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With Love to My Mother and in Loving Memory of My Father
Realizing the Single Software Market:

Cross-National Validity of Software License Agreements

JAN LEIDÖ

iUSTUS

**Abstract**

The Internet has revolutionized the software industry, one of the world’s largest businesses. A single software market is emerging, independent of national borders, where products and services are digitally distributed. But the legal framework for software transfers is not geographically independent; relevant underlying law varies substantially between different legal systems.

In this doctoral thesis, cross-national validity of certain standard software license agreements is examined as a solution to overcome national differences and improve the emerging single software market. Cross-national validity is mapped, explained, and improved under American and German law. The United States and the European Union collectively dominate the single software market. Within the EU, Germany is the most relevant legal system, and many conclusions reached under German law can be extended to the entire EU.

The study identifies many current issues, caused by *inter alia* inherent limits of law, fundamental differences between German and American law, and problematic transferor choices. Current issues exist regarding formation, substantive content, and interpretation of software license agreements on a cross-national level. This leads to increasing legal and practical problems for the industry and individual transferors.

Major and minor improvements in software license agreements and business models are suggested to achieve cross-national validity. Simple advice includes better assent mechanisms, prior disclosure, clear notice, and translating software license agreements. More comprehensive advice includes focusing on provisions that are essential from a business or technical perspective, rethinking certain business and technical choices that might lead to legal problems, making compromises over certain provisions that have only minor legal advantages but clear legal disadvantages, and choosing a way to bridge or avoid national differences regarding central provisions and practices from among available suggestions adapted to different business models.

Making such improvements is becoming increasingly important as lawmakers and consumer associations in different countries become ever more active, and as developing countries become increasingly important. Improving cross-national validity will enhance legal certainty and bring us one step closer to realizing the single software market.

**Keywords:** IT law, comparative law, United States law, German law, contract law, copyright law, competition law, data privacy law, private lawmaking, software license agreements, cross-national validity, single software market

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PART I
BEGIN

Faust and Mephistopheles

Auch was Geschriebnes forderst du Pedant?
Hast du noch keinen Mann, nicht Manneswort gekannt?
Ist’s nicht genug, daß mein gesprochnes Wort
Auf ewig soll mit meinen Tagen schalten?
Rast nicht die Welt in allen Strömen fort,
Und mich soll ein Versprechen halten?
Doch dieser Wahn ist uns ins Herz gelegt,
Wer mag sich gern davon befreien?
Beglückt, wer Treue rein im Busen trägt,
Kein Opfer wird ihn je gereuen!
Allein ein Pergament, beschrieben und beprägt,
Ist ein Gespenst, vor dem sich alle scheuen.
Das Wort erstirbt schon in der Feder,
Die Herrschaft führen Wachs und Leder.
Was willst du böser Geist von mir?
Erz, Marmor, Pergament, Papier?
Soll ich mit Griffel, Meißel, Feder schreiben?
Ich gebe jede Wahl dir frei. ³

1 Introduction

1.1 The Study

1.1.1 Background

Technology changes everything. This includes society, business practices, and law. Well-known examples of the latter include the disruptive effects of railroads and automobiles on law, legal principles, and legal problems. A more recent example is computer technology. A specific example of the disruptive effects of computer technology is software distribution, which is becoming increasingly globalized and digitalized. A single software market, independent of territorial borders, is starting to emerge. But legal obstacles, conflicts between global software transfers and the local nature of law disturb this process. Since software transfers are dependent on law, this discrepancy between law and software transfers is making the latter difficult and inefficient. It is a problem in need of a solution.

Software license agreements govern the use of transferred computer software and networking services. Software license agreements are standard-form

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4 See infra section 2.1.2.

5 See infra section 1.1.4.


7 See infra section 1.1.4.

8 See infra section 1.6.1 (Regarding its definition in this thesis.).
agreements that are used between transferor and transferee,\textsuperscript{9} to, for example, allocate rights, risks, and obligations.\textsuperscript{10} Software license agreements are used against many different kinds of transferees, from third-party developers and enterprise customers to consumer end users.\textsuperscript{11} Like software transfers, software license agreements become subject to local laws with different requirements in different jurisdictions. But software license agreements can also be used to level differences between local laws.\textsuperscript{12} The latter is the foundation for this thesis, a potential solution to discrepancies between local law and global software transfers.

But leveling differences through software license agreements is far from simple. Theoretically, this would require taking all local rules of all legal systems into account. That would be difficult, especially since transferors have limited time and resources.\textsuperscript{13} Instead, this thesis settles for cross-national validity,\textsuperscript{14}

\textsuperscript{9} That is, the party who has agreed to transfer software and the party who has agreed to receive software. See Principles of the Law of Software Contracts § 1.01(n)(1–2) (2009). See also infra section 1.6.1.

\textsuperscript{10} See, e.g., Michael Liberman, Overreaching Provisions in Software License Agreements, 1 Rich. J.L. & Tech. 4, *2 (1995) (Important functions include to: (1) Protect the transferor’s rights; (2) legally secure revenue streams; and (3) allocate rights and obligations between transferor and transferee.) (The asterisk refers to the internal page number of a work if the continuous pagination has, for some reason, failed in the available copy.); Florencia Marotta-Wurgler, What’s in a Standard Form Contract? An Empirical Analysis of Software License Agreements, 4 J. Empirical Legal Stud. 677, 689 (2007) (Categorizing provisions that allocate rights and risks as: (1) Acceptance of license; (2) scope of license; (3) transfer of license; (4) warranties and disclaimer of warranties; (5) limitations of liability; (6) maintenance and support; and (7) conflict resolution.).

\textsuperscript{11} See infra section 1.3.4.

\textsuperscript{12} See, e.g., Kelly Leong, iTunes: Have They Created a System for International Copyright Enforcement?, 13 New Eng. J. Int’l & Comp. L. 365, 388–390 (2007) (Regarding how Apple uses its Terms of Service to level differences in national laws and create a private international copyright enforcement system.); Greg Lastowka, Virtual Justice: The New Laws of Online Worlds 91 (Yale University Press: New Haven 2010) (“If all virtual world participants are required to agree to the ‘laws’ of the virtual world (expressed in the online contract), then the problem created by divergent jurisdictional rules and by the unique nature of fantastic environments could be overcome by setting more optimal rules through contract.”).

\textsuperscript{13} Cf. Denis T. Rice, Problems in Running a Global Internet Business: Complying With Laws of Other Countries, 797 PLI/Pat 11, 19 (2004) (“An issue for any online business is how to comply with laws of all the countries in which it does business and how to avoid violating laws in countries where it does not do business. In addressing these matters, the e-commerce company must be aware of the expanding reach of international jurisdiction and must be sensitive to foreign laws that vary from U.S. law and could impact the company’s business.”).

\textsuperscript{14} See infra section 1.1.5.
and focuses on a few select legal systems. Whether certain software license agreements, and certain provisions in software license agreements, are cross-nationally valid, if there are any obstacles to this, and if such obstacles can be overcome will be examined. This subject can be linked to larger themes in society, such as technical developments, globalization, and digitalization.

1.1.2 Globalization/Digitalization and Software

Software distribution has become globalized and digitalized, and this affects software transfers and software license agreements. Software governance through software license agreements is arguably becoming a form of private ordering. Software license agreements extend and replace the intellectual property regime to facilitate specific needs. While software license

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15 See infra section 1.4.3.
16 See infra section 1.3.2.
17 See infra section 1.3.1.
agreements are important for software governance, they are still subject to law, like private ordering. Since software license agreements are used cross-nationally, different laws can become applicable to different software transfers. This thesis focuses on such challenges and how to overcome them.

1.1.3 Software and Software License Agreements
Traditional, the term computer software ("software") has referred to operating systems (for example, Apple OS or Microsoft Windows), application programs (for example, Adobe Photoshop, Apple iTunes, or Microsoft Excel) and data that are used by hardware devices. The latter include computers, and computer-like devices, but also many personal and industrial devices. Technological developments have expanded the notion of software, beyond local software on hardware devices to on-demand access through local devices, often known as "cloud software."
The software industry represents significant and increasingly large values.\textsuperscript{27} An often-repeated phrase is that software is expensive to develop, but inexpensive and simple to copy.\textsuperscript{28} This gives transferors no shortage of incentives for limiting piracy,\textsuperscript{29} and facilitating control over software use with legal tools, in order to get what they view as a reasonable return on investment.\textsuperscript{30} Granted, the marginal cost to create additional copies will always be negligible in relation to the development cost,\textsuperscript{31} but development costs, in absolute numbers, can naturally vary between different software projects.\textsuperscript{32} Improvements in development tools have lowered the investment for software development, but the complexity of certain software has increased.\textsuperscript{33} Thus, the picture is mixed. All software is not expensive to develop, but trivial software might not even qualify for copyright protection.\textsuperscript{34}


\textsuperscript{28} Andreas Leupold & Silke Glossner, Münchener Anwaltshandbuch IT-Recht Teil 1, B. VI. 1, recital 150 (2nd ed., Beck Juristischer Verlag: München 2011); Alison Jones & Brenda Sufrin, EU Competition Law — Text, Cases, and Materials 777 (4th ed., Oxford University Press: Oxford 2011) (Certain parts have been omitted in newer editions of this work. For this reason, the third, fourth, or the fifth edition of this work will be used in different sections. For pedagogical reasons, short citation forms will state the used edition.). See also Ox Shy, \textit{The Economics of Network Industries} 53, 182 (Cambridge University Press: Cambridge 2001) (On software development costs and economics of scale.).

\textsuperscript{29} See Leupold & Glossner, supra note 28, at Teil 1. B. VI. 1, recital 150 (Often with technical means, such as DRM and similar.); Lessig, supra note 21 (Regarding “code” as a regulator.).

\textsuperscript{30} See Leupold & Glossner, supra note 28, at Teil 1. B. VI. 1, recital 150; Jones & Sufrin, supra note 28, at 777 (4th ed.).

\textsuperscript{31} See Shy, supra note 28, at 182; Wallace v. International Business Machines Corp., 467 F.3d 1104, 1107–1108 (7th Cir. 2006) (Copyright law allows authors to charge more than their marginal costs “so that they can recover their fixed costs (and thus promote innovation).”).

\textsuperscript{32} For example, consider the differences in size and complexity (and thus also in expenses) between an operating system, a word processor, and a simple mobile utility application.

\textsuperscript{33} See Phil Johnson, \textit{Curiosity About Lines of Code}, IT World August 8, 2012 (Comparing lines of code (LOC) in different projects: Apollo 11 – 145,000 LOC; Space Shuttle – 400,000 LOC; Curiosity Mars Rover – 2.5 million LOC; Android 2.2 – 12 million LOC; Windows XP – 45 million LOC; Apple OS X 10.4 – 86 million LOC.;) James Larus, \textit{Spending Moore’s Dividend}, 52 Comm. ACM No. 5 62, 64–65 (2009) (Comparing Microsoft Windows code size increases and improvements in processor performance. Some increases in code size have been exponential, “such as the factor-of-four increase in lines of code between Windows 3.1 and Windows 95 over three years.”).

\textsuperscript{34} See infra section 3.3 (Regarding copyright protection for software.).
Software can be divided into specialized software and standardized software. The former is customized for individual transferees, with the special needs of each transferee in mind. The latter is mass-produced for all kinds of transferees, regardless of individual needs, even though the target group might sometimes be very narrow. In the early days of computing, before the advent of the microcomputer, all software was specialized. Under this business model, software was developed on a contract basis for mainframes, and required customizations and modifications for each customer. With the microcomputer, standardized mass market software emerged. This business model became popular among transferors, since the lack of customization for each transferee made standard software less expensive than specialized software. Certain software is still specialized, for example, certain business systems/applications and certain embedded systems/applications. But most end users only come across standard software.

Software can be controlled with technical or legal tools. Technical tools are primarily focused on preventing piracy, and unlike legal tools, they do not require legal enforcement by courts to be effective. A software license agreement is the common legal tool to facilitate legal control over software, together with software patents (when such protection is available). Software license agreements are considered to have been created to avoid legal uncertainty in the software industry: First that software would not be protected by intellectual property law, later that intellectual property protection could be circumvented. While both examples of initial uncertainty have been

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35 See Leupold & Glossner, supra note 28, at Teil 1. B. IV. 2(c) recital 77–86.
36 See Oxford Dictionary of Computing 316–317 (John Daintith & Edmund Wright eds., Oxford University Press: Oxford 2008) (Regarding "microcomputer") That is to say: A computer with a microprocessor, for example, a personal computer; which is what most people associate with the term computer.
38 See also infra section 2.2 (Regarding common software business models.).
39 See Lessig, supra note 21, at 187–188.
40 Proposal for a Council Directive on the Legal Protection of Computer Programs, COM (88) 816 final—SYN 183 (March 17, 1989), 1989 O.J. (C 91) 4, para. 3.3 (“Much of the software put on the market today is subject to license agreements between right holder and user.”); Liberman, supra note 10, at *2.
42 See Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96 n. 7 (3d Cir. 1991) (Regarding the so-called “first-sale doctrine,” which was thought to be able to circumvent intellectual property protection for software.) See also infra section 3.1.1.
resolved, the use of software license agreements remains, with different functions. For example: (1) Preventing downstream user proliferation; (2) allocating rights, risks, and obligations; (3) legally securing revenue streams; or (4) to use the strategy of price discrimination. Transferees, on the other hand, primarily wish to use an adequate program based on their purpose, and, if possible, perhaps also with as few transferor claims as possible. Still, transferor and transferee interests could potentially overlap.

A license agreement is a document evidencing a license, and a license is “[a] permission, [usually] revocable, to commit some act that would other-

43 O’Rourke, supra note 41, at 927–930; Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96, fn. 7 (3d Cir. 1991).
45 See Liberman, supra note 10, at *2; Marotta-Wurgler, supra note 10, at 689.
46 This allows a transferor to tailor prices and functions to different groups of transferees with different preferences and increase profits. See William W. Fisher III, When Should We Permit Differential Pricing of Information?, 55 UCLA L. Rev. 1, 2–3 (2007) (Airline fares to the same destination vary depending on, for example, time of departure, time between departure and return, or between business class or coach class.). To be effective, the transferor must prevent a transferee that should pay a high price from paying a low price, for example by preventing a resale market. See Michael J. Meurer, Vertical Restraints and Intellectual Property Law: Beyond Antitrust, 87 Minn. L. Rev. 1871, 1877 (2003); Wang, supra note 44, at 9. Software license agreements and technical tools may be used to achieve efficient price discrimination. See David Friedman, In Defense of Private Orderings: Comments on Julie Cohen’s Copyright and the Jurisprudence of Self-Help, 13 Berkeley Tech. L.J. 1151, 1171 (1998).
47 See Leupold & Glossner, supra note 28, at Teil 1. B. VI. 2, recital 151–152. But see Bygrave, supra note 21, at 192 (Arguing that end users ‘are probably indifferent to the agreements’ actual terms and, in the absence of untoward behaviour, they can generally enjoy the proffered service(s) without significant interference from the EULA drafter.”).
48 See infra section 2.2.2.
49 See Robert W. Gomulkiewicz, Conditions and Covenants in License Contracts: Tales From a Test of the Artistic License, 17 Tex. Intell. Prop. L.J. 335, 346 (2009) (“To be most accurate, the entire contract should be called the ‘license contract’ and the rights-granting part of that license contract should be called the ‘license.’”). But cf. BLACK’S LAW DICTIONARY 1002 (9th ed. 2009) (The term may also denote the document evidencing the permission.); Raymond T. Nimmer, LAW OF COMPUTER TECHNOLOGY § 7:4 (Westlaw through November 2013) (“A license is an agreement that deals with, and grants or restricts, a licensee’s contractual right to use information. The agreement focuses on what rights, immunities, or uses are given or withheld in reference to use of the information.”). Under this latter terminology, a license can be a document evidencing a license. To avoid ambiguity, permission and document evidencing permission should be separated.
1 Introduction

wise be unlawful.” The term software license agreement implies that it is a document evidencing a license to use software. But the label “license” does not determine whether a transferred software copy is licensed or sold. This requires a legal evaluation, and the result will affect the enforceability of many restrictions. While different software license agreements may contain different rights and restrictions, many restrictions, especially for end user software, can be described as use restrictions that are contained in standard-form agreements. The validity of such use restrictions is a primary concern in this thesis. Beyond use restrictions, software license agreements might also contain more traditional “boilerplate” provisions, regarding for example warranties and disclaimers of such, limitations on liability, or conflict resolution.

1.1.4 A Single Software Market

In the 1980s, software went mass-market. This shift has allowed software developers to get a return on their development costs by selling as many copies of software as possible, known as using economics of scale. This mass-distribution model can be favorable for both transferors and transferees; it allows software transferors to get an adequate return on their development costs, and it allows transferees to legally obtain software at a relatively low price, at least in theory.

50 See Black’s Law Dictionary, supra note 49, at 1002. Cf. De Forest Radio Telephone Co. v. United States, 273 U.S. 236, 241–242 (1927) (A license “has been described as a mere waiver of the right to sue by the patentee.”).
51 The term “software license agreement” is used as a generic description of agreements sometimes labeled as End User License Agreement (EULA), (Software) Terms of Use (TOU) or simply Software License. See infra section 1.6.1 (Regarding terminology).
52 See infra section 3.1.1 (Regarding whether standard software is licensed or sold.).
53 This thesis will examine different kinds of software license agreements. See infra section 1.3.4.
55 See Marotta-Wurgler, supra note 10, at 689.
57 Sterne & Kessler, supra note 37, at 158–160.
58 Gomulkiewicz & Williamson, supra note 56, at 342.
59 Software price will not necessarily always be relatively low, for example if: (a) There is limited competition in the market; (b) the software is complex; or (c) it is aimed at transferees.
A clarification about the software industry: Most people associate software producers with companies such as Apple and Microsoft, creating “packaged software.” Such companies, and other companies creating packaged software, transfer software for large values, but are arguably a minority in the software industry. But “packaged” software is more relevant for this subject. Thus, the understanding of “software” and the “software industry” in this thesis is closer to most peoples’ perception than the statistical reality.

Software distribution has changed tremendously over the last 25–30 years, primarily based on two factors: (1) Mass distribution and economics of scale; and (2) the advent of the Internet, and the creation of a global and digital software market, the single software market. The single software market has shifted software distribution from physical to digital, from national markets to a single software market. When software was sold in bricks-and-mortar stores on physical media, there were natural geographical market limits. Software was primarily transferred through national subsidiaries or on national licenses. But digital distribution and Internet access now allow transferees to access software stored on “foreign” networks. Geographical limits have arguably become obsolete with the help of e-commerce and digital software to which price is not important. Such caveats naturally apply to non-software products and services as well.

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60 See Suma S. Athreye, *The Indian Software Industry, in From Underdogs to Tigers: The Rise and Growth of the Software Industry in Brazil, China, India, Ireland, and Israel* 7, 7–8 (Ashish Arora & Alfonso Gambardella eds., Oxford University Press: Oxford 2005) (“[T]he number of firms that produce software or employ software developers is larger than the number of firms usually labeled as software firms, for example, Microsoft or Oracle. Thus, ‘packaged software’ is only a fraction of the total software industry. Indeed large banks, insurance companies, finance companies, and virtually every organization of any size ends up producing, maintaining, and enhancing a considerable amount of software. Much of this software is specialized, consisting of standard ‘platforms’ such as an SAP ERP system or an Oracle accounting system tailored to users’ needs.”).

61 “Non-packaged” software, such as in-house software, is not: (1) Transferred, or only transferred on a minor scale; and (2) not necessarily governed by the kind of standard software license agreements relevant for this thesis.

62 The term is a play on the European Union law term “the single market,” as created by the Single European Act, 1987 O.J. (L 169) 1.

distribution. This development has turned divided software markets into a single software market. A single software market increases competition, which should serve transferees with lower prices. For transferors it increases the customer base, and allows further facilitation of economics of scale. The single software market does not only increase the customer base for large undertakings, but a single software market also helps small undertakings.

Other technical advancements, such as improvements in e-commerce, and new software categories for new platforms, for example, mobile applications ("apps"), have also helped to lower the threshold for market entry.

But a single software market is also associated with difficulties and legal challenges. While the economy has become globalized, local rules still control the global economy, which may conflict with the nature of software and information technology. Local rules, developed in isolation, might not be

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65 The consequences can be compared to the creation of the single European market. See Stephen Weatherill, EU Consumer Law and Policy 34 (2nd ed., Edward Elgar Publishing: Cheltenham 2005) (Regarding the convergence of national markets into a single European market, how this will stimulate competition, and how this should serve consumers with better choice, quality, and lower prices.).

66 See Oleksandr Pastukhov, Going Where No Taxman Has Gone Before: Preliminary Conclusions and Recommendations Drawn from a Decade of Debate on the International Taxation of E-Commerce, 36 RUTGERS COMPUTER & TECH. L.J. 1, 1 (2009) ("The advent of e-commerce has forever changed how business is done. Internet operations have launched even the smallest of undertakings into global markets and have made them part of an important industry with enormous potential.").

67 See infra section 2.1.5.

68 Nimmer, supra note 49, at § 19:1 ("Commercial and other activity on the Internet achieves great advantages for persons and entities that distribute information by enabling them to reach worldwide contexts with little expense. That same characteristic, however, exposes the Internet user and product provider to worldwide regulation and jurisdiction. The cost-benefit balance is quite clear. The benefits of wide access and reach (however they are measured) are offset by costs of worldwide liability exposure. In addition, especially in context of tort or regulatory issues, the jurisdiction questions relate to the capability of a state to control effects on its own residents when those effects may be due to remote activity, and to the ability of individuals to defend themselves or pursue claims across great distances.").

69 See Danielsen, supra note 6, at 53; Raquel Xalabarder, Copyright: Choice of Law and Jurisdiction in the Digital Age, 8 ANN. SURV. INT’L & COMP. L. 79, 80 (2002) ([M]arkets have become increasingly ‘global,’ while copyright laws remain basically ‘territorial’.").

70 Johnson & Post, supra note 6, at 1367 ("Cyberspace challenges the law’s traditional reliance on territorial borders.").
the most efficient way to regulate globalized markets.  \textsuperscript{71} It has sometimes been predicted that a global regulation would emerge, but such regulation is yet to be seen.  \textsuperscript{72} With local rules, the result may vary between different transfers. Thus, transferors doing business in the single software market must take the local laws of different legal systems into account. \textsuperscript{73} While global software transfers are possible from a technical and business perspective, legal problems and uncertainty might raise transaction costs and reduce efficiency. To improve certainty, efficiency, and realize the single software market, national differences must be overcome. One solution could be to bridge differences with cross-national application of software license agreements. \textsuperscript{74}

1.1.5 Cross-National Use and Validity of Software License Agreements

Within the single software market, a transferor can either use different software license agreements for transferees of different nationalities, \textsuperscript{75} or to use one software license agreement for all transferees of all nationalities. The latter practice is the main interest of this thesis, \textsuperscript{76} and is recommended as probably the most cost-effective solution for doing business on a global level. \textsuperscript{77}

\textsuperscript{71} See Dieter Martiny, \textit{Traditional Private and Commercial Law Rules Under the Pressure of Global Transactions: The Role for an International Order}, in \textit{Rules and Networks: The Legal Culture of Global Business Transactions} 123, 136 (Richard P Applebaum, William L F Felstiner & Volkmar Gessner eds., Hart Publishing: Portland 2001) (“Today it is widely accepted that legal rules formulated solely in terms of national entities, without taking into account transnational and global developments, will be ineffective or even unproductive.”).

\textsuperscript{72} Gail E. Evans & Brian F. Fitzgerald, \textit{Information Transactions under UCC Article 2B: The Ascendancy of Freedom of Contract in the Digital Millennium}, 21 U.N.S.W.L.J. 404, 407 (1998) (“For it is likely that once Article 2B is adopted and legislated nationally, the United States will move for its global implementation.”) As we will see, this prediction was wrong on two accounts: (1) The UCC 2B, or the Uniform Computer Information Transactions Act (UCITA) did not become a success among the States. \textit{See infra} section 3.1.2 (Regarding the UCITA as a solution to legal uncertainty in the field, and its failings.). And (2) the United States did not push for global implementation.

\textsuperscript{73} Rice, \textit{supra} note 13, at 19.

\textsuperscript{74} See Leong, \textit{supra} note 12, at 388–390; Lastowka, \textit{supra} note 12, at 91.

\textsuperscript{75} \textit{See infra} section 12.5.4.

\textsuperscript{76} \textit{See infra} section 1.3.2.

The practice of using one software license agreement globally for software governance is in many ways similar to “global law,” a phenomenon in international commercial law given much attention. Applying software license agreements globally, to overcome differences between jurisdictions, is similar to the description of global law: A privately created legal framework that applies globally.

This approach requires cross-nationally valid software license agreements. Since cross-nationally applied software license agreements derive their validity from underlying national laws, a software license agreement must be valid under the laws that are applicable to a specific software transfer. Since transferor and transferee might reside in any jurisdiction within the single software market, the result could vary substantially between different software transfers. Thus, transferors must become aware of differences between different legal systems and try to overcome them. Validity could otherwise vary between different software transfers, which affects both transferors and transferees. This will require a mapping of requirements, current problems, and potential improvements.

Elgar Publishing: Cheltenham 2013) (Transferors “may choose to adopt a single standard form complying with the most restrictive law under which they market their products. This approach may be a far less expensive way for them to conduct their business than to draft forms that vary by jurisdiction.”). This can be described as standardization, using a uniform set of provisions for all markets, adapted to the strictest legal requirements.

78 See infra section 1.3.1.
79 See, e.g., Leong, supra note 12, at 388–390; Lastowka, supra note 12, at 91.
80 See Flood, supra note 22, at 313.
81 See Leupold & Glossner, supra note 28, at Teil 5. F. III. recital 336 (“Da es weder ein glo-
bales noch ein europäisches IT-Recht gibt, ist auch im Rahmen einer internationalen Cloud – wie
sie aufgrund des Konzepts des Cloud Computing in aller Regel vorliegen wird – das anwendbare
nationale Recht zu ermitteln.”) [Roughly: Since there is no global nor European IT-law, applica-
table national law must also be established for international clouds.]).
82 Cf. Verbraucherzentrale Bundesverband (vzbv), Press Release: App-Store-Betreiber bestehen
AGB-Check nicht, August 20, 2012 (“Unternehmen wie google und iTunes [Apple] agieren welt-
weit, doch ignorieren sie leider allzu oft deutsche Verbraucherschutzvorschriften, sagt Helke Hei-
demann-Peuser, Referatsleiterin Kollektiver Rechtsschutz beim vzbv.”) [Undertakings like Google
and iTunes [Apple] operate globally, but too often they ignore German consumer protection
laws, says Helke Heidemann-Peuser, Head of Collective Legal Protection at [the German
consumer association] vzbv.].
83 From a transferee perspective, this means that rights and obligations under the same agree-
ment will vary depending on what law will be applied. See Lucille M. Ponte, Getting a Bad
Rap? Unconscionability in Clickwrap Dispute Resolution Clauses and a Proposal For Improving
the Quality of These Online Consumer “Products”, 26 OHIO ST. J. ON DISP. RESOL. 119, 154
(2011).
1.2 The Study’s Framework

This study is based on seven theses on how to realize the single software market: (1) Cross-national validity is important and will be even more important in the future; (2) cross-national validity must be balanced with other values; (3) law, business, and technology are related; (4) cross-national validity will require an active effort; (5) global harmonization is unlikely; but (6) a market approach to cross-national validity is more likely to be successful; and (7) cross-national validity requires a broad approach.

1.2.1 Importance of Cross-National Validity

Technology is in constant development, and subjects related to technology can thus quickly become obsolete. But software license agreements are, as noted by Gomulkiewicz, “here to stay for the foreseeable future.” While use of software license agreements have arguably been successful, legal uncertainty has not been resolved, and software license agreements often “exist in a legislative void.” This uncertainty can cause several problems, and cross-national validity of software license agreements is important from: (a) Macroeconomic; (b) industry; and (c) individual perspectives.

First, software is among the largest industries, and is growing. Legal uncertainty in the industry, regarding, for example, software license agreement validity, can have a major economic impact, and uncertainty, even

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84 See infra section 2.1.
86 See Micalyn S. Harris, UCITA: Helping David Face Goliath, 18 J. Marshall J. Computer & Info. L. 365, 366 (1999) (Stating that technological developments in the computer industry have been supported by a legal framework based on the law of contract (software license agreements). “The contracting model has worked well because it protects the ability of computer information providers to commercialize their creations while offering maximum flexibility — an essential quality in an industry in which change is rapid and constant.”).
87 I. Lan Sys., Inc. v. Netscout Serv. Level Corp., 183 F.Supp.2d 328, 332 (D. Mass. 2002) (“Legal scholars … have tried to fill that void, but their efforts have not kept pace with the world of business.”).
88 See Rustad & Onufri, supra note 27, at 25–26 (“The 2008 Software 500 study estimated that total revenue for the top 500 companies in the software and services industry increased to [USD] 451.8 billion for 2007.”); Jon M. Garon, Media & Monopoly in the Information Age: Slowing the Convergence at the Marketplace of Ideas, 17 Cardozo Arts & Ent. L.J. 491, 574 (1996) (The software industry was the third largest industry in the U.S. as early as in 1996.); Marc Andressen, Why Software Is Eating the World, Wall St. J. August 20, 2011, at C2 (Arguing that software is “eating” itself into an increasing number of industries.).
89 See Rebecca K. Lively, Microsoft Windows Vista: The Beginning or the End of End-User
regarding the law applicable to software license agreements, makes the market less efficient.90 Due to the size of the software market, such uncertainty may create issues of large economic importance. Thus, a well-functioning market lies in the public interest. From this perspective, scholarship on the software market and software market improvements becomes important. If scholarship could clarify the law in this area, this could promote commerce,91 and increase efficiency. Furthermore, the economic importance of the software industry is likely to increase further as the single software grows and extends more into developing countries.

Second, cross-national validity of software license agreements is also important from an industry perspective. The stakes are very high in the software industry.92 Cross-national validity is important from a strategic and economic perspective. Problems with cross-national invalidity can also illuminate deeper strategic and structural problems in the software industry. Cross-national application of software license agreements is a common practice in a globalized and digitalized software market,93 since it is probably the most cost-effective way of doing business.94 If there are legal problems associated with this practice, such problems should be resolved, if possible. And if such problems are insurmountable, current strategies must be evaluated and new strategies to global software distribution must be created. Cross-national validity is of economic importance since: (1) The industry is closely associated with the United States, but more than half of the global software market is found outside the United States, and this share seems to have increased over

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90 See Uniform Computer Information Transactions Act Prefatory Note (Westlaw through 2013) ("[L]egal rules that are not relevant to commercial practice or that are uncertain in application inhibit contracting or raise transaction costs.").
91 Legal scholarship could be a complement or an alternative to the creation of model laws. Cf. Robert W. Gomulkiewicz, The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing, 13 Berkeley Tech. L.J. 891, 892 (1998) (Arguing that the UCC 2B (UCITA) “could clarify licensing law and thereby promote commerce in software and information products.”).
92 Nimmer, supra note 49, at § 19:1 (“The result in this country [the United States] has been remarkably active litigation, involving well over 500 reported cases since the mid-1990’s, as well as legislative attention in Europe and elsewhere. The pace of litigation is high because the stakes are high.”).
93 See supra section 1.1.5.
time; and (3) piracy rates are higher outside the United States, allowing further growth in other countries, if piracy rates can be reduced through new business models and technical solutions. While the single software market is still in its infancy, cross-national validity is already important for the industry. And importance is likely to increase in the future. Challenges may also increase when developing countries become more important.

Third, the question of cross-national validity is important on an individual level for transferors, transferees (from end users to third-party developers), and different interest associations acting on the behalf of transferors or transferees. Transferors are presumably interested in software license agreement validity, or should at least be interested. Transferors have argued that if

95 See Business Software Alliance, Shadow Market: 2011 BSA Global Software Piracy Study (9th ed., 2012); Business Software Alliance, Shadow Market: 2007 BSA Global Software Piracy Study (5th ed., 2008) (The United States' estimated share of the global legal software market (software transfers): 2003 - 45 percent, 2007 - 42 percent, 2011 - 40 percent. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.). The (Business) Software Alliance is a trade group aiming to stop software piracy. But any stake in that issue does not interfere with the usefulness of this data to determine the ranking of countries based on legal software transfers. The method is openly described and the data is also largely consistent with other studies on software transfers. See also Kimmo Alajoutsijävi, Kari Mannermaa & Henrikki Tikkanen, Customer Relationships and the Small Software Firm: A Framework for Understanding Challenges Faced in Marketing, 37 Info. & Mgmt. 153, 153 (2000) (The United States' amounts for approximately 75 percent of the world market.). While there are methodological difficulties with comparing different studies, the increasing importance of other countries is clear.

96 See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (The BRIC countries' estimated share of the global legal software market (software transfers): 2003 - 2 percent, 2007 - 7 percent, 2011 - 8 percent. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.). Projections on future growth and geographic redistribution are always uncertain. Any issue with the initial data collection done for these reports will affect such projections. But these projections are largely consistent with the common understanding of future economic growth in developed and developing countries and a geographical redistribution of the world economy.


98 See Lastowka, supra note 12, at 98 (“[T]he rules may be merely symbolic if the virtual world owner fails to enforce them. Presumably, most virtual world owners want users to comply with these community rules.”).

99 See Gomulkiewicz, supra note 85, at 701 (“EULAs are, in the aggregate, a contract with
transferees were not bound by software license agreements, transferors would, inter alia, face “considerable additional liability,” which would force them to “raise their prices to compensate for this additional exposure.”100 And, perhaps primarily, transferors want definitive answers.101 The importance of cross-national validity becomes clear if we consider the recent example of Creative Commons, which worked for six years to improve cross-national validity.102 Third-party developers, end-user transferees, consumer or industry associations may also be interested in software license agreement validity, but are likely more interested in whether they can be successfully challenged.103 Results may help transferors improve cross-national validity. Results may also lead to more challenges, which may improve cross-national validity in the longer perspective.

Increasing Importance of Cross-National Validity
The single software market is currently in its infancy. The importance of cross-national validity is likely to increase with: (1) Future growth, especially in developing countries; and (2) when lawmakers and consumer associations in different countries are increasingly putting pressure on transferors to comply with applicable law.
To predict future growth we can look at estimated legal transfers (in Millions of USD) and estimated shares of the global legal software market in the period 2003–2011.\textsuperscript{104}

<table>
<thead>
<tr>
<th>Year</th>
<th>Worldwide Transfers</th>
<th>United States Transfers</th>
<th>European Union Transfers</th>
<th>Other Countries Transfers</th>
<th>Worldwide Market Share</th>
<th>United States Market Share</th>
<th>European Union Market Share</th>
<th>Other Countries Market Share</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>$50,910M</td>
<td>$23,031M</td>
<td>$16,753M</td>
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<tr>
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<tr>
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<td>$63,997M</td>
<td>$27,421M</td>
<td>$19,636M</td>
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<td>43%</td>
<td>31%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>2007</td>
<td>$76,849M</td>
<td>$32,160M</td>
<td>$23,363M</td>
<td>$21,327M</td>
<td>42%</td>
<td>30%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>2008</td>
<td>$87,330M</td>
<td>$36,572M</td>
<td>$26,514M</td>
<td>$24,243M</td>
<td>42%</td>
<td>30%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>2009</td>
<td>$82,659M</td>
<td>$33,560M</td>
<td>$23,338M</td>
<td>$25,761M</td>
<td>41%</td>
<td>28%</td>
<td>31%</td>
<td>31%</td>
</tr>
<tr>
<td>2010</td>
<td>$93,776M</td>
<td>$38,060M</td>
<td>$25,749M</td>
<td>$29,967M</td>
<td>41%</td>
<td>27%</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>2011</td>
<td>$104,849M</td>
<td>$41,664M</td>
<td>$29,021M</td>
<td>$34,164M</td>
<td>40%</td>
<td>28%</td>
<td>32%</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Growth rate</th>
<th>Market share diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003–2011</td>
<td>106 percent</td>
<td>– 5 pp\textsuperscript{108}</td>
</tr>
<tr>
<td></td>
<td>81 percent</td>
<td>– 4 pp</td>
</tr>
<tr>
<td></td>
<td>73 percent</td>
<td>+ 9 pp</td>
</tr>
<tr>
<td></td>
<td>207 percent</td>
<td></td>
</tr>
</tbody>
</table>

From this data we can see that: (1) The United States is very important and the European Union has a relatively strong position, but the importance of the United States and the European Union is slowly decreasing over time (at

\textsuperscript{104} The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011. Worldwide numbers are calculated by adding data from all countries, not by using the estimated worldwide piracy losses and piracy rate. Under the latter approach, the calculated worldwide sums for each year after 2008 becomes too low in relation to the summarized values for all countries. The figures for the European Union is calculated by adding sums for all countries within each region, taking the enlargements in 2004 and 2007 into account, not using the estimated piracy losses and piracy rates for the region. See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study).

\textsuperscript{105} All countries except the United States and the Member States of the European Union.

\textsuperscript{106} Estimated legal transfers in millions of USD.

\textsuperscript{107} Estimated share of the worldwide market.

\textsuperscript{108} Percentage points.
1 Introduction

the expense of other countries);\textsuperscript{109} and (2) legal transfers are increasing globally, but the growth rate is lower in the United States and the European Union than the worldwide average, and much lower than the other countries combined.\textsuperscript{110} If we examine growth between 2003 and 2011 we get the following figures:

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Country</th>
<th>M USD</th>
<th>Percent</th>
<th>Country</th>
<th>Percent</th>
<th>M USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>$18,633M</td>
<td>81%</td>
<td>Other Latin America</td>
<td>4,610%</td>
<td>$76M</td>
</tr>
<tr>
<td>2</td>
<td>Japan</td>
<td>$3,056M</td>
<td>76%</td>
<td>Vietnam</td>
<td>2,499%</td>
<td>$89M</td>
</tr>
<tr>
<td>3</td>
<td>China</td>
<td>$2,327M</td>
<td>700%</td>
<td>Dominican Republic</td>
<td>1,760%</td>
<td>$28M</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>$2,194M</td>
<td>661%</td>
<td>Other Middle East</td>
<td>1,706%</td>
<td>$76M</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>$2,016M</td>
<td>45%</td>
<td>Panama</td>
<td>1,501%</td>
<td>$27M</td>
</tr>
<tr>
<td>6</td>
<td>France</td>
<td>$1,865M</td>
<td>66%</td>
<td>Pakistan</td>
<td>1,281%</td>
<td>$42M</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>$1,795M</td>
<td>237%</td>
<td>El Salvador</td>
<td>1,264%</td>
<td>$13M</td>
</tr>
<tr>
<td>8</td>
<td>Russia</td>
<td>$1,730M</td>
<td>1,049%</td>
<td>Ukraine</td>
<td>1,254%</td>
<td>$114M</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
<td>$1,718M</td>
<td>126%</td>
<td>India</td>
<td>1,168%</td>
<td>$1,585M</td>
</tr>
<tr>
<td>10</td>
<td>United Kingdom</td>
<td>$1,610M</td>
<td>41%</td>
<td>Russia</td>
<td>1,049%</td>
<td>$1,730M</td>
</tr>
</tbody>
</table>

Thus, most absolute growth is occurring in a mixture of developed and developing economies. As expected, the growth rate in developed countries is low, but absolute increases are still substantial. Developing countries such as China, Brazil, and Russia show impressive growth rate and absolute growth.\textsuperscript{113} If we examine the BRIC countries, their market share of the global software market increased from 2 percent in 2003 to 8 percent in 2011. Legal transfers increased from 965 M USD in 2003 to 8,801 M USD in 2011, an 812 percent increase.\textsuperscript{114} Thus, the BRIC countries have surged, and account

\textsuperscript{109} Estimated market shares in 2003 and 2011: The United States decreased from 45 percent in 2003 to 40 percent in 2011. The European Union decreased from 33 percent in 2003 to 28 percent in 2011. Other countries increased from 23 percent in 2003 to 32 percent in 2011.

\textsuperscript{110} In the period 2003–2011, the growth rate in the United States was 81 percent and 73 percent in the European Union. The worldwide average was 106 percent. In other countries than the United States and the European Union, the growth rate was 207 percent.

\textsuperscript{111} Countries with the highest absolute growth in M USD.

\textsuperscript{112} Countries with the highest growth rate in percentages.

\textsuperscript{113} In absolute numbers, India is at position 11, with a 1,585 M USD and 1,168 percentage increase.

\textsuperscript{114} The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011. Worldwide numbers are calculated by adding data from all countries, not by using the estimated worldwide piracy losses and piracy rate. The figures for the BRIC countries are
for a substantial portion of the relative importance decrease of the United States and the European Union. While absolute growth in the United States and some other developed countries is substantial, their decreasing relative importance vis-à-vis developing countries such as the BRIC countries with impressive growth rates suggest that the geographical distribution of the single software market is likely to change over time.

Legal transfers can be increased by increasing total software use (legal transfers and illegal use), but also by decreasing piracy. Countries where both can be improved are very interesting. Total software use is increasing globally, but the growth rate is much higher in the BRIC countries than within the European Union and the United States. Piracy rates are currently much higher in the BRIC countries than in the United States and the European Union, but are also decreasing much faster in the BRIC countries than in the United States and the European Union. This further suggests that future growth is more likely within the BRIC countries. If we take China as an example, its current figures of legal transfers are moderate; estimated pirated values exceed legal transfers, but the combined values would make it the world’s second largest software market. This suggests growth potential in this market if piracy rates can be reduced through for example new service-based business models and software distribution channels where piracy is less likely.

calculated by adding sums for all countries within each region, not using the estimated piracy losses and piracy rates for the region. See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study).


116 See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (Estimated piracy rates: United States: 2003 - 22 percent, 2007 - 20 percent, 2011 - 19 percent; European Union: 2003 - 37 percent, 2007 - 35 percent, 2011 - 33 percent; BRIC: 2003 - 87 percent, 2007 - 75 percent, 2011 - 70 percent. The estimated pirated values as of 2011 (in millions of USD) were: (1) United States 9,773; (2) China 8,902; (3) Russia 3,227; (4) India 2,930; (5) Brazil 2,848; (6) France 2,754; (7) Germany 2,265.).

117 See Business Software Alliance, supra note 95 (2011 global study) (Pirated value: 8,902; Legal Transfers: 2,659 (in millions of USD)).
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Thus, the data for legal transfers in the period 2003–2011 shows that the geographical distribution of the single software market is changing. The relative importance of the United States and the European Union is decreasing, while the relative importance of developing countries, such as the BRIC countries, is increasing. A future single software market that is more evenly geographically distributed among more countries makes cross-national validity increasingly important.

Lawmakers, both in Europe and the United States, especially in California, are becoming increasingly active in issues that concern software license agreement validity, such as data privacy protection. Interest associations, such as consumer associations, are becoming increasingly active against transferors in court. And sometimes, such associations are directly warning transferors of invalid software license agreements without litigation.

These developments make it relevant to start seeking improvements to cross-national validity today.

1.2.2 Cross-National Validity Must be Balanced with Other Values

While cross-national validity is important for transferors, it must be balanced with other values. For example: (1) Resources spent on legal issues may lead to less resources spent on core tasks such as developing and transferring software; and (2) the advantages of cross-national validity must outweigh its cost, in terms of for example (a) transaction costs or (b) inability to enforce provisions that may be valid in certain legal systems.

But while it is important to remember that transferors must balance different values, this does not substantively affect the importance of the subject; not in a short perspective, and especially not in a longer perspective.

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118 See infra section 7.1.
120 Verbraucherzentrale Bundesverband (vzbv), supra note 82.
1.2.3 Law, Business, and Technology are Related

Cross-national validity of software license agreements is a legal issue, but software license agreements are related to technology and business models. Technology and business models influence each other, and chosen business models affect software license agreements. In order to make effective legal improvements, it becomes necessary to take the technology and business side into account.

A core function of a software license agreement is to legally secure revenue streams,\(^{121}\) which makes the relationship between software license agreements and business models important. This relationship will be explored,\(^ {122}\) and will be used when searching for improvements.

The relationship between law and business becomes visible through several questions in this thesis:

1. Is there invalidity? [Legal issue]
2. Is it a problem? [Business/legal issue]
3. Can it be resolved? [Legal issue]
4. Is it worth it? [Business issue]

Since this is a thesis in legal science, the primarily focus is on legal issues. Still, it is not possible to completely disregard these business questions, since they are closely linked with legal questions. Legal advice must be correlated to a technical and business context. Legal advice that runs contrary to a technical or business reality is not effective; technology and business practices that run contrary to legal requirements are not effective either. Thus, in order to make effective legal improvements, it is necessary to ask business and technology questions and take this into account when making improvements.

1.2.4 Cross-National Validity Will Require an Active Effort

Another thesis is that cross-national validity will require an active effort, since:

1. Software license agreements are not likely to become cross-nationally valid by themselves due to legal development;\(^ {123}\) and
2. while globalization and

\(^{121}\) See Liberman, supra note 10, at *2.

\(^{122}\) See infra section 2.

\(^{123}\) For example, if the general legal view of certain provisions or practices changes from invalidity to validity. Regarding one exception, see infra section 4.2.1 (Regarding validity of shrink-wrap license agreements under American law before and after ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).) But the result of such rare developments have not been cross-national validity, only asymmetrical validity.
the exchange of ideas may affect both legal cultures and substantive law over time, this will not in itself remove all national legal differences relevant for software license agreement validity. An active effort where relevant rules are harmonized or differences are otherwise bridged or avoided must be achieved.

1.2.5 Global Harmonization is Unlikely

If there are differences between relevant rules in different legal systems, lawmakers in different countries could harmonize applicable national laws and thereby reduce problems (global harmonization). This can be described as a lawmaker approach. But global harmonization is both a difficult and unlikely path to cross-national validity.

It is a difficult path since software license agreements cover many different areas of law and are aimed at different categories of transferees, both consumers and business actors. Successful global harmonization has primarily: (1) Focused on business actors; and (2) had a limited scope even between business actors. This makes global harmonization a difficult path for cross-national validity.

It is also an unlikely path, since there is no viable way forward: (1) There is reluctance among lawmakers in some countries to make comparative inquiries, making harmonization unlikely; and (2) the institutional support for global harmonization does not exist.

To understand the lack of institutional support within the single software market, we can contrast it with some key characteristics of the European Single Market. A cornerstone within the European Union is the idea of integration and a single market, by reducing physical, technical and fiscal barriers to trade, and allowing free movement of goods, services, persons and capital. The main principles of this integration process have been non-discrimination and market access. The European Union has several legal instruments and

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125 For example, CISG does not govern agreement validity. See CISG, Article 4.
126 Especially American drafting committees have been reluctant to make such inquiries, while that is expected within the European Union. See James R. Maxeiner, Standard-Terms Contracting in the Global Electronic Age: European Alternatives, 28 Yale J. Int’l L. 109, 129–131 (2003); Jean Braucher, Unfair Terms in Comparative Perspective: Software Contracts, in COMMERCIAL CONTRACT LAW: A TRANSATLANTIC PERSPECTIVE 339, 359 (Larry DiMatteo, Qi Zhou, Severine Saintier, & Keith A. Rowley eds., Cambridge University Press: Cambridge 2013).
institutions to develop and uphold this integration, primarily, the Treaties, and the Court of Justice of the European Union ("CJEU"), but also other legal instruments, such as regulations, directives, decisions, recommendations and opinions. The single software market is different: (1) It lacks a political idea based on state power; (2) it lacks legal instruments and legal institutions to develop and uphold market integration; (3) there is no uniform idea on how to approach legal questions in the market; (4) no legal system has opted-in as a member of this market; and (5) it lacks central governance.

And even with this institutional support, the European Union needed much time and effort to reach the current level of integration. It could be argued that it would be easier to create global harmonization without institutional support for a relatively specific subject such as the single software market. But the single software market spans over continents with completely different legal cultures, and covers legal areas with diverging views. This makes global harmonization unlikely within the foreseeable future.

On a deeper theoretical level, even harmonization may not be sufficient for legal systems to converge. LeGrand once famously argued that European legal systems were not converging. LeGrand argued that focus on rules, concepts, and institutions was insufficient, since it did not reveal much about a legal system, limiting the scholar to a “thin description,” instead of a “thick description.” In the thick description of law, law is not only rules, but also a social subsystem, which requires understanding of the underpinning social aspects of law, the legal culture. The latter requires understanding of the legal mentalité, how and why a community thinks about law by studying the cognitive structure of a legal culture. Based on this, LeGrand argued that the European legal systems were not converging, since common law and civil law systems have different legal mentalités, and some differences are irreducible. However: (1) Different local circumstances have not prevented legal

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131 LeGrand, supra note 129, at 55–56, 60.
132 Id. at 61–74 (Such differences include, for example, the nature of legal reasoning, the
transplants;\textsuperscript{133} and (2) Legrand’s broad definition of law and focus on legal mentalité is not relevant for all questions. Convergence of law-as-rules could be sufficient to overcome most problems associated with cross-national validity of software license agreements. But as seen, even that is unlikely.

\subsection*{1.2.6 A Market Approach to Cross-National Validity}

A sixth thesis is that cross-national validity can and should instead be solved by transferors, that is, a market approach instead of a lawmaker approach. Transferors can bridge (standardize) or avoid differences by adjusting software license agreements and business models to achieve cross-national validity. This approach is arguably more likely than global harmonization.\textsuperscript{134}

As described, a problem with the lawmaker approach is the dependency on external parties and elements. Global harmonization requires comparative outlooks by lawmakers and institutional support for global harmonization, which is currently lacking.

Improvements in software license agreements have no such external dependencies: (1) There is no need to seek a common understanding among parties with disparate ideas and opinions. (2) Each actor becomes responsible for all (relevant) legal systems, which reduces the risk of disparate results in different legal systems. This can be contrasted to addressing lawmakers, where there is a risk of disparate efforts in different countries, since there is reluctance among lawmakers in some countries to make comparative inquiries.\textsuperscript{135} And (3) there is no need to create legal instruments and institutions to create and enforce harmonization. Under this approach, cross-national improvements will be as

\textsuperscript{133} See Alan Watson, \textit{Legal Transplants and Law Reform}, 92 L.Q. Rev. 79, 80–81 (1976) (Arguing that the acceptance of Roman law in many different circumstances as an example that rules can be borrowed to very different “social, economic, geographical and political circumstances.”); R. C. van Caenegem, \textit{European Law in the Past and the Future: Unity and Diversity over Two Millennia} 73–88, 138–139 (Cambridge University Press: Cambridge 2002).

\textsuperscript{134} Cf. Brendon Beheshti, \textit{Cross-Jurisdictional Variation in Internet Contract Regulation: Is There a Viable Path to Globally Uniform Internet Contracting Laws?}, 8 J. Int’l Com. L. & Tech. 49, 65–69 (2013) (Arguing that “[g]iven the political realities and the geographic imbalance of where the Internet consumers are located,” global uniformity based on market pressure to conform with local laws might be a more viable path than international treaties or more reliance on public law and less reliance on “the private law of contract.”).

\textsuperscript{135} Especially American drafting committees have been reluctant to make such inquiries, while that is expected within the European Union. See Maxeiner, \textit{supra} note 126, at 129-131; Braucher, \textit{supra} note 126, at 359.
good as transferors are willing to make them. Success cannot be guaranteed, but transferors can make improvements with some effort.

Neither a market nor lawmaker approach is likely to be perfect. Ideally, both approaches should be used. But bridging or avoiding differences to software license agreements is arguably more realistic than global harmonization, and the former approach to the single software market will be examined in this thesis. Transferors therefore become my primary addressees, even though it can be hoped that lawmakers also become better at finding a common understanding in the future.

1.2.7 A System Approach to Cross-National Validity

A final thesis is that a broad approach to cross-national validity is required.

This study takes a system approach. That is, several issues will be examined rather than a specific issue, from a macro perspective rather than a micro perspective. Software license agreements cover many different questions, and it is advantageous to examine several different issues for several reasons: (1) A macro perspective makes it possible to see patterns and relationship that become invisible with a micro perspective; (2) a macro perspective makes it possible to describe the difficulties of combining necessary knowledge to draft cross-nationally valid software license agreements;\(^\text{136}\) and (3) based on my hypothesis,\(^\text{137}\) where agreements assume the role of system builders, a system approach becomes more appropriate than a very limited focus. While this thesis has a system approach, it does not aim to be completely exhaustive with regard to all conceivable issues in cross-national application of software license agreements, but it tries to balance depth and breadth of important questions, by studying elements that are common to software license agreements.

\(^{136}\) The main problem with cross-national validity is arguably not to overcome a few very specific problems relevant to a minority of transferors, but to overcome the plethora of common problems that are relevant to most transferors. See Gomulkiewicz, supra note 91, at 892 ("Licensing law can be chaotic for both licensors and licensees. To draft a license agreement for software or an information product, a lawyer must be conversant in numerous areas of law, including the common law of contracts, Uniform Commercial Code Article 2, state and federal intellectual property rules and overlays, bankruptcy law, and competition law, not to mention various electronic commerce, data privacy, and digital signature statutes.").

\(^{137}\) See infra section 1.3.2.
1.3 Scope of the Study

1.3.1 Globalization/Digitalization and Private Ordering

The effects of, and approaches to, globalization and digitalization are not unique to the software market.138 The world is often claimed to have become globalized,139 digitalized,140 and interdependent.141 The term “globalization” can be understood and approached in different ways; for example, if globalization is understood as “world domination,”142 as a process of tearing down nation-state boundaries and the emergence of a worldwide phenomenon,143 or as a process of connecting social contexts or regions.144 Different forms of globalization may exist at the same time, but the form relevant for this thesis is the spread of open markets and Western technology.145 While globalization and legal change through technological developments are not new phenomena,146 the process arguably occurs much faster today.147

The globalization discussion is sometimes also extended to effects on law, especially the effects of globalization/digitalization on existing laws and legal

138 See supra section 1.1.2.


144 Anthony Giddens, *The Consequences of Modernity* 64 (Polity Press: Cambridge 1991) (“[Globalization] can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.”).

145 Cf. Glenn, supra note 142, at 52–54 (Regarding multiple processes of globalizations and this particular process.).


147 Ziegel, supra note 143, at 278–281.
principles;\textsuperscript{148} for example, harmonization efforts,\textsuperscript{149} or whether legal systems in certain regions do,\textsuperscript{150} or do not,\textsuperscript{151} converge. According to some, globalization gives rise to a new legal order. According to others, globalization calls for a global legal order.\textsuperscript{152} In both views, globalization blurs nation-state boundaries, and changes the role of the state.\textsuperscript{153} According to some, this has led to the rise, or rather return, of a private legal order.\textsuperscript{154} State and international law is based on public ordering and grows from public, centralized political centers, while private ordering is decentralized and is created (predominately) by private parties.\textsuperscript{155} But private ordering is not “soft law,” since private ordering, such as contracts, can be enforced by courts,\textsuperscript{156} while soft law cannot be enforced.\textsuperscript{157} Private ordering is associated with \textit{legal pluralism},\textsuperscript{158} as opposed to \textit{legal centralism}, the latter under which “law is exclusive, systematic and unified hierarchical ordering of normative propositions.”\textsuperscript{159} Proponents of


\textsuperscript{150} Mathias Reimann, \textit{The Progress and Failure of Comparative Law}, 50 Am. J. Comp. L. 671 (2002).

\textsuperscript{151} See Legrand, supra note 129.

\textsuperscript{152} See Rafael Domingo, \textit{The New Global Law} 98 (Cambridge University Press: Cambridge 2010) (Regarding the need for a global legal order.).

\textsuperscript{153} Ralf Michaels & Nils Jansen, \textit{Private Law Beyond the State? Europeanization, Globalization, Privatization}, 54 Am. J. Comp. L. 843, 843 (2006); Douglas, supra note 141, at 367–369 (Arguing that the interconnected modern world “requires us to reconsider perspectives that have historically been the exclusive domain of the nation-state,” including law, especially “in the area of international commercial transactions.”).


\textsuperscript{155} Flood, supra note 22, at 313.

\textsuperscript{156} Cf. Lessig, supra note 21, at 187 (“The ultimate power of a contract depends upon the decision of a court to enforce the contract or not.”).

\textsuperscript{157} Soft law can have different meanings, but it is generally non-binding or softly enforced (cannot resort to courts). See Alan Boyle, \textit{Some Reflections on the Relationship of Treaties and Soft Law} 48 Int’l & Comp. L.Q. 901, 901–902 (1999).


\textsuperscript{159} John Griffiths, \textit{What is Legal Pluralism?}, 24 J. L. PLURALISM & UNOFFICIAL L. 1, 3 (1986).
the two concepts have criticized each other. Private ordering can be enticing in an online global market, promising to better meet the expectations of parties from different legal cultures, improving cross-national commercial transactions, creating cross-national governance faster than international law, or, under ideal conditions, create tailored legal norms. Private ordering also allow for competing lawmaking, creating choice for its recipients. In private ordering, contracts are common, since they allow adaption to specific needs and transcend nation-state boundaries easily. However, most forms of private ordering are still dependent on state authority for its legitimacy.

There are many different forms of and names of private ordering, for example, (new) lex mercatoria, transnational law, global law, or privately made law. The most famous is probably the new lex mercatoria (the new law merchant). It is used between business actors, and is predominately applied by arbitration bodies instead of national or international courts. The lex mercatoria may be understood and defined in different ways, if perceived as common commercial principles or the “law” found in an individual contract. But one common characteristic is that it

161 Maniruzzaman, supra note 154, at 658.
162 Flood, supra note 22, at 313.
165 Flood, supra note 22, at 313.
166 Maniruzzaman, supra note 154, at 658.
167 Flood, supra note 22, at 313.
169 Snyder, supra note 164, at 403–420.
172 Maniruzzaman, supra note 154, at 691, fn. 151.
is customary,\textsuperscript{173} and autonomous (detached form national legal systems).\textsuperscript{174} Cross-nationally applied standard software license agreements do not usually share these characteristics, which makes associations with the \textit{lex mercatoria} unsuitable.

Global (private) law might be a more useful term. According to Flood, global law is, like the \textit{lex mercatoria}, only “partially dependent on state authority for its legitimacy.” But unlike \textit{lex mercatoria}, global law is not tied only to business actors and arbitration bodies.\textsuperscript{175} Being primarily based on contracts, it is not customary either. \textit{Lex mercatoria} can be thought of as a loosely defined source\textsuperscript{176} and global law as a description of a phenomenon: The reliance on contracts to overcome national differences.\textsuperscript{177} This makes global law a suitable association to cross-national use of software license agreements.

However, this association creates concern regarding: (1) Private ordering; and (2) use of the word “law.” Private ordering has sometimes been considered a myth, using the argument that enforcement of private ordering without public ordering is “chimerical,”\textsuperscript{178} since private ordering is not autonomous. Private ordering can be more or less autonomous,\textsuperscript{179} but is never completely free from the public legal order,\textsuperscript{180} since the idea of a self-validating contract, known as a \textit{contrat sans loi} (a contract without law), is rejected by most legal


\textsuperscript{174} See Maniruzzaman, \textit{supra} note 154, at 670; Marrella & Yoo, \textit{supra} note 171, at 823–824; Patrikios, \textit{supra} note 21, at 274.

\textsuperscript{175} Flood, \textit{supra} note 22, at 313.

\textsuperscript{176} Still, an arbitration body is probably able to apply its principles when faced with a question. \textit{See} Goode, \textit{Is the Lex Mercatoria Autonomous?}, in \textit{Commercial Law Challenges in the 21st Century: Jan Hellner in Memoriam} 73, 83–84 (Ross Cranston, Jan Ramberg, Jacob Ziegler eds., Iustus: Uppsala 2007).

\textsuperscript{177} \textit{Cf.} Flood, \textit{supra} note 22, at 313 (“It is at the level of private ordering that difference is resolved into a document that circumvents the contingencies of jurisdictional conflict.”).


\textsuperscript{179} See Goode, \textit{supra} note 176, at 80–83.

\textsuperscript{180} \textit{See} Radin & Wagner, \textit{supra} note 178, at 1296. However, certain forms of private ordering that use arbitration bodies for dispute settlements have a fair amount of autonomy. \textit{See} Goode, \textit{supra} note 176, at 80–83.
However, private and public ordering are seldom, if ever, binary concepts. Most forms of private ordering are probably mixed ordering, depending on its degree of autonomy. Comparing *lex mercatoria* and software license agreements, the latter have less autonomy, especially when aimed at consumers. Autonomy exists, but is clearly limited. Software license agreements are thus rather mixed ordering than private ordering.

There are two distinct views on whether global law, governance through contracts, can be called “law.” Some scholars have used the term “law” to describe governance by standard-form agreements, while other reserve the word “law” to regulation by public bodies with state-delegated power. The counterargument is that the state’s lawmaking monopoly is increasingly difficult to maintain, and that private ordering is becoming increasingly important in certain areas, and may sometimes be more important than legislation. Still, regardless of who is right, using terms such as “global law” or “non-state law” creates concern. Twinning summarizes the concerns with globalization and non-state law as: (1) A fear that non-state law is a threat to liberal democracy; (2) a fear that the discipline of law will become detached with its roots and become diluted; (3) a fear of “opening the floodgates,” meaning that we will lose a clear basis for distinguishing legal and social

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182 Cf. Arthurs & Kreklewich, supra note 148, at 28–29 (Regarding hybridization of law and legal institutions.).

183 See Marrella & Yoo, supra note 171, at 820–837.

184 See W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 Harv. L. Rev. 529, 530 (1971) (Arguing that standard-form contracts had “become a considerable portion of all the law to which we are subject.”); Snyder, supra note 164, at 403–420, 448–449 (Arguing that private ordering in the form of standard-form contracts affects many millions of persons and business actors. Such agreements will not necessarily affect everyone, but neither does state law, and no one would be hesitant to call state law for “law.”); Friedrich Kessler, *Contracts of Adhesion—Some Thoughts About Freedom of Contract*, 43 Colum. L. Rev. 629, 641 (1943) (“Freedom of contract means that the state has no monopoly in the creation of law. The consent of contracting parties creates law also.”).

185 See Michaels & Jansen, supra note 153, at 850; 1 Friedrich Carl von Savigny, *System des heutigen Römischen Rechts* 67–68, 79 (Veit: Berlin 1840) (A contract is not a legal source; putting contracts and laws on the same line as legal sources causes confusion. Noting that without the state, private law would not exist and people would not have capacity to act.).

186 Arthurs & Kreklewich, supra note 148, at 16–29 (Describing competition with State’s law from agencies of the State (for example, courts and the European Union) and private parties.).

187 See, e.g., Riles, supra note 168, at 608–630; Slawson, supra note 184, at 530.

188 See Teubner, supra note 181, at 18.
norms;\(^{189}\) and (4) that broadening our conception of law may destabilize “the comparative project.”\(^{190}\) To avoid this problem, the word “law” can be avoided since it is not important.\(^{191}\) To describe what Flood calls “global law,” the term “global contractual governance” will be used.

1.3.2 Hypothesis, Aim, and Objectives

The world is being globalized,\(^{192}\) but law is mainly local.\(^{193}\) This might lead to practical problems, and isolated development might not be the most efficient way to govern globalized markets.\(^{194}\) To overcome national differences, cross-nationally applied agreements have been put forward as a potential solution; both in the general discussion of globalization and private ordering,\(^{195}\) and more specifically regarding cross-nationally applied software license agreements.\(^{196}\) This is treated as a hypothesis in this thesis that will be tested through the question of cross-national validity of software license agreements.\(^{197}\)

Thus, whether cross-national application of software license agreements is a reasonable approach to realize the single software market will be studied. This will be done by examining cross-national validity of certain, non-negotiable, software license agreements for standard software.\(^{198}\) When problems

\(^{189}\) See also Tamanaha, supra note 160, at 192 (Arguing that all “all forms of social control” become law under this broad definition of law, including “moral or political norms, or customs, habits, rules of etiquette, and even table manners.”).

\(^{190}\) William Twinning, General Jurisprudence: Understanding Law from a Global Perspective 362–374 (Cambridge University Press: Cambridge 2009) (Twinning argues that such concern serves better as warning than “good grounds for refusing to acknowledge the importance of the phenomena.”).

\(^{191}\) See Twinning, supra note 190, at 370; Glenn, supra note 142, at 73 (On the question whether everything in the Chthonic legal tradition constitute law for the chthonic people: “It just doesn’t matter.”).

\(^{192}\) See supra section 1.3.1.

\(^{193}\) See Danielsen, supra note 6, at 53; Johnson & Post, supra note 6, at 1367. Cf. Friedrich Carl von Savigny, Vom Beruf unserer Zeit für Gesetzgebung und Rechtswissen-

\(^{194}\) See Martiny, supra note 71, at 136.

\(^{195}\) See Flood, supra note 22, at 313.

\(^{196}\) See, e.g., Leong, supra note 12, at 388–390; Lastowka, supra note 12, at 91.

\(^{197}\) Since this solution only works if agreements are cross-nationally valid.

\(^{198}\) See infra section 1.4.3 (Regarding my choice of comparandum. This thesis will focus on key legal systems attempts to give the findings as much leverage as possible.).

\(^{199}\) See infra section 1.3.4 (Regarding principles for choosing software license agreements.).
are found, the question of whether such problems can be resolved will be examined and discussed.

This thesis will focus on standard software, rather than specialized software, since the former is more interesting from the perspective of this thesis. A standard software transferor has no or little direct contact with and knowledge about its transferees, while a specialized software transferor negotiates its software license agreement with the transferee. Standardized software license agreements, non-negotiable provisions, and a lack of knowledge about transferees and applicable laws increase the risk for problems, making it more interesting for this thesis.

This is a study of cross-national validity of software license agreements, which is narrower than cross-national software transfers. When software is transferred, a number of questions outside software license agreements become relevant. Like software license agreements, software transfers become subject to different national laws in different situations, and these laws can vary between different jurisdictions. Issues of this kind that are relevant to software transfers but not to software license agreements may arise when transferors make certain technical decisions, such as including encryption technology, or copy-protection mechanisms. Such decisions can cause cross-national conflicts, but is beyond the scope of this thesis, unless a practice is also governed through a software license agreement.

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200 Stephen T. Keohane, Mass Market Licensing, 652 PLI/Pat 437, 443–444 (2001) (Noting that software license agreements for standard software are “completely anonymous, in that the [transferor] does not care and, indeed, frequently does not even know, who its [transferees] are.”).

201 Vendor license agreements for standard software also fall within this category, since many or most provisions are negotiable. See Michael Overly & James R. Kalyvas, Software Agreements Line by Line: A Detailed Look at Software Agreements & How to Change Them to Fit Your Needs 11–12, 23–28 (Aspatore Books: Boston 2004) (Since each transaction might concern thousands or many millions of dollars, transferees must examine such software license agreements thoroughly.).

202 Due to these differences, it might be difficult to transfer conclusions to other types of software license agreements.

203 Cf. Principles of the Law of Software Contracts § 1.01(m) (2009) (Regarding the definition of software transfers.).


205 See infra section 6 (Regarding practices that might become relevant for this study if governed in software license agreements. For example, technical tying is in itself a practice beyond the scope of this thesis, but if also governed through a software license agreement, that provision will rely on the legality of technical tying; thus, such practices can become relevant for this thesis through the proverbial “back door.”).
This thesis attempts to find solutions to a market problem; conflicts between software license agreements and substantive law in different jurisdictions. The primary study object of this thesis is software license agreements, not the law applicable to them. Thus, this thesis will not focus on the reasonableness of, and policy discussions relating to, applicable law. Focus is on conflicts between software license agreements and law, and how such conflicts can be resolved. There are many ways to improve software license agreement validity. However, my point of departure is that the only viable approach is a market approach. That is, software license agreements should be modified to improve validity; law should not be modified to improve validity.

Aim and Objectives
The aim of this thesis is to examine and improve cross-national validity of certain software license agreements, by:

- Examining the validity of certain software license agreement provisions and practices, in different jurisdictions.
- Comparing the validity of certain software license agreement provisions and practices between different jurisdictions.
- Analyzing cross-national invalidity, or potential risk thereof, and give advice on how such issues can be resolved.

To achieve the aim of this study, the following objectives are of primary importance:

1. Predicting how courts in different legal systems would assess certain software license agreement provisions and practices.
2. Comparing predictions between different legal systems to see if there are likely differences in software license agreement validity between different legal systems.
3. If such differences exist, examine and analyze whether such differences can be overcome by making software license agreements cross-nationally valid.

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206 See infra section 12.3.
207 See supra section 1.2.6 (Regarding why the market should solve the problem and not lawmakers.).
208 Regarding which legal systems, see infra section 1.4.3.
1.3.3 Delimitations

The fundamental freedoms of European Union law have been omitted. Granted, European Union law tends to show up in unexpected situations. Still, it is very unlikely that the fundamental freedoms of European Union law would become applicable to software license agreements. This would require: (1) An agreement that imposes territorial restrictions; that (2) is enforced by national legislation that restricts free movement of any of the four fundamental freedoms. The former, which in itself can be a competition law violation, is not uncommon for certain software license agreements, but the latter is very unlikely. Granted, these two requirements were met in Murphy. There, the CJEU found that a British statute restricting foreign tools for receiving encrypted broadcasting services was restricting the freedom to provide and receive services by directly discriminating competitors from other Member States. The license agreement in itself was a restriction of competition. While Murphy shows the applicability of the fundamental freedoms to situations related to license agreements, it is so uncommon and distantly relevant that such questions have been omitted.

Software license agreement validity depends on the validity of contractual provisions (content) and contract formation (process/presentation). This thesis focuses on both software license agreement formation and validity of certain provisions. However, some specific aspects related to contract

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210 That is, free movement of goods, services, persons, and capital.
212 This restriction was unjustifiable and unproportional.
214 However, there is not always a bright line between process/presentation and content. Validity of a provision, seemingly a question of content, might also be dependent on how a provision is presented to a transferee. See infra section 8.4.1 (Regarding how warranty disclaimers must appear typographically in order to be valid and enforceable.). Compare also with UCC § 1-201(b)(10) (Westlaw through September 2013) (Regarding the requirement for conspicuous provisions under the UCC, which include size of text, contrasting type, font, or color compared to the surrounding text.).
formation have been left out since they do not improve on this thesis. This include traditional problems of invalidity due to unfree or unreal consent,\footnote{See Cal. Civ. Code § 1565 (West, Westlaw through 2013).} if obtained through, for example, duress or deceit,\footnote{Restatement (Second) of Contracts §§ 174 cmt. a, b, 175 cmt. d (1981); Bürgerliches Gesetzbuch [BGB] [Civil Code] August 18, 1896, Reichsgesetzblatt [RGBl.] 195, § 123 (Ger.).} mistake,\footnote{Restatement (Second) of Contracts § 153 (1981); BGB § 119 (Ger.).} incapacity,\footnote{Restatement (Second) of Contracts § 12(1) (1981); BGB §§ 105–106 (Ger.).} fraud, or undue influence.\footnote{See Cal. Civ. Code § 1567 (West, Westlaw through 2013).} Among these, invalidity due to incapacity when minors enter into software license agreements is probably common,\footnote{See infra section 2.} for example when minors use online service, smartphones, and tablets. However, such questions have been left out since they do not add value to this thesis and its main question. Invalidity due to incapacity, duress, or similar, is not a problem that is specific to software license agreements, and it does not help illuminating the larger theme of cross-national validity. These grounds for invalidity are similar in all major legal systems, and transferors are aware of these requirements, including invalidity due to incapacity. I can only add a reminder of the importance of legal capacity, even on the Internet.

\section*{1.3.4 Principles for Choosing Software License Agreements}

There are many different software license agreements,\footnote{See Marotta-Würgler, supra note 10, at 682 (647 end user software license agreements for commercial software were examined.). That is only a selection since: (1) Almost all transferors within this category use their own software license agreements; and (2) there are other categories.} which is at least partly explainable by the abundance of available technical solutions and business models.\footnote{See infra section 2.} Thus, a selection of software license agreements and provisions is needed. My main principle for selection is representativity and leverage. Common provisions found in software license agreements used against many transferees are likely to be the most problematic for the industry.

To avoid studying only certain kinds of provisions and software license agreements, software license agreements are divided into different categories, and widely used license agreements are chosen from different categories. A simple taxonomy based on functions has been chosen, which divides software

\footnotesize
\begin{itemize}
\item \footnote{See Cal. Civ. Code § 1565 (West, Westlaw through 2013).}
\item \footnote{Restatement (Second) of Contracts §§ 174 cmt. a, b, 175 cmt. d (1981); Bürgerliches Gesetzbuch [BGB] [Civil Code] August 18, 1896, Reichsgesetzblatt [RGBl.] 195, § 123 (Ger.).}
\item \footnote{Restatement (Second) of Contracts § 153 (1981); BGB § 119 (Ger.).}
\item \footnote{Restatement (Second) of Contracts § 12(1) (1981); BGB §§ 105–106 (Ger.).}
\item \footnote{See Cal. Civ. Code § 1567 (West, Westlaw through 2013).}
\item \footnote{See Eric Felten, Are We All Online Criminals?, Wall St. J. November 18, 2011, at d8. ("Prof. Kerr points out that ‘a 17-year-old who conducts a Google search in the course of researching a term paper has likely violated Google’s Terms of Service.’").}
\item \footnote{See infra section 2.}
\end{itemize}
license agreements into three major groups: (1) end user software license agreements; (2) enterprise software license agreements; and (3) developer software license agreements. Representativity and focus on non-negotiability means that end user software license agreements will play a more important role than enterprise software license agreements, since the former a more likely to illuminate the fundamental problem in this thesis.

1.3.5 Relation to Earlier Research

Different aspects of standard software license agreement validity have been studied before, primarily from an American perspective. This includes, for example, the general validity and enforceability of different forms of software license agreements, or the validity and enforceability of specific software license agreements. The validity and consequences of certain provisions have also been studied. Some have also tried to systematize the law of software license agreements under American law. Certain questions have been discussed for a relatively long time, but the legal outcome has changed significantly over time, so certain questions must be revisited in scholarship.

223 Different categories of transferees can use software with different functions in different situations. For example, a business actor might be an end user for certain software, but an enterprise user for other software.
224 Vendor license agreements are not interesting since they are negotiated. See supra section 1.3.3.
229 For example regarding contractual restrictions on reverse engineering. See Charles
The novelty of this thesis lies primarily in the *cross-national approach* to software license agreement validity. The emerging single software market leads to new questions and new requirements for software license agreements. The cross-national approach is combined with the second primary novelty, a *system approach*. Few studies have taken a system approach, even within one legal system. Previous cross-national studies have focused on specific questions,\(^{230}\) for example certain aspects of software license agreement formation.\(^{231}\) Some studies have focused on the relationship between freedom of contract and mandatory copyright policies from a comparative perspective,\(^{232}\) or the relationship between standard-terms in software license agreements and contract law.\(^{233}\) A third novelty is the practical evaluation of *private ordering* as a way to overcome national differences.\(^{234}\) The growth of private ordering has been a popular subject, but this thesis also evaluates the legal conditions for private ordering and the practical viability of this strategy.\(^{235}\)

The scope of the comparative element in earlier studies has been of varying degree. Certain comparative studies have primarily focused on American law, with international outlooks.\(^{236}\) Some comparisons with Europe have only examined secondary sources (directives) of European Union law,\(^{237}\) while others have also studied the adoption of European Union Law in the Member States.\(^{238}\) However, some more comprehensive studies have also been conducted, mainly studying some aspects of differences in consumer protec-

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230 While the Principles of the Law of Software Contracts are systematic, and certain rules may be useful for transferors on a cross-national level, the project did not aim to be a comparative systematic project. See Hillman & O’Rourke, supra note 77, at 55.


232 See supra section 1.3.2 (Regarding my hypothesis.).

233 The question of whether the *lex mercatoria* can be applied by arbitration bodies has been examined. See Maniruzzaman, supra note 154, at 694–697. But the substantive limits of private ordering, especially outside the scope of purely commercial relationships and arbitration bodies have not been examined.


235 See Rustad & Onufri, supra note 27.

236 Maxeiner, supra note 126, at 131.
tion regarding software license agreements between the United States and the European Union. As far as possible, this study will attempt to treat the chosen legal systems equally.

American legal scholars from an American tradition in legal scholarship have conducted much previous research in this field. When describing different legal scholarship traditions, Germany and the United States can serve as two extremes. American legal scholars often view law “from the outside,” with an interdisciplinary approach to law. German legal scholars commonly view law “from the inside,” without influence from other disciplines. Legal scholarship in Germany is often doctrinal, that is, it focuses on “finding out what the law is.” American legal scholars are more interested in legal policy and de lege ferenda discussions instead of “doctrinal details.” While in Germany, policy generally lies outside the realm of law, and inside the realm of politics. Such differences require different methods. German legal scholars “employ interpretative methods in order to systematically expose the law”; that is, their own methods, separate from social sciences. American legal scholars, on the other hand, often examine law with the methods of different social sciences, for example the methods of law and economics, political science, and sociology. Differences between American and German legal scholarship can be explainable by the influence of the American legal realism movement and the acceptance of utilitarianism in the United States during the 20th century. Such differences can result in very different studies. The American perspective of legal scholarship is apparent in previous research in this field; much focus has been on legal policy discussions, and less on doctrinal research. This thesis has a doctrinal side, but goes beyond that: To map and improve cross-national validity, “what the law is” must be examined,


applied to software license agreements, and based on those findings, cross-national validity must be improved. Finding out “what the law is” will be a necessary step, but is not a study object in itself.

1.4 Methodology

By “legal method” we commonly mean the “way” to apply existing legal sources to specific legal issues. A wider definition might answer questions associated with the creation, application, and interpretation of law. Examining cross-national validity of certain software license agreements will require different methods, but two major elements can be discerned: (1) To predict how courts in certain countries would assess the validity of certain software license agreements and provisions; which is supported by (2) a comparative theory and method.

1.4.1 A Prediction Method

In order to examine cross-national validity of certain software license agreements and make improvements, the current state must first be assessed. This is done by predicting how a court would assess the validity of a certain software license agreement, provision, or practice, when interpreting the law as it stands. These predictions must then be repeated for different jurisdictions and different kinds of provisions. This creates a map that can be used to create cross-nationally valid software license agreements.

242 See supra section 1.3.2.
243 Thus, legal policy and de lege ferenda discussions regarding applicable law are not especially interesting. See supra section 1.3.2.
244 Stefan Vogenauer, Sources of Law and Legal Method, in The Oxford Handbook of Comparative Law 869, 885 (Mathias Reimann & Reinhard Zimmermann eds., Oxford University Press: Oxford 2006) (“In a legal context, the term ‘method’ is usually employed to refer to the ‘path’ or the ‘way’ from an existing source of law to the decision on a particular legal issue in a given situation.”).
245 Vogenauer, supra note 244, at 886 (“[I]t can be said that a legal method typically answers the following questions: (1) What is the style of lawmaking? (2) Who applies and interprets the law? (3) Which factors are taken into account in the application and interpretation of the law? (4) How are these factors ranked?”).
246 See supra section 1.3.2.
247 This analysis is also relevant when drafting software license agreements. See Eric E. Bergsten, Comment, Patents–Licensing—Legality of Grant-Back Clauses, 55 Mich. L. Rev. 697, 709 (1957) (“When a patentee wishes to issue licenses containing a grant-back clause he has to go through the same type of analysis which a court must go through when called upon to evaluate the legality of such a clause.”).
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The view of the current state of law as predictions about what courts will do corresponds to the so-called *prediction theory* of law, often associated with Holmes. While this theory is associated with American legal realism, this does not mean that this thesis approaches law from an external perspective. Predictions are made from an internal perspective, systematizing, analyzing, and interpreting the authoritative sources that courts in the relevant legal systems would use. This method can be described as doctrinal legal research (German: *Rechtsdogmatik*). The task of this method “is to systematize and interpret valid law” in an attempt to create “coherent picture of law.” Since there is little legislation on legal method and legal sources in most legal systems, we are left with theories of legal method and legal sources. Such theories may be universalistic or applicable to one legal system. In a comparative study, it is necessary to be careful, especially when such theories include normative elements, and not take those theories at face value, since theory and practice may differ. A comparatist might have to overcome “folklore” about legal method and legal sources, and develop “a certain aware-

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250 See Lundmark, supra note 240, at 95–96 (In short, legal realists are: (1) Rule-Skeptics; (2) employing interdisciplinary approaches to law; (3) advocating “empirical approaches to law”; and (4) they are instrumentalists, seeing “the practice of law as political exercise.”).

251 See [*infra* section 1.4.5].


253 Aleksander Peczenik, *A Theory of Legal Doctrine*, 14 Ratio Juris 75, 75, 78–80 (2001); Alexy, supra note 252, at 253–254 (The tasks for legal dogmatics are: “(1) logical analysis of legal concepts, (2) unification of this analysis into a system, and (3) application of the results of this analysis to justify legal decisions.”).
ness as to which kinds of argument and modes of legal reasoning are generally regarded as acceptable and feasible in that system.” This is “acquired by observing the interpretative practices of the persons and institutions engaged in the application and interpretation of the law, typically, but not exclusively, the courts of that system.” That is, some reverse engineering of practical legal method may be required.

Due to the importance of predictions, this thesis has a doctrinal side, but stating the relevant law is only one objective. Going from what the law is to improving cross-national validity is of major importance. Predictions on how courts in different legal systems would act will be compared. The results will be used to create suggestions for improving cross-national validity. This tests the hypothesis of bridging national differences with cross-nationally applied contracts, and creates a potential legal solution for the single software market.

An important question is the potential bias of this method. If relevant law is developed primarily through case law, prediction certainty can be affected by what is commonly litigated. Litigation may be clustered towards certain questions due to: (a) Their importance among the parties; (b) procedural reasons; or (c) practical reasons. Such clustering could be described as litigation bias. In this thesis, there will be strong clusters and weaker clusters. Litigation bias could affect what is considered legal problems and what legal scholars choose to write about, that is, bias in the creation of legal writing (doctrine). And most importantly, due to litigation bias, certainty of predictions may vary between different questions. This is especially important since this is an area in constant development, and the highest judicial branches have not examined all questions.

254 Vogenauer, supra note 244, at 883–889.
255 Doctrinal legal research is not merely descriptive. It also includes “evaluative (normative) steps,” for example, analogies, e contrario arguments, or “goal-based reasoning in the law.” See Peczenik, supra note 253, at 79.
256 See supra section 1.3.2.
257 Examples of such strong clusters may include: (1) Validity of assent mechanisms; (2) whether software is licensed or sold; (3) validity of provisions prohibiting reverse engineering; and (4) validity of certain procedural provisions, primarily forum selection clauses, but not choice-of-law clauses under American law.
258 Examples of such weaker clusters may include: (1) Hardware restriction clauses, especially under competition law; (2) liability clauses; and (3) positive provisions such as data collection, non-exclusive grant-backs, and share-alike clauses.
259 See infra section 1.5.1 (Regarding sources from lower branches of the judiciary.)
Another potential problem with this method lies in its dogmatic nature. When faced with a new problem, cerebral energy might be spent on fitting the solution in pre-existing dogmas. The anti-dogmatic and functionalistic nature of comparative law might induce a healthy dose of skepticism against such dogmas. In that sense, the two methods used might support each other. Doctrinal legal research creates a systematic order; a comparative method adds the perspective of another legal system and brings a healthy dose of skepticism against dogmas.

1.4.2 A Comparative Legal Theory and Method

Studying cross-national validity requires a comparative legal method. Comparative law is a way to build bridges between legal cultures, and can simply be described as the “study of the relationship of one legal system and its rules with another,” or the “systematic study of particular legal traditions and legal rules on a comparative basis.” The essence of comparative law is to compare and determine similarities and differences.

Different comparative studies have different purposes. A comparative study can be useful to, for example, find new legal solutions to given problems, aiding the legislator, helping legal reforms and unifying law. But also to give a better understanding of the own legal system, allowing the comparatist to question aspects of the own legal system taken for granted. These examples can be described as “serving comparisons”; the comparison “serves” a legal system, often the legal comparatist’s “own” legal system. Another kind of

262 See Mary Ann Glendon et al., Comparative Legal Tradition: Texts, Materials and Cases on the Civil and Common Law Traditions, with Special Reference to French, German, English and European Law 6 (2nd ed., West Publishing: St Paul 1994).
264 Michael Bogdan, A Concise Introduction to Comparative Law 45 (Europa Law Publishing: Groningen 2013) (Thus, merely examining and presenting different legal systems in parallel is not comparative law.).
study can be described as “illustrative,” where the object of the comparison is to illustrate a question, problem, or phenomenon. This study is illustrative, by illustrating the problems with and solutions to national differences in a global market, but it does not attempt to serve a certain legal system.

While there is some consensus on what comparative law can achieve,267 there is no clear method of comparative law.268 But some important theories and considerations can be discerned, including: (1) Functionalism; (2) legal culture; (3) law in books, action, and practice; (4) taking context into account; and (5) language barriers, secondary sources, non-existent patterns, and subjectivism.

The concept of functionalism must be taken into account, that is, only rules and legal institutions that fulfill the same function (solve the same problem), can and should be compared.269 This may allow the comparatist to avoid the conclusion that a certain legal concept has no equivalent in the other legal system(s). Since this comparison focuses on contractual provisions and not rules per se, such challenges should not be insurmountable. Still, the concept of functionalism will be important when comparing rules and legal institutions relevant to software license agreements in different countries.

Another important concept is legal culture. Rules in the form of statutes and precedents are only the surface image of law. Law is a social subsystem that includes legal culture, and law cannot be understood without understanding the legal culture.270 Legal cultures can be divided into two large families: Western and non-Western legal cultures. A cross-cultural comparative study may require additional sociological and anthropological knowledge compared

267 Zweigert & Kötz, supra note 265, at 15–16; Bogdan, supra note 264, at 15–25.
269 Zweigert & Kötz, supra note 265, at 34–36 (Considering functionalism to be the most basic principle of comparative law. The theory is that legal systems largely face the same problems, but may solve these problems in different ways, while the results may still be similar.); Reitz, supra note 268, at 620–621; Bogdan, supra note 264, at 52.
1 Introduction

to an intra-cultural comparative study.\textsuperscript{271} The concept of legal culture raises
the question whether a legal scholar can really understand other legal cultures,
and by extension other legal systems. According to LEGRAND, this possibility
is very limited.\textsuperscript{272} I think that a comparatist has to be humbled by the task
of fully understanding another legal culture. Both law-as-rules and legal cul-
ture will be relevant to this thesis. But the difficulties of fully understanding
another legal culture should not make my research questions impossible. Still,
as a comparatist, it is necessary to be aware of these difficulties and consider
one’s work as a contribution to a discussion, not the final word.

Studying law in books and law in action, using the relevant methods and
sources of respective legal systems, is not always sufficient.\textsuperscript{273} It might also
be necessary to study relevant (legal) history, legal culture, philosophical, and
religious traditions.\textsuperscript{274} However, all potential aspects cannot be studied, and
comparative studies will inevitably be superficial,\textsuperscript{275} even though superficial
studies also contribute. My focus on “what the law is,” not what is should
be, decreases the importance of other knowledge, but knowing as much as
possible about the legal systems, including (legal) history, legal culture, philo-
sophical, and religious traditions is still advisable.

Erroneous conclusions might be drawn due to language barriers (linguis-
tical or terminological), the use of secondary sources, and a desire to see
patterns that might not exist. Comparative studies become subjective; the
selection of what is studied will be partly based on arbitrary decisions, since
the decisions are made before the comparatist has “full knowledge of relevant
facts.”\textsuperscript{276} Using translations to overcome language barriers might create other
problems.\textsuperscript{277} These problems must be taken into account, but several of them
can arguably be reduced by examining a larger corpora of sources; making

\textsuperscript{271} See Mark van Hoecke & Mark Warrington, Legal Cultures, Legal Paradigms and Legal
Doctrine: Towards a New Model For Comparative Law, 47 INT’L & COMP. L.Q. 495, 508–513
\textsuperscript{272} Legrand, supra note 129, at 74–81.
\textsuperscript{273} See Reitz, supra note 268, at 628–630.
\textsuperscript{274} Legrand, supra note 129, at 55–56; Grossfeld, supra note 261, at 9; Reitz, supra note
268, at 632.
\textsuperscript{275} Watson, supra note 266, at 10.
\textsuperscript{276} Id. at 10–12; de Cruz, supra note 263, at 220, 225–226.
\textsuperscript{277} Cf. Glenn, supra note 142, at 48–49 (According to one argument, translations are inac-
curate and deform the original meaning of expression. According to another argument, such
statements are exaggerations, both regarding the importance of the text, and of the difficulties
of human communication. Translations can be better or worse, and writings in one’s own
language may also be impossible to understand.).
it possible to create patterns and avoid inconstancies in the comparatist’s understanding, better understand the sources, and avoid sources that seem to lead astray.

### 1.4.3 The Choice of Comparandum

The choice of comparandum depends on the topic in question.\(^\text{278}\) Based on the research question(s) it becomes necessary to establish: (1) If the research question allows a choice of comparandum based on equal merits, or if the choice of one legal system is predetermined by the research question; and (2) the principles or merits for choosing legal systems.

The answer to the first question depends on the kind of comparative study conducted. In a serving comparison, the “served” legal system is predetermined by the study, and is the main object, while the other legal system(s) is a complement to provide additional insights or solutions. In an illustrative comparison, all legal system stands on equal footing, no legal system is predetermined and all systems are chosen on the same merits. This study belong to the second category, meaning that no legal system is predetermined and all legal systems should be chosen on the same merits.

My choice is based on two principles: (1) This kind of study requires legal systems that are representative for the study object; for example a phenomenon, a problem, or similar. Legal systems with leverage over software license agreement validity should be chosen. That is, legal systems where the application of software license agreements is common should be chosen. A transferor is presumably more likely to notice and resolve issues in legal systems with leverage. And (2) if several legal systems are equally important, clear differences between the chosen legal systems allow capturing different forms of issues. These two principles are also consistent with the principle of doing as much as possible with few legal systems.

My choice is not primarily related to legal families, a core concept of comparative law. Legal systems have traditionally been placed within different legal families for taxonomic and organizational purposes.\(^\text{279}\) Different legal scholars organize legal systems according to different taxonomies.\(^\text{280}\) For example,

\(^{278}\) Zweigert & Kötz, supra note 265, at 40–41 (A common solution is to choose central legal systems within legal families considered central for the topic in question.).


ZWEIGERT & KÖTZ\textsuperscript{281} and DAVID\textsuperscript{282} have presented well-known taxonomies, but other taxonomies, unknown to many (European) comparatists, also exist.\textsuperscript{283} Many scholars have heavily criticized both mainstream taxonomies and the concept of legal families as a whole.\textsuperscript{284} Some even claim that "the whole 'legal families' division is now collapsing."\textsuperscript{285} Thus, this seems like a good opportunity to discard legal families as a primary basis for choice of comparandum.\textsuperscript{286}

Software license agreement validity is important in legal systems with many (legitimate) transferees and transferors,\textsuperscript{287} based on current figures.\textsuperscript{288} Most

\textsuperscript{281} ZWEIGERT & KÖTZ, supra note 265, at 69–75 (Includes seven legal families: Romanistic, Germanic, Nordic, Common law, Socialist, Far Eastern, Islamic, and Hindi legal families.). This taxonomy has attracted criticism, for example on the ground that the legal families are not of a single genus, but a mixture of state and non-state law systems. See William Twinning, \textit{Globalisation and Comparative Law, in Comparative Law: A HANDBOOK} 69, 78 (Esin Örücü & David Nelken eds., Hart Publishing: Oxford 2007).

\textsuperscript{282} RENÉ DAVID, \textit{LES GRANDS SYSTÈMES DE DROIT CONTEMPORAINS} 21–31 (7th ed., Dalloz: Paris 1978) (Includes four major legal families: (1) Romano-Germanic Law; (2) Common Law; (3) Socialist Law; (4) Other legal systems based on religion and tradition, which includes Islamic, Hindu, Jewish, Far-Eastern, and African Law.) BOGDAN argues that DAVID’s taxonomy can arguably be pedagogical for a Western legal scholar, since its focus on Western legal systems overlaps with the interests of many Western scholars. See BOGDAN, supra note 264, at 75–76.

\textsuperscript{283} See Pargendler, supra note 280, at 1056–1060.

\textsuperscript{284} See, e.g., Örücü, supra note 279, at 169, 177 (For being Eurocentric (and North American-centric), as well as static, inadequate and irrelevant.); ZWEIGERT & KÖTZ, supra note 265, at 65, 67 (Focusing on private law and internal legal culture.); James Gordley, \textit{Comparative Law and Legal History, in THE OXFORD HANDBOOK OF COMPARATIVE LAW} 753, 761 (Mathias Reimann & Reinhard Zimmermann eds., Oxford University Press: Oxford 2006) (Arguing that isolating different "systems" might be difficult. For example, it might be difficult to think of German law as a "system," since the German code "incorporate[s] a conglomerate of ideas, developed over centuries, some incorporated because they had been traditionally accepted, some at the whim of the drafters.".). See also Pargendler, supra note 280, at 1043–1044.

\textsuperscript{285} Hoecke & Warrington, supra note 271, at 502.

\textsuperscript{286} It should be noted that while legal scholars seem to be abandoning the concept, economists have embraced legal families and have found empirical evidence for variations in economic and legal outcome. See Pargendler, supra note 280, at 1045–1046.

\textsuperscript{287} My point of departure is that a legal system’s importance is affected by software piracy rates. Transferors (and illegitimate transferees) are less likely to care about validity and its improvement when piracy rates are high. For an estimation of software piracy, see BUSINESS SOFTWARE ALLIANCE, supra note 95 (2011 global study) (In 2011, the global piracy rate of PC software was 42 percent. The piracy rate was 19 percent in the United States, 26 percent in Germany, 63 percent in Russia, and 77 percent in China.).

\textsuperscript{288} Importance may change over time due to: (1) Increased importance of the BRIC countries; and (2) reduced piracy rates might change this. Legal transfers are clearly increasing in the BRIC countries, but they still have a long way to go. See supra section 1.2.1 (Regarding
relevant data point in a certain direction. A handful of countries dominate software transfers (indirectly, most transferees). Most transferors can also be found in the same countries. If we adjust transferors for standard software, Europe becomes less important, while the United States and Japan become more important. Based on these different data sets, and based on the focus on standard software, we can clearly see that United States is the most important legal system from any perspective. A second tier includes Germany, Japan, France, Canada, Australia, Spain, the Netherlands, China, and India.

increasing importance of cross-national validity and the BRIC countries.). For the BRIC countries, increased leverage can be associated with: (1) Increased software use; and (2) reduced piracy rates. See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (Estimated collective piracy rates in the BRIC countries based on the above data: 2003 - 87 percent; 2007 - 75 percent; 2011 - 70 percent. Estimated total software use (legal transfers and illegal use) in the BRIC countries (millions of USD): 2003 - 6,682; 2007 - 19,239; 2011 - 25,581.). Other countries might be able to increase leverage by only decreasing piracy rates.

289 Business Software Alliance, supra note 95 (2011 global study) (Estimated shares of the global legal software market (software transfers) in 2011: (1) U.S. - 40 percent; (2) Japan - 7 percent; (3) Germany - 6 percent; (4) U.K. - 5 percent; (5) France - 5 percent; (6) Canada - 3 percent; (7) China - 3 percent. Data is calculated from estimated piracy losses and piracy rates.); Joel Kotkin & Shashi Parulekar, The State of the Anglosphere, in 22 City J. No. 1, 2012 (The top eight countries in software sales, as of 2009 (numbers are in millions of USD): (1) U.S. 450,000; (2) India, 34,000; (3) Canada 32,000; (4) U.K. 22,000; (5) Germany 21,000; (6) France 18,000; (7) Japan 12,000; and (8) Netherlands 3,000.).

290 See Michel van Kooten, Global Software Top 100 - Edition 2011, Software Top 100 (Aug. 23, 2011), <http://www.softwaretop100.org> (The largest software transferors in the world are primarily based in the United States, and also, for example, Germany, Japan, France, Sweden, and Finland).

291 Many large transferors focus on specialized software, enterprise software, and industry specific software. See Steven Casper, Mark Lehrer & David Soskice, Can High-technology Industries Prosper in Germany? Institutional Frameworks and the Evolution of the German Software and Biotechnology Industries, 6 INDUS. & INNOV. 5, 15–16 (1999) (“The German software industry is sometimes depicted as strong in the production of technically sophisticated customized software and weak in more standardized software products.”); van Kooten, supra note 290 (Among the top 25 undertakings, the European transferors are focused on enterprise and specialized software: SAP (Germany) [Enterprise software]; Ericsson (Sweden) [Industry specific software]; Nokia Siemens Network (Finland) [Industry specific software]; Alcatel-Lucent (France) [Industry specific software]; Dassault (France) [Enterprise software]; Sage (United Kingdom) [Enterprise software].).

292 See van Kooten, supra note 290 (Among the top 25 undertakings, the following undertakings develop software for consumer or business end users: Microsoft (U.S.); Symantec (U.S.); Nintendo (J); Activision Blizzard (U.S.); Electronic Arts (U.S.); Adobe (U.S.); Sony (J); Autodesk (U.S.); and Konami (J). Half of these undertakings, and all Japanese, develop games.). The focus of software revenue will arguably skew figures towards game developers, but this is acceptable.
Thus, the choice of the United States is simple. However, it is not possible to study the United States as a single jurisdiction. Software license agreement validity is dependent on many areas of law, both federal and state law. Many of these areas belong to private law, an area of law that is mainly within the competence of the States, with different results in different states. This means that one state, or preferably several to get a comprehensive view, must be chosen. California, Washington, and New York are three interesting states in this regard. Silicon Valley, CA, is the center of the majority of the computer and computer software industry. Washington and New York houses a number of software enterprises, for example, Microsoft in Washington, IBM and CA (formerly, Computer Associates) in New York. Certain software license agreements specify that California or Washington law should be applicable to any dispute. Additionally, all three states are populous with many software transferees, which increases the importance of validity. These three jurisdictions are also quite different. Most consumer protection is state law, and California and New York are on different sides in the consumer-friendliness spectrum, which could lead to interesting results.

The second tier of important legal systems is relatively far behind the United States. But the European Union has collective leverage, since applicable laws

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294 Black’s Law Dictionary, supra note 49, at 1316 (“The body of law dealing with private persons and their property and relationships.”).

295 Zweigert & Kötz, supra note 265, at 250.


297 New York is arguably of increasing importance. See, e.g., Emily Glazer, Google Web Grows in City, Wall St. J. February 29, 2012, at A23 (“Google Inc. has dramatically expanded its presence in Manhattan in the past year, adding roughly 750 people to its outpost in 2011 in the most prominent example of a technology company shifting its focus toward New York.” “Google’s expansion in New York—once seen as too expensive for tech start-ups—has helped fuel a perception that the city is in the midst of a technology industry boom. It comes as Facebook, Hewlett-Packard and other companies expand their New York presences.”); Florida, supra note 296, at C3 (“New York City’s Silicon Alley … is now home to more than 500 new start-up companies like Kickstarter and Tumblr.”).

298 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 12 (2013).

299 See Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 24 (2009) (If the software was acquired in the United States.).


to software license agreements are sometimes harmonized through positive or negative integration. This means that findings in one Member State of the European Union may sometimes be extendable to the other Member States. This has two consequences: (1) The American dominance becomes less pronounced; and (2) the United States and the European Union collectively dominate the single software market. While the European Union is important, European Union law only has a limited reach. There is little supranational European Union law that will be directly applicable to transferors. Much of the available European Union law that is relevant for software license agreement validity comes in the form of directives. Directives must be transposed into national law, and once they are correctly implemented, this becomes a question of national law. Also, not all relevant questions are even harmonized through directives. For such questions, unharmonized national law must be applied. Thus, it becomes necessary to choose one Member State of the European Union and study the national law of that legal system.

Among the Member States of the European Union, Germany is arguably the most interesting country since: (1) Germany is likely the most important software market within the European Union; (2) German law is clearly different from American law, adhering to the second principle of diversity, while,

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302 See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (Market share of the worldwide market: 2003 – United States 45 percent, European Union 33 percent, total 78 percent; 2007 – United States 42 percent, European Union 30 percent, total 72 percent; 2011 – United States 40 percent, European Union 28 percent, total 68 percent. The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011.).

303 These include Treaty provisions, regulations, and decisions. See Case 26/62, NV Algemene Transport- en Expedite Onderneming van Gend en Loos v. Nederlandse Administratie der Belastingen, 1963 E.C.R. 1 (Foundations of direct effect.); Craig & de Búrca, supra note 128, at 183–191 (Regarding the requirements for direct effect of Treaty provisions, the horizontal and vertical direct effect of Treaty provisions, and the direct effect of regulations and decisions.); Article 288 TFEU (Binding effect of regulations and decisions.).

304 See infra section 1.5.2 (Regarding the relationship between the European Union and the Member States.).

305 See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (Germany’s estimated share of the global legal software market (software transfers): 2003 – 9 percent, 2007 – 7 percent, 2011 – 6 percent. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.). But cf. Kotkin & Parulekar, supra note 289 (The United Kingdom is the most important European market in this study.) However, the first study is arguably more reliable since it: (1) Has an available comprehensive data set, and the study has been repeated for almost ten years; and (2) describes the used method.
for example, English law is more similar to American law;\textsuperscript{306} and (3) German law, for example, the German civil code has influenced civil codes of other legal systems.\textsuperscript{307} Although Germany is a federation, the substantive rule-making ability in matters applicable to software license agreements is retained at a federal level in Germany, unlike the United States,\textsuperscript{308} meaning that it does not become necessary to study the laws of specific states (\textit{Länder}).

Germany and the United States sounds like a textbook example of a comparative study, since it fits within the above rejected concept of legal families. Germany is traditionally considered a prime example of a civil law legal system,\textsuperscript{309} and the United States is traditionally placed within the common law legal family. Simply choosing one civil law legal system and one common law legal system has been a common approach in comparative law. However, legal family was not a primary principle for choice, even though differences was a secondary principle.\textsuperscript{310} My choice can be accused of being Western-centric. However, the data shows that my subject is still currently Western-centric.\textsuperscript{311} The Indian software market is a major contributor to the Indian

\textsuperscript{306} Or rather, American law is more similar to English law than German law. \textit{Cf.} E. Allan Farnsworth, \textit{An Introduction to the Legal System of the United States} 7 (3rd ed., Oceana Publications, Inc.: New York 1996) (Regarding the “unmistakable family resemblance to the laws of England.”).

\textsuperscript{307} Including other European legal systems, South American legal systems, and Asian legal systems, for example, China and Japan. \textit{See} Nigel Foster & Satish Sule, \textit{German Legal System and Laws} 3, 32–33 (4th ed., Oxford University Press: Oxford 2010); Glenn, \textit{supra} note 142, at 345–346–54 (Even though the adaption and practice of the Japanese civil code is Japonic to its nature, and that Japan has also been influenced by U.S. law since World War II.); Liang Huixin, \textit{Some Issues About the Codification of the Chinese Civil Code}, 1 \textit{China L. Rev.} 27, 32–34 (2005).


\textsuperscript{310} The U.S. would arguably not be the best choice of a common law legal system either, since it is not a “typical” common law legal system. \textit{See} Glenn, \textit{supra} note 142, at 263–269 (American law has borrowed several ideas from civil law, such as rights, and civil law structures and sources of law. American legislation include civil law features, such as codes, for example civil codes and codes of civil procedure, and the civil law tradition of broad, liberal interpretation of legislation.). The idea of civil law legal systems is also challenged; through general clauses in statutes, and a growing importance of case law, both on a national and European Union level. \textit{See} Zweigert & Kötz, \textit{supra} note 265, at 268.

\textsuperscript{311} \textit{See} Business Software Alliance, \textit{supra} note 95 (2011 global study); \textit{Business Software Alliance}, \textit{supra} note 95 (2007 global study) (China’s estimated share of the global legal software market (software transfers): 2003 - 0.7 percent, 2007 - 1.9 percent, 2011 - 2.5 percent; India’s estimated share of the global legal software market (software transfers): 2003 - 0.3 percent, 2007 - 1.2 percent, 2011 - 1.6 percent. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.).
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Export market, but focuses on outsourcing and specialized software. Xue, a Chinese scholar, considers the Chinese software market to lag behind Western countries, and notes that relevant Chinese case law is limited. But these and other legal systems are likely to become more important in the future. Thus, my choice might seem conventional, but is principled, not habitual.

My choice of comparandum omits my “own” legal system (Sweden). The inclusion of one’s own legal system in a comparative study might be considered obvious, a sine qua non. But for this kind of comparative study, no legal system is given, and all legal systems must be chosen on their own merits. Sweden cannot be chosen on the same merits, representativity with leverage, as the chosen legal systems; Sweden lacks leverage since it has few transferees compared to Germany and the U.S., making Sweden a bad choice as a third legal system, and making the laws of more prominent legal systems important for export-dependent Swedish transferors. If the existence of invalidity would be an end in itself, it could be interesting to choose legal systems that are very different from each other. But Sweden is not sufficiently different for that purpose. My legal training in the Swedish legal system

312 New segments, for example niche companies focusing on, for example, embedded software now also contributes to the Indian software market. See Athreye, supra note 60, at 7–8, 32.
313 See Xue, supra note 231, at 88, 90 (While China “possesses a large amount of professional software vendors who are able to design software independently,” “China still mainly depends on imported software and its software … is still much behind western countries.” Also, the lack of material can be problematic: “[T]here has been no recorded cases based on Shrink-wrap licenses in China.”).
314 For “serving” comparisons this might be justifiable.
315 See Business Software Alliance, supra note 95 (2011 global study); Business Software Alliance, supra note 95 (2007 global study) (Sweden’s estimated share of the global legal software market (software transfers): 2003 - 1.3 percent, 2007 - 1.3 percent, 2011 - 1.4 percent. In the period 2003–2011, the growth was 808 M USD or 124 percent, slightly above the worldwide average at 106 percent. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.). Sweden’s relative leverage adjusted for population is clearly better than China and India, but only absolute leverage is interesting.
316 That place should probably go to Japan, United Kingdom, France, or Canada.
317 Granted, there might exist a separate Nordic legal family. See Mattias Derlén, A Castle in the Air — The Complexity of the Multilingual Interpretation of European Community Law 53–57 (Diss. Print & Media: Umeå 2007). However, this is less important than the fact that both Germany and Sweden are members of the European Union. As we will see, many findings can be extended to the entire European Union. If invalidity would be an end in itself, a legal system from a non-Western legal culture would be better. Cf. Hoecke & Warrington, supra note 271, at 508–513 (Regarding cross-cultural and intra-cultural comparisons, Western and non-Western legal cultures).
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and legal culture could be a final argument for inclusion.\textsuperscript{318} But this advantage cannot compensate for lack of material; relevant Swedish legal materials are relatively sparse compared to the United States and Germany.\textsuperscript{319} This would make a continuous mapping of all relevant questions under Swedish law difficult, even though certain questions could be answered under Swedish law.\textsuperscript{320} Including Sweden in this study would arguably make it a fifth wheel, and not significantly improve the thesis.\textsuperscript{321} Still, it might be possible to use Swedish/Nordic, as well as, for example, French or English secondary sources to explain secondary European Union law. It should be noted that studying only “foreign” legal systems could increase the risk of making mistakes.\textsuperscript{322} But it is very easy to become blind for one’s own legal system, so only studying “foreign” legal systems has its advantages as well. In the end, omitting my “own” legal system for other legal systems is the most reasonable choice for my research questions.

\textsuperscript{318} In theory, this could allow me to dig deeper into the subject since I presumably have a deeper knowledge about the Swedish legal system than about the German and American legal system.

\textsuperscript{319} Granted, case law is generally limited for copyright transfers in Swedish law, since the parties often settle, and there are few and limited specific rules for copyright transfers, requiring a fallback on contract law’s general rules. See Jan Rosén, Upphovsrättens avtal 108 (3rd ed., Norstedts Juridik: Stockholm 2006). The situation is different for software license agreements in United States, and to a lesser extent in Germany, where courts have been given ample opportunities to reflect on many different relevant issues, laid down important rulings, and given me material for a book. More episodic knowledge on relevant issues for other countries may be more useful for articles.

\textsuperscript{320} Rosén has previously examined a number of questions relevant to software license agreements, mostly related to the European Union Software Directive. See Jan Rosén, Swedish Software Law: As Related Primarily to EC Directives 31–99 (Skriftserien No. 46, Juridiska fakulteten vid Stockholms universitet: Stockholm 1996) (Regarding for example distribution exhaustion, validity of shrink-wrap license agreements, provisions prohibiting reverse engineering and decompilation, contractual and tortious liability, and the relevance of contract law content control and competition law to software contracts.); Rosén, supra note 319, at 261–284 (Regarding for example validity of shrink-wrap license agreements, the right to use transferred software, creation of copies, decompilation, and reverse engineering.).

\textsuperscript{321} This does not make Swedish law uninteresting for this subject, but mapping of Swedish law would likely be better in a freestanding work.

\textsuperscript{322} This problem is primarily related to choosing and interpreting relevant legal material, which arguably can be overcome. See infra section 1.5 (Regarding my choice of material.).
1.4.4 Comparative Process and Structure

Most comparative studies follow a certain process.\textsuperscript{323} For example: (1) Identifying law; (2) identifying similarities and differences; (3) explaining similarities and differences; and (4) (critical) evaluation.\textsuperscript{324} The first step requires identification and description of the relevant elements of the law.\textsuperscript{325} The second step requires identification of similarities and differences with respect to functions.\textsuperscript{326} The third step is to explain similarities and differences in order to contextualize them.\textsuperscript{327} The fourth and final step is to critically evaluate the compared legal systems. This step can be important\textsuperscript{328} but can be difficult, since: (1) This requires knowledge about the social context and purpose of the legal rule;\textsuperscript{329} and (2) there is a risk of being regarded as chauvinistic, if failing to completely understand arrangements that is peculiar from the comparatist’s viewpoint.\textsuperscript{330} The primary study object in this thesis is software license agreements, not the underlying applicable law. My critical evaluation will focus on software license agreements and not law, therefore avoiding this problem.

There are two main views on how a comparative study should be structured: (a) Each legal system is offered objective separate reports, followed by a comparison, so that the reader can make comparisons;\textsuperscript{331} or (b) a comparative structure that emphasizes the comparative aspects, and avoids repeat-

\textsuperscript{323} See, e.g., Zweigert \& Kötz, supra note 265, at 43–47; de Cruz, supra note 263, at 240–246; W. J. Kamba, Comparative Law: A Theoretical Framework, 23 Int’l \& Comp. L.Q. 485, 511–512 (1974); Bogdan, supra note 264, at 45–67 (Comparison, explanation, and evaluation.).

\textsuperscript{324} See Zweigert \& Kötz, supra note 265, at 43–47. The comparative process may also include fewer steps. See, e.g., Kamba, supra note 323, at 511–512; Bogdan, supra note 264, at 45–67.

\textsuperscript{325} Zweigert \& Kötz, supra note 265, at 34–35, 43–44; Reitz, supra note 268, at 628–630 (By: (a) Adhering to functionalism; (b) using the way of legal reasoning, methods, and materials as domestic scholars; (c) examining law in action through court opinions and legal doctrine; and (d) examine elements outside the law to take its context into account.). But see Bogdan, supra note 264, at 45 (Considering this to be a pre-step, outside the realm of comparative law.).

\textsuperscript{326} Zweigert \& Kötz, supra note 265, at 43–44; Bogdan, supra note 264, at 45.

\textsuperscript{327} Bogdan, supra note 264, at 55–62 (Larger explanatory models, such as economy, politics and ideology, religion, history and geography, demographic factors, or interaction with other controlling instruments, can explain similarities and differences and differences.).

\textsuperscript{328} Zweigert \& Kötz, supra note 265, at 47 (Arguing that there is an obligation to evaluate, since no one else will make the evaluation if the comparatist does not do it.).

\textsuperscript{329} See Bogdan, supra note 264, at 39–41.

\textsuperscript{330} See Reitz, supra note 268, at 634–635.

\textsuperscript{331} Zweigert \& Kötz, supra note 265, at 43.
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The mapping is divided into: (1) Software license agreement formation, modification, and severability; and (2) substantive validity. Each section is divided into: (a) Formal requirements/obstacles; and (b) mapping against these requirements/obstacles. To make the mapping of substantive validity more readable, provisions are structured into the following categories: (1) Negative; (2) positive; (3) procedural; (4) liability; or (5) other. This taxonomy aims to be simple yet flexible. The first category require transferors or transferees to refrain from doing something, the second category requires or allows transferors or transferees to do something, the third category concerns procedural questions, and the fourth category concerns transferors' liabilities and limitations to liabilities. The last category attempts to catch provisions that might be difficult to classify, but such provisions will not be mapped in this thesis.

1.4.5 Methods of German and American Law

To adhere to the requirements of comparative theory and method, validity under German and American law must predicted using the relevant methods and legal sources of each legal system. German and American legal sources that are relevant to my research questions will be collected. These sources must be systematized and analyzed in accordance with the German and American positions on what constitute sources of law, and their priorities. These sources must then be interpreted according to the accepted practices of each legal system.

Legal method directions are seldom found in legislation, and a comparatist is commonly left with different theories about legal method. Such theories about American and German legal method become important. The brief and simplified description of, or theory about, the American legal method is that it focuses on case-law analysis, where precedents are studied, and rules and principles are extracted from these cases that later can be applied to other similar situations. The brief and simplified description of the Ger-

332 Reitz, supra note 268, at 633–634.
333 See supra section 1.2.7.
334 Vogenauer, supra note 244, at 886–889.
336 Zweigert & Kötz, supra note 265, at 259, 263. See also James Gordley, The Common
German legal method is that it focuses on the hierarchy of legal provisions, and whether the facts of a situation match the conditions of a legal provision. In practice, it might be necessary under this method to interpret legal provisions or to fill out unintended legal gaps. The German legal method includes applying European Union law. There is no uniform method for doing that, which has been met with concern by some German legal scholars, arguing that they cannot use the German legal method, with German interpretation modes, to primary and secondary European Union law, and have called for a uniform European legal method. While it could be possible to discern some methodological principles from European Union case law, this arguably overcomplicates things. Much of the European Union law applicable to software license agreements comes in the form of directives, which have been transposed to German law. When applying transposed national law, it might be necessary to examine transposed law through the light of European Union law, to ensure conform interpretations of European Union law. This can simply be described as the German method updated with the demands set by European Union law.

While there are differences in legal methods between these legal systems, these differences should not be exaggerated. The civil law legal method is not a mechanical application of well-defined provisions, and the common law method does not seek narrow decisions, but general principles that can be applied in similar situations. General clauses in civil law systems might require

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*Law in the Twentieth Century: Some Unfinished Business*, 88 Cal. L. Rev. 1815, 1818 (2000) (Courts do sometimes refer to general principles or rules in their rulings. However, scholars and courts might extract different rules and principles that better explain the result of that case and other similar cases. In that situation should the latter rules and principles be used as statements of the law. The principle is that “law is what judges do, not what they say.”).  
337 Foster & Sule, *supra* note 307, at 73–74. For a more detailed “outline” of German legal method, see Müller, *supra* note 252, at 121–263.  
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Judicial lawmaking,\(^{340}\) many American states have civil codes,\(^{341}\) and American statutes might require interpretation,\(^{342}\) which is performed similarly to civil law systems.\(^{343}\) Thus, it is necessary to avoid broad generalizations and simplifications about legal method.

While these theories about legal method in different legal systems are helpful, it might still be necessary to overcome the “folklore” in those theories. Thus, it might be necessary to develop awareness about acceptable legal arguments and legal reasoning used by courts in Germany and the United States when applying and interpreting the law.\(^{344}\)

1.5 Material

The examined software license agreements and provisions determine necessary legal sources for these jurisdictions.\(^{345}\) Thus, a selection of material is based on my research questions and studied software license agreements. But: (1) Different legal systems recognize different legal sources and examine and value those sources differently; and (2) access to relevant sources of good quality is required. This will be examined below.

1.5.1 German and American Legal Sources

In most legal systems, there is no legislation about what constitutes a source of law. This is instead often elaborated in different theories about sources of law. These may be: (a) Universalistic;\(^{346}\) or (b) particular to each legal system.\(^{347}\) Legal systems differ on what constitutes a source of law. In some legal systems, something can only be “a ‘source of law’ if the persons framing legal solutions to given fact patterns are under an obligation to take the relevant item into account.” In other systems, a broader definition is used, also including sources

\(^{340}\) Zweigert & Kötz, supra note 265, at 259–271.
\(^{343}\) Glenn, supra note 142, at 253–264; Farnsworth, supra note 306, at 75–78.
\(^{344}\) See Vogenauer, supra note 244, at 888–889.
\(^{345}\) See supra section 1.3.4 (Regarding principles choosing software license agreements.).
\(^{346}\) See, e.g., Hart, supra note 248, at 100–123 (Arguing that there is a rule of recognition enabling courts and others to identify what counts as law.); Hans Kelsen, General Theory of Law & State 115–123 (Transaction Publishers: London 2005) (Arguing that there is a basic norm (Grundnorm) in every legal system that all other legal rules derive from.).
\(^{347}\) Vogenauer, supra note 244, at 880–885.
that “may be taken into account.”\textsuperscript{348} An example of the latter could answer the following questions: What legal sources are authority reasons, which sources must, should, or may be used as authority reasons, and the priority of these sources.\textsuperscript{349} As a comparatist, it is necessary to be suspicious about these theories about legal sources. It is necessary to separate folklore from reality, “and develop a certain sensitivity as to what is regarded as a source of law and as to how various sources are perceived to be ranked in the other system.”\textsuperscript{350}

If we try to describe the folklore, we see that German and American law have different views on what constitute legal sources, their relative importance, and how to use them in legal reasoning. However, both the American and German legal system divides legal sources into a hierarchical order and into hierarchical groups (primary and secondary sources).\textsuperscript{351}

Primary legal sources of the American legal system constitutes of case law, the constitutions (both the federal and state constitutions), legislation, rules of court, rules, regulations, and opinions of administrative agencies. Secondary sources constitutes of statements about the law, which are used to explain, interpret, develop, locate, or update primary sources.\textsuperscript{352} The United States adheres to the doctrine of the binding force of precedents, meaning that courts settle disputes for future cases, and that decisions laid down by superior courts binds lower courts for similar situations.\textsuperscript{353} The federal structure, with separate judicial branches for state and federal law, and ability for both federal and state governments, and their respective legislative, executive and judicial branches to create law,\textsuperscript{354} leads to an abundance of sources. However, the federal structure limits conflicts between sources.\textsuperscript{355}

\textsuperscript{348} Id. at 878–879.
\textsuperscript{349} Peczenik, supra note 253, at 76–80.
\textsuperscript{350} Vogenauer, supra note 244, at 883–885.
\textsuperscript{351} Mersky & Dunn, supra note 342, at 2–3; Anke Freckmann & Thomas Wegerich, The German Legal System 31–32 (Sweet & Maxwell: London 1999).
\textsuperscript{352} Mersky & Dunn, supra note 342, at 2; Farnsworth, supra note 306, at 61–71, 83–89.
\textsuperscript{353} Mersky & Dunn, supra note 342, at 4, 6 (There are some limitations and practicalities in regard to this: (1) The Supreme Court is not bound by its own precedents; (2) the specific circumstances of a case are probably never completely applicable to future circumstances; and (3) lower courts will sometimes overrule earlier decisions.); Zweigert & Kötz, supra note 265, at 265.
\textsuperscript{354} Mersky & Dunn, supra note 342, at 2, 4.
\textsuperscript{355} (1) The federation has exclusive competence over matters covered by the federal Constitution. See U.S. Const. Art. I, Section 8. And (2) in a conflict between federal and state law, the federal law will have precedence over state law. See U.S. Const. Art. VI.
German law formally only recognizes two sources of law, statutes and customary law. Case law is not a formal legal source.\textsuperscript{356} Formally, courts should not create law, in order to uphold the separation of powers.\textsuperscript{357} The basic rule is that there is no doctrine of binding force of precedents.\textsuperscript{358} In theory, courts are free to decide without regard to previous decisions, not even by higher courts.\textsuperscript{359} But the reality is somewhat different. Judgments and the application of European Union law are arguably two modern additional sources.\textsuperscript{360} Courts blur the line between interpretation and creation of new law.\textsuperscript{361} And courts pay regard to previous decisions from higher courts, and later decisions over earlier decisions.\textsuperscript{362} The writing of legal scholars (doctrine) also has considerable authority in practice.\textsuperscript{363} Customary law exists as an own category, both on a federal level and on \textit{Land} level, but it has mainly been codified.\textsuperscript{364}

\textsuperscript{356} Foster \& Sule, \textit{supra} note 307, at 5–7, 49.
\textsuperscript{357} See Grundgesetz für die Bundesrepublik Deutschland [Grundgesetz] [GG] [Constitution] May 23, 1949, Bundesgesetzblatt [BGBl.] 1, art. 20(3), 97 (Ger.) (Regarding the independence of courts.); Deutsches Richtergesetz [DRiG] [German Judiciary Act] September 8, 1961, BGBl. I at 1665, § 4(1) (Ger.) (Active judges cannot also perform legislative or executive duties.). See also Foster \& Sule, \textit{supra} note 307, at 52–53 (The exception to this rule is the Bundesverfassungsgericht (Federal Constitutional Court.).).
\textsuperscript{358} The main exception is the Federal Constitutional Court. See Gesetz über das Bundesverfassungsgericht [Bundesverfassungsgerichtsgesetz] [BVerfGG] [Federal Constitutional Court Act] March 12, 1951, BGBl. I at 243, § 31 (Ger.) (Decisions are binding.). Some minor procedural exceptions also exist, see Foster \& Sule, \textit{supra} note 307, at 53–55.
\textsuperscript{359} Foster \& Sule, \textit{supra} note 307, at 5–7; Freckmann \& Wegerich, \textit{supra} note 351, at 37.
\textsuperscript{360} Foster \& Sule, \textit{supra} note 307, at 49. See generally Alexy, \textit{supra} note 252, at 274, fn. 169 (Regarding the scholarly discussion for and against precedents as a source of law.).
\textsuperscript{362} Foster \& Sule, \textit{supra} note 307, at 6–7, 53–55. There are “no major differences of practical relevance between” the common law and civil law legal families. See Vogenauer, \textit{supra} note 244, at 894–895; Zweigert \& Kötz, \textit{supra} note 265, at 259–264. Still, courts have room for deviations. See Alexy, \textit{supra} note 252, at 274–279 (Regarding the always existing differences between two cases, and the theoretical burden of argument rule for deviating from precedents in identical cases.).
\textsuperscript{363} Foster \& Sule, \textit{supra} note 307, at 6–7, 137; Freckmann \& Wegerich, \textit{supra} note 351, at 32, 37.
\textsuperscript{364} Freckmann \& Wegerich, \textit{supra} note 351, at 36.
The federal structure leads to a duality of sources, but the federal structure limits conflicts between them.

One difference between Germany and the United States is the use of secondary sources. They are considered more important for the application of law in Germany than in the United States. Another difference between Germany and the United States is the relationship between the federal state and the members of the federation. Especially within private law, which is very relevant for this subject. In the United States, this is mainly within the competence of the States, and statutes and case law has developed differently in different states. In Germany, the Länder have concurrent lawmaking power with the Bund (Federation) over private law, but the Länder’s power is preempted if the Bund has enacted law in the same matter, and the Bund has acted in this area, so federal law will be applied. Since Germany is a member of the European Union, European Union sources become relevant. Under the quasi-federal structure of the European Union, European Union law has supremacy over national law.

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365 Id. at 33 (There are both federal laws and Land (state) laws.).
366 The German Constitution binds all other legislation, and federal law will take precedence over Land law in a conflict. See Grundgesetz [GG] art. 1(3), 20(3), 31 (Ger.).
367 Lundmark, supra note 240, at 103–106, 124–125 (Arguing that “Germany has reliable, accurate, and up-to-date secondary materials.” And that “there is a marked tendency [among German courts] to apply the rules found in commentaries in a literal fashion.” But “secondary authorities are accorded much less weight than case law in the United States.”). One explanation of the usefulness of German secondary sources may be the doctrinal focus of German legal scholarship. See supra section 1.3.5.
368 Zweigert & Kötz, supra note 265, at 250.
369 The Länder have the right to legislate, except when power has been conferred to the federal state (Bund). Certain areas are under the exclusive competence of the Bund, while the Bund and the Länder have concurrent lawmaking over some areas, such as private law. See Grundgesetz [GG] arts. 70(1), 71, 73, 72, 74(1) (Ger.).
370 Grundgesetz [GG] art. 72(1) (Ger.). There are exceptions where the Länder may still enact laws in certain respects, but these exceptions are not applicable to this thesis. See Grundgesetz [GG] art. 72(3) (Ger.).
supremacy has been hotly debated in Germany. However, supremacy and transfer limitations will not be a practical issue for this thesis, since most relevant laws have been transposed to German law. Still, it might be useful to use secondary sources to explain secondary European Union law, and those sources may also originate from outside Germany.

Relevant Sources
Using the above principles of applicable legal sources in these legal traditions, relevant sources must be chosen. Primary sources should have precedence, but secondary sources are also important to explain concepts and aspects that are not explained by primary sources, or to clarify or contextualize certain aspects in primary sources. For a number of reasons, the amount of relevant American legal sources is greater than the amount of relevant German legal sources, but there is not an insufficient amount of German sources; the American corpora of sources is only very rich.

Sources must not only be relevant; access, accessibility, and quality are also important. For a comparative study, the material at hand can be limiting. A comparatist often has access to fewer sources than a domestic scholar, and the available sources may also be different than the sources that a domestic scholar would use. However, this is not likely to be a problem for primary sources, and not a major problem for secondary sources either. Accessibility, or the ability to benefit from sources, is mostly a question of language comprehension. Most relevant material in this field is written in English, with the addition of German material for German law. It is not likely that articles written in other languages would be relevant to this thesis.

The quality of primary sources is primarily a question about the legal value of case law, especially under American law. This subject is in constant development, and the legal value of relevant case law varies. When available, case law from the highest judicial branches will be used. But the highest branches have not always laid down the law in every relevant question, even for questions that

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372 See Craig & de Búrca, supra note 128, at 273–283.
373 For example: (1) The American emphasis on case law and the greater number of litigations concerning software license agreements in the United States, leading to a greater number of cases to cite; and (2) the much larger American scholarly focus on this subject in the United States, leading to more American secondary sources.
374 Reitz, supra note 268, at 630–631.
375 Most standard software license agreements do not contain arbitration clauses. Lawsuits end up in ordinary courts. Additionally, arbitration clauses are not always effective when used either. See Comb v. PayPal, Inc., 218 F.Supp.2d 1165, 1177 (N.D. Cal. 2002).
have been examined by lower courts for more than 20 years. Still, lawyers must be able to reason and give legal advice for such questions. Thus, analogies and decisions by lower courts must be used to fill in such areas as the second best option. Decisions from lower courts may have some precedent effect and be the currently closest approximation of the law. They may also be able to explain the precedents of superior courts in a relevant context. Their legal value may change over time, but these cases are the currently best available material. Regarding case law in general, caution should be taken to the implications of individual judgments, since all cases are dependent on their specific circumstances, which are probably not completely applicable to future situations.

The value of secondary sources is primarily determined by their legal reasoning, using correct methods and materials. Citation frequency is also a quality marker, and gives a comparatist some guidance on domestically relevant sources. Due to the fast-paced nature of this subject, caution has been observed with regard to age. Certain material from the 1990s was based on ideas that later became largely irrelevant. Proximity in time is also a problem. In an area where law and technology moves quickly, it becomes easy to become too attached to current ideas that might be considered irrelevant in hindsight.

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376 This certain questions specific to software license agreements, but also more general legal questions. For example, personal jurisdiction. See Peter Singleton, *Personal Jurisdiction in the Ninth Circuit*, 59 Hastings L.J. 911, 912 (2008) (“In many respects, personal jurisdiction law is the law of the federal circuit courts.”); Robert J. Condlin, “Defendant Veto” or ‘Totality of the Circumstances’? It’s Time for the Supreme Court to Straighten Out the Personal Jurisdiction Standard Once Again, 54 Cath. U. L. Rev. 53, 147 (2004) (“It has been twenty years since the decision in Burger King, the last of the Court’s major personal jurisdiction decisions, and confusion and disagreement are the order of the day.”).

377 Methodologically, they might require additional reflection.

378 However, their outcome has often been constant in several lower court rulings over several years.

379 See Mersky & Dunn, supra note 342, at 6.

380 Cf. Eric S. Raymond, *The Cathedral & the Bazaar* 30 (Revised ed., O’Reilly Media: Sebastopol 2001) (“Given enough eyeballs, all bugs are shallow.”). Widely read and cited sources have been scrutinized by other legal scholars. Most faults in such articles have probably been discovered, commented, or fixed.

381 But: (1) Older material can give some continuity to fast-paced subjects; and (2) all problems in this subject are not necessarily new, solutions might also be found in the past and in other areas.

382 For example, legal scholarship about UCITA. See infra section 3.1.2 (Regarding the UCITA as a solution and its failings.). Still, UCITA’s failings can be a useful lesson.

383 For example, legal aspects of the so-called “Year 2000 bug,” might seem amusing in hindsight, but was probably considered very relevant at the time.
1 Introduction

1.5.2 Applicable Levels of Law

Applicable substantive law for cross-national transactions can be found on different levels, and these levels may be more or less harmonized. Applicable substantive law may even be decentralized within legal systems. Decentralization of substantive law can lead to an increased risk of differences between jurisdictions, even within legal systems. Decentralization makes it more difficult to know what the law is within legal systems, meaning that less energy can be spent on overcoming cross-national differences. The existence of substantive law at different levels raises questions: (1) What happens in a conflict; and (2) what level should be applied?

What Happens in a conflict?

Existence of substantive law at different levels raises a number of questions, especially what happens in a conflict between different levels. This is primarily a question in federations, where both overlapping issues and the same issue might be regulated in different levels of law. This might lead to complicated questions of competence and precedence between the federation and the individual states / Länder. This conflict can be resolved through the doctrine of preemption. This doctrine plays an important function under both American and European Union law. Under American law, the doctrine of preemption originates from constitutional law, stating, “that a federal law can supersede or supplant any inconsistent state law or regulation.” The doctrine is also

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384 See Ted Janger, The Public Choice of Choice of Law in Software Transactions: Jurisdictional Competition and the Dim Prospects for Uniformity, 26 BROOK. J. INT’L L. 187, 188–189 (2000) (Noting that “[s]ubstantive law … for multi-jurisdictional transactions can be generated in a number of ways:” (1) “Non-uniform state law … or national law”; (2) “Uniform state law (à la the UCC) or national law (à la UNIDROIT or UNCITRAL);” or (3) “Supra-state or supra-national law,” for example, federal law or European Union law.).

385 See Ponte, supra note 83, at 154 (“The disagreement between courts on issues of unconscionability and public policy makes it difficult for online businesses to uniformly and efficiently process online consumer transactions across state borders.”).

386 Amedeo Arena, The Doctrine of Union Preemption in the E.U. Internal Market: Between Sein and Sollen, 17 COLUM. J. EUR. L. 477, 479, 487–498 (2011); Case C-478/07, Budevovicky Budvar, national podnik v. Rudolf Ammersin GmbH (Budweiser), 2009 E.C.R. 1-07721, Opinion of AG Colomer, 5 February 2009, para. 93 (“What we have here ultimately is the debate about Community ‘pre-emption’ of a measure and the situations in which the concurrent competences of the Member States in a particular field may have been displaced by the activity of the Community legislature.”).

found in other federal states, such as Germany,\textsuperscript{388} and even quasi-federal entities such as the European Union.\textsuperscript{389}

Under American law, the constitutional Supremacy Clause gives federal law precedence in a conflict with state law.\textsuperscript{390} But it is presumed that state laws should not be preempted, unless “that was the clear and manifest purpose of Congress.”\textsuperscript{391} Preemption can be express or implied, that is, preemption can be expressly found in a statute’s language, or it can be implied through the structure and purpose of the statute.\textsuperscript{392} Three different types of preemption can be distinguished:\textsuperscript{393} (1) Field preemption, if Congress, acting within constitutional limits, has completely “entirely displaced state regulation in a specific area,” or if Congress “evidences an intent to occupy a given field”;\textsuperscript{394} (2) obstacle preemption, usually when state law “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress”;\textsuperscript{395} and (3) rule preemption, when there is an “actual conflict with the law of the state”;\textsuperscript{396} that is, “when it is impossible to comply with both state and federal law.”\textsuperscript{397}

Under European Union law, the modes of preemption are a bit less clear, but it has been argued that preemption is implied. Preemption takes different forms; it takes the “conceptual-federalist approach” when the Union has exclusive competence, and it takes a pragmatic approach when the Member States have retained concurrent lawmaking power. Preemption can be divided into the following categories: (1) Field preemption, where national regulation is considered illegal when the Union has occupied a field; (2) obstacle pre-

\textsuperscript{388} See Grundgesetz [GG] art. 72(1) (Ger.).


\textsuperscript{390} U.S. Const. Art. VI.


\textsuperscript{392} Fid. Fed. Sav. & Loan Ass’n v. de la Cuesta, 458 U.S. 141, 152–153 (1982).


\textsuperscript{396} Savage v. Jones, 225 U.S. 501, 533 (1912).

emption, when national actions would “endanger the objectives,”398 “obstruct the working,”399 or “interfere with the proper functioning” of any European Union legislation,400 even if that legislation has not exhausted all other legislation; and (3) rule preemption, when there is a direct conflict between national and Union legislation.401

Preemption (Sperrwirkung) also exists in German law.402 When the Bund and the Länder have concurrent lawmaking power, such as over civil law (das bürgerliche Recht),403 the Länder are preempted from legislating when the Bund has acted,404 which is the situation in civil law. Due to the Länder’s limited substantive lawmaking power, preemption under German national law does not become as important as under American and European Union law.

Thus, both American and German law, including European Union law, has mechanisms to prevent conflicts. Preemption is of primary importance to legislators, but also courts when deciding what the law is. The doctrine can also, at least theoretically, become applicable to software license agreements, if: (1) enforcing a software license agreement would create obstacles to the purpose of legislation, or if conflicting with a specific rule; and (2) if a software license agreement relies on a law that becomes preempted.405

What Should be Applied? The Relationship Between Germany and the European Union

The question of what level of law should be applied is complicated further in Germany due to the special nature of European Union law. European Union law has a limited reach. When there is European Union law relevant to software license agreements, it often exists in the form of directives,406 which should be implemented in national legislation.407 Thus, transposed national law will be applied, but transposed national law must be interpreted in the

401 Arena, supra note 386, at 498–505.
402 See Grundgesetz [GG] art. 72(1) (Ger.).
403 See Id. at art. 74(1)(1).
404 See Id. at art. 72(1).
405 See infra section 5.1.2.
406 Cf. Article 288 TFEU (Directives “…shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.”).
“light of the directives,”408 and CJEU decisions on the interpretation of, *inter alia*, directives bind national courts.409 As an exception, directives can be binding under certain circumstances without being implemented,410 but this exception will rarely, if ever, apply to transferors.411

Some regulation exist both on a Union and national level, and can complement each other; for example, competition law. European Union competition law can become applicable if there is a direct, indirect, actual, or potential effect on trade between the Member States.412 European Union competition


409 See Case 29/68 Milch- Fett- und Eierkontor v. HZA Saarbrücken, 1969 E.C.R. 165, paras. 2–3 (Binding the court that raised the question in a preliminary ruling.); L. Neville Brown & Tom Kennedy, *The Court of Justice of the European Communities* 378 (5th ed., Sweet & Maxwell: London 2000) (Since other courts “cannot simply disregard” the ruling, it also binds other courts in a sense. Other courts “can either apply the ruling, or seek a new ruling.”).

410 Direct effect of directives requires: (1) The directive must be sufficiently clear and precise; and (2) the implementation period of the directive has expired; but (a) a Member State must not adopt measures that might seriously compromise the effect of the directive during the implementation period; and (b) set aside national law that might come in conflict with Union law. See Craig & de Búrca, *supra* note 128, at 193–194 (Sufficiently clear and precise.); Case 148/78, Pubblico Ministero v. Ratti, 1979 E.C.R. 1629 (Expired implementation period.); Case C-129/96, Inter-Environnement Wallonie ASBL v. Région wallonne, 1997 E.C.R. I-7411 (Not compromise effect.); Case C-144/04, Mangold v. Helm, 2005 E.C.R. I-9981 (Set aside national law.).

411 A directive can have vertical direct effect. See Case 41/74, Van Duyn v. Home Office, 1974 E.C.R. 1337. But not horizontal direct effect. See Case 152/84, Marshall v. Southampton and South-West Health Authority (Teaching), 1986 E.C.R. 723. Thus, a directive can only bind a Member State, or state controlled organ, not a private individual or private body. See Case C-188/89, A. Foster and Others v. British Gas plc, 1990 E.C.R. I-3313. But a directive might lead to so-called triangular situations, that is, “invoking the provisions of a directive against the Member State concerned” can “deprive another individual … of their rights.” See Case C-201/02, The Queen, on the application of Delena Wells v Secretary of State for Transport, Local Government and the Regions, 2004 E.C.R. I-00723, paras. 55–58. See also Craig & de Búrca, *supra* note 128, at 194–199. Still, triangular situations are probably only theoretically possible in this context.

law is regulated in the Treaty, which is, unlike directives, clearly applicable to transferors.\textsuperscript{413} Both Union and national competition law can be applied concurrently, that is, European Union competition law does not preclude the application of national competition law.\textsuperscript{414} And when a national competition authority or court applies national competition law to situations that are caught by Union competition law, the latter must also be applied.\textsuperscript{415} Whether national or Union law is applied can be important since it can lead to different outcomes.\textsuperscript{416}

1.5.3 Citation, References, and Legal Style

Different legal traditions cite legal sources differently. To improve accessibility, a uniform citation style is preferred. Different uniform standards exist, but this thesis follow the so-called Bluebook manual,\textsuperscript{417} — a widely used legal citation manual, especially in the United States — since: (1) It is the most extensive available citation manual; (2) it contains rules for both American and German sources; and (3) it is very familiar to legal scholars in this field. Once a work has been cited in full, the Bluebook allows further citations in a short form.\textsuperscript{418} However, one full citation in the entire thesis might require turning too many pages. The solution used is to cite all sources when first used in each chapter. To enhance the clarity of URLs (Uniform Resource

\textsuperscript{413} Treaty articles have direct vertical and horizontal effect. \textit{See} Case 26/62, NV Algemene Transport- en Expeditie Onderneming van Gend en Loos v. Nederlandse Administratie der Belastingen, 1963 E.C.R. 1; \textit{Craig & de Bürca, supra note 128}, at 183–188 (Regarding the requirements for direct effect of treaty provisions.).


\textsuperscript{416} Jones & Sufrin, \textit{supra note 415}, at 1061–1063 (5th ed.). A national court or competition authority cannot apply stricter rules for collusion, but may apply stricter rules for abuse of dominant position, as long as this does not conflict with the fundamental freedoms of the Treaty. \textit{See} Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. (L 1) 1 (EC), Article 3(2); Jones & Sufrin, \textit{supra note 415}, at 1062–1064 (5th ed.).

\textsuperscript{417} The Bluebook: A Uniform System of Citation (Columbia Law Review Ass’n et al. eds., 19th ed. 2010). A few modifications are made to improve clarity or consistency, for example regarding Rule 1.5. A parenthesis in a footnote, relating to the content of the preceding source, begins with a capital letter and ends with punctuation.

\textsuperscript{418} \textit{See Id.} at R. 16.9., 157–158.
Locators),\(^{419}\) they are encapsulated within a less-than sign and a more-than sign, for example, <http://www.example.org>.

Different legal traditions also have different legal styles. This thesis aims to adhere to the American legal style described by Garner.\(^{420}\)

### 1.6 Terminology

The terminology in this subject can be incoherent since: (1) Different actors use different terminology to describe what is essentially the same thing; and (2) law in different legal systems also use different terminology for things that are essentially the same, or at least very similar. To increase coherence, a coherent terminology will be strived for.

#### 1.6.1 General Terminology

A number of different terms and definitions have been borrowed from the *Principles of the Law of Software Contracts*, published by the American Law Institute (ALI).\(^{421}\) “The Principles of the Law of Software Contracts are often abbreviated as the “ALI Principles.”\(^{422}\)

The term “software licensing” is sometimes used in this context, but the word “licensing” may create different connotations. It may be understood as for example: (a) A limited intellectual property transfer to another level in a supply chain;\(^{423}\) or (b) the practice to make enterprise and end user products and services “subject to license and similar contractual terms.”\(^{424}\) The latter

\(^{419}\) See *Id.* at R. 18.2.2., 166–169.


\(^{422}\) One of its reporters has used this short-form, so it must be considered established. See Robert A. Hillman, *Contract Law in Context: The Case of Software Contracts*, 45 *Wake Forest L. Rev.* 669, 669 (2010).

\(^{423}\) Cf. Jay Pil Choi, *A Dynamic Analysis of Licensing: The 'Boomerang' Effect and Grant-Back Clauses*, 43 *Int’l Econ. Rev.* 803, 803 (2002) (“Licensing is a voluntary form of dissemination whereby an inventor can enjoy at least some of the gains to trade by availing other parties of the use of his superior knowledge. Firms often grant licenses because they do not have the resources to achieve full commercial exploitation of their intellectual property by themselves.”); Carl Martin Gölstam, *Licensavtalet och konkurrensrätten* 106 (Diss. Iustus förlag: Uppsala 2007) (Describing that license agreements can include rights for manufacturing or marketing of a product, or the right to grant sub-licenses.).

\(^{424}\) See Nimmer, *supra* note 49, at § 7:125 (“Licensing today constitutes an ordinary feature of retail, consumer and other markets for software and for other products.” … “Indeed, it is fair to say that ordinary consumer expectations are that many digital products come subject to license and similar contractual terms.”); Rosén, *supra* note 320, at 73–75 (Describing-
understanding is more relevant for this thesis. But to avoid confusion, the term “software transfer” will be used. It is defined as “a conveyance of rights in software or an authorization to access software, including by way of sale, license, lease, or access agreement.”

The term “software license agreement” (German: “Softwarelizensvertrag”) will cover terms such as “software license,” “software contract,” “terms of use,” (end user) “license agreement,” or “access agreement.” A software license agreement is an agreement for the transfer or access of software. The spelling in Black’s Law Dictionary will be used for terms such as shrink-wrap, click-wrap, and browse-wrap license agreements.

The term “software” is used in this thesis as a generic term to describe “statements or instructions that are executed by a computer to produce a certain result.” This term commonly includes, for example, “operating systems, word processors and applications programs” and related data. For simplification, when referring to a singular piece of software, the term “a program” will be used. While the terms are often used interchangeably, computer programs are arguably a subset of software. However, in this thesis, “a program” will denote any particular piece of software, even if it is not an application program.

A valid copyright license requires consensus between transferor and transferee. “[T]he purchase of software, e.g. from the shelves of a store, normally imply not only a transfer of ownership of a certain good, but also a ‘licence’ for the purchaser to use the software and the enclosed computer program, i.e. if nothing else has been actually agreed.”

425 Principles of the Law of Software Contracts § 1.01(m) (2009).
427 Principles of the Law of Software Contracts (2009); Raymond T. Nimmer, Donald A. Cohn & Ellen Kirsch, License Contracts Under Article 2 of the Uniform Commercial Code: A Proposal, 19 Rutgers Computer & Tech. L.J. 281, 294 (1993) (“A ‘software contract’ might be defined as: An agreement that transfers or promises to transfer one or more rights in specific computer software, including the right to access, the right to use or to have used, the right to modify, the right to copy or the right to otherwise employ the computer software.”).
428 Principles of the Law of Software Contracts § 1.01(a) (2009).
429 See Principles of the Law of Software Contracts § 1.01(a, d) (2009).
432 The definition of “computer program” under U.S. law is consistent with the definition of “software” described above. See Copyright Act of 1976, 90 Stat. 2541, enacted October 19, 1976, codified at 17 USC § et seq., at 17 USC § 101.
The parties to software license agreements will be referred to as “transferor and transferee,” rather than alternative terminological pairs, such as “licensor and licensee.” A transferor is defined as a “party who, pursuant to an agreement with the transferee, has transferred or has agreed to transfer software.” A transferee is defined as a “party who, pursuant to an agreement with the transferor, has received or has agreed to receive rights in or access to software.” In most situations, the transferor is also the software license agreement drafter, but there are situations when a transferor uses a software license agreement drafted by another entity, so the terms will not be used interchangeably.

“Global contractual governance” refers to the phenomenon of attempting to bridge national differences with contracts, which is sometimes described as a private legal order known as “global law.” The term global contractual governance is used instead of “global law” since the use of the term “law” in that context is controversial, and can create wrong connotations.

The phrase “cross-national” in cross-national validity is more suitable for this thesis than “transnational,” since the latter could create the wrong connotations when only examining two legal systems. Finally, unnecessary technicality will be avoided. Technical terms and other not widely terms, are italicized and explained in the glossary.

1.6.2 Comparative Terminology
With regard to the United States, the collective of states within the Union, that is, the 50 states included in the United States will be referred to as “the States.” An individual state of the American Union will be referred to as “the state” or by its name, for example, California. The Union, the United States of America, will often be abbreviated as “the U.S.” or sometimes referred to as “America.” The law of the United States will sometimes be referred to as “American law” for the sake of brevity. The U.S. judiciary system has a state
judicial branch and a federal judicial branch that works in parallel. The judicial branch of a State will be referred to as “state courts,” and the judicial federal branch will be referred to as “federal courts.” When a state judiciary branch has a court called a “Supreme Court,” such courts will be referred to as “the supreme court of…” to avoid confusion with the United States Supreme Court.

With regard to Germany, when German legislative acts are used by their full names, both German names and English translations will be used. In German, many legislative acts are referred to by their abbreviations. For example, the German Copyright Act (Urheberrechtsgesetz) is abbreviated as UrhG, and the German Civil Code (Bürgerliches Gesetzbuch) is abbreviated as BGB. When referring to German legislative acts in abbreviated form, only the established German abbreviations will be used, not translated abbreviations. To avoid confusion between the German and the American decentralized entities of their respective federations, the original German names will be used. The collective of German states will be referred to as “the Länder.” An individual state of the German Federation will be referred to as a Land. The German Supreme Court in matters of criminal and civil law (Bundesgerichtshof) will be referred by its abbreviation (BGH) to avoid confusion with the U.S. Supreme Court.

With regard to the European Union, the Member States will be referred to as “Member States” or their respective name, to avoid confusion with the States of the American Union. The names of European Union law instruments are often very descriptive, with names that also have a general meaning, such as “directive.” To avoid confusion with the general meaning, the names will be written with capital initial letters, for example, “Directive.” The European Union institutions have changed names over time. Before the Lisbon Treaty entered into force, the General Court was known as the Court of First Instance (CFI). The highest court, Court of Justice, was previously known as the European Court of Justice (ECJ), but is now commonly known.

439 It should be noted that a supreme court of a state is not always the highest court in the state judiciary. For example, in the State of New York the first instance of the state courts is called “Supreme Courts” and the final instance called “Court of Appeals.”
440 It should be noted that there are several “supreme courts” under German federal law. See Grundgesetz [GG] art. 93 and 95 (Ger.).
441 See Craig & de Búrca, supra note 128, at 58.
as the Court of Justice of the European Union (CJEU). To avoid confusion, their current names, CJEU and the General Court, will be used consistently.

To bridge differences between the, at least perceived, unified American legal profession and the fragmented legal professions in the civil law world, a unified terminology will be used. When specific terms such as judge and legal scholar are inappropriate, the American term “lawyer” will be used for what would be known as a “jurist” (German: Jurist, from the Latin iura) in the civil law world, that is, legal professionals or those with an academic degree in legal science. This means that the term lawyer will be given a wider meaning than those that are licensed to practice law, since only some civil law legal professionals known as advocates (German: Rechtsanwälte) are licensed to practice law before courts, like American attorneys-at-law.

Sometimes, different terminology is used for essentially the same thing. One example is antitrust and competition law. The term competition law will be used in this thesis, since it is more widely used internationally. The terminology within American and German (and European) competition law also differs. The European “abuse of dominant position” is not completely the same abuse as “monopolization” found within American competition law. To avoid confusion, respective terminology will be used within their respective context. A similar example is “private international law” (French origin: droit international privé), “international private law” (German origin: Internationales Privatrecht) and “conflict of laws.” The first two are primarily used in civil law countries and the last is primarily used in common law countries. Private international law and conflict of laws may both cover applicable forum (jurisdiction), applicable law (choice of law), recognition and enforcement, but conflict of laws in the United States also covers interstate conflicts, without requiring an international element. To avoid confusion,

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443 The term “jurist” is unsuitable since it is especially used for “a judge or an eminent legal scholar” in the United States. See Black’s Law Dictionary, supra note 49, at 933.
445 Merryman & Pérez-Perdomo, supra note 442, at 105–106.
446 See infra section 6.1.3.
448 See Symeon C. Symeonides, American Federalism and Private International Law, 63 REVUE
in conflicts between foreign countries, the term private international law will be used. The term interstate conflicts will be used for such conflicts.

Under American law, a consumer is a person entering a transaction “primarily for personal, family, or household purposes.” In European Union legislation, consumers are defined as “any natural person who … is acting for purposes which are outside his trade, business or profession,” which is consistent with the German definition. Advocate General (AG) Mishcho has argued that European business actors acting outside their ordinary profession or trade should be covered by the protection, but this has been rejected by the CJEU. However, some Member States, such as Italy and France, still accepts this broader definition of consumers, but not Germany. Thus, while there might be a difference between the United States and some European Union Member States regarding this, there are no fundamental differences between German and American law.
For non-consumers, that is, “any natural or legal person who “is acting for purposes relating to his trade, business or profession,” the term business actors will be used.

1.7 Disposition of the Thesis

This thesis is divided into five parts.

This part, the first part, chapter 1, contains the introduction. The introduction draws the outline of the problem, and contains the theoretical and methodological backdrop of the study.

The second part, chapters 2–3, examines the underlying technical and business side of software license agreements, legal classifications, and applicable laws. The elements described in the second chapter will be important when seeking improvements in part four. The third chapter examines legal classifications and applicable laws in the absence of software license agreements.

The third part, chapters 4–8, maps (1) software license agreement formation, modification, and severability, (2) maps formal requirements/obstacles under important areas of American and German law, and (3) maps validity of certain provisions in software license agreements against requirements/obstacles.

The fourth part, chapters 9–12, analyzes (1) different types of invalidity, (2) reasons for cross-national invalidity, (3) consequences, and (4) solutions to improve cross-national validity.

The fifth part, chapter 13, summarizes the problems and solutions.

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PART II

BUSINESS AND LEGAL FRAMEWORK
FOR SOFTWARE TRANSFERS

The Merchant of Venice: The Penalty Clause

This kindness will I show.
Go with me to a notary, seal me there
Your single bond; and, in a merry sport,
If you repay me not on such a day,
In such a place, such sum or sums as are
Express’d in the condition, let the forfeit
Be nominated for an equal pound
Of your fair flesh, to be cut off and taken
In what part of your body pleaseth me.456

2 Business Context

Software license agreements satisfy several important functions for transferors. Core functions include protecting the transferor’s rights and to legally uphold a chosen business model, that is, legally secure the revenue streams that the software generates. Granted, copyright law creates protection without software license agreements, but software license agreements have a wider scope than copyright law. Also, with software license agreements, many transferors attempt to modify the balance of rights and obligations between transferor and transferee to create a protection that is more relevant for a specific business model.

Technical choices and limitations, choice of business models, and the limitations of real-world practice affect the provisions found in software license agreements, directly or indirectly. Collectively, this can be described as software license agreements “business context.” Understanding these aspects are important for understanding software license agreements and invalidity, and when seeking cross-national improvements.

2.1 Technology

Technology changes constantly, which affects business models and software license agreements, and sometimes also law. Constant change could make it difficult to describe technology in a way that does not grow outdated instantly. However, the pace of software development often slows down when hardware becomes faster. This is partly due to an increased complexity of larger
programs, and partly due to a lock-in in design choices. Thus, software descriptions do not necessarily grow outdate quickly. This chapter will focus on certain aspects that affect software license agreements and might have legal implications.

2.1.1 Source Code and Binary Executables

A generic description of software is detailed recipes of commands that instruct the processor what to do in order to carry out certain (predefined) tasks. Natively, hardware can only understand binary values — 0 or 1 (OFF or ON) — so-called computer code. Thus, these instructions are only long sequences of 0’s and 1’s. However, it is infeasible to write complex software directly in computer code, since it is too complicated to place the 0’s and 1’s correctly for the desired result. Therefore, programmers write software in a format that they understand, and then translate the software into a format that the computer can understand. The software development process can look like this.

Software starts out as source code. The source code is a higher-level set of commands that is written by a programmer in a programming language (for example [ANSI] C or Objective-C). The source code written in a human-understandable programming language must be “translated” into computer-

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462 Cf. JARON LANIER, YOU ARE NOT A GADGET 181–182 (Alfred A. Knopf: New York 2010) (“[It took less than a decade to get from the Apple II to the Macintosh. By contrast, it has been well over a decade since network-based search services appeared, and they are still trapped in the command line era. At this rate, by 2020, we can expect software development to have slowed to a near stasis, like a clock approaching a black hole.”).  
463 Or set of statements.  
465 Also known as object code or machine code.  
467 Ravicher, supra note 466, at *6–8.  
468 Buckman & Gay, supra note 464, at 3. See also Greg R. Vetter, The Collaborative Integrity of Open Source Software, 2004 UTAH L. REV. 563, 580–582 (2004) (Programming languages share many similarities with human languages, such as grammar, syntax, and vocabulary. As with human languages, there is a huge amount of different programming languages, and programmers are not fluent in every programming language.).
understandable computer code; that is, binary values. This process is often known as \textit{compilation}.^{469}

A well-known basic example of computer programming, known as “Hello, World!,” can illustrate this “translation process.” The purpose of the example program is to display (“print”) the text “Hello, World!” on the screen. In a programming language, such as C, the source code would look something like this:

```c
#include <stdio.h>

int main(void)
{
    printf("Hello, World!\n");
    return 0;
}
```

When this source code stub has been translated into machine language, the computer generates a file, known as a \textit{binary executable}.^{470} A binary executable is a machine language file^{471} that causes the operating system to run (“execute”) the software. In a graphical user interface operating system, the user clicks on an icon, graphically representing the binary executable,^{472} and the operating system executes the software. Most users only come across software as binary executables, and do not need, and are neither able, to translate source code into machine language and binary executables before executing the software.

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^{469} See, e.g., Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222, 1230–1231 (3d Cir. 1986); Nimmer, supra note 464, at § 1:10; Buckman & Gay, supra note 464, at 3 (1) A compiler translates the high-level language into lower-level assembly language. And (2) the \textit{assembler} then breaks down the assembly language into \textit{machine language}. However, this is a simplification, and not all programming languages are compiled into machine code. Some programming languages are interpreted at runtime (that is, the duration of the software execution, from when a process — or a program — is launched until it is terminated.) by an \textit{interpreter}.

^{470} Also known as an “executable file” or “binaries.”

^{471} The general suffix/file extension for binary executables is “.bin.” On Microsoft Windows systems, binary executables traditionally uses the file extension “.exe.”

^{472} If the operating system is based on the “window, icon, menu, pointing device” paradigm, such as, for example, Apple OS and Microsoft Windows.
2 Business Context

If we return to our little example above, we can execute the binary executable and see what happens. The following will be displayed on the screen:

```
Hello, World!
```

Suppose that we want to change the text (“string” in computer terminology) to German; from “Hello, World!” to “Hallo, Welt!” that is. If we return to our source code, we can simply change the phrase “Hello, World!” on line 5 to “Hallo, Welt!” and run the translation process again. Executing the software will then print “Hallo, Welt!” on the screen.

However, suppose that we only have access to the software in binary executable form, and still want to make the same change to the software. If we try to examine the binary executable (not executing it), a tiny section of the software will look something like this:

```
1. 01000011 01000110 00100000 01000110 01000001 00100000 01000101
2. 01000100 00100000 01000110 01000101 00100000 00110000 00110111
3. 00100000 00110000 00110000 00100000 00110000 00110000 00100000
4. 00110000 00110001 00100000 00110000 00110011 00100000 00110000
```

The software transcript above is in computer-readable, binary form. This is very difficult to read and comprehend for most people, because understanding what these binary values mean requires detailed knowledge on how a particular piece of hardware interprets the source code. Making our simple change from “Hello, World!” to “Hallo, Welt!” suddenly becomes rather difficult if we do not have access to the source code. While the underlying ideas of a program can sometimes be discovered through reverse engineering, this

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473 Our little example is too rudimentary to run in a graphical environment, and is executed with a command in a command-line interface: For example, “./hello” (if the source code is named hello.c, and is compiled as “gcc -g hello.c -o hello”).

474 In hexadecimal view, the binary file spans about 6.5 A4-pages in 12 pt. size. In binary view, the binary file spans almost 67 A4-pages in 12 pt. size.

475 LA. REV. STAT. ANN. § 51:1962(3) (West, Westlaw through 2013) (Reverse engineering, decompiling and disassembling refers to “any process by which computer software is converted from one form to another form which is more readily understandable to human beings, including without limitation any decoding or decrypting of any computer program
process does not make the complete source code available to the user, neither is it always practically or economically feasible. Thus, access to source code is necessary for efficient software development and modification by the transferor.

Source code access can be interesting to other parties, including competitors, for a number of reasons. Among transferees, most consumer end users are probably primarily interested in software in binary form, and less interested in source code, since most of them will have little use for source code, and compilation is a complicated and unnecessary step for such transferees. Certain business end users might reason similarly, but some might be interested in source code for interoperability purposes. Enterprise users and third-party developers are most likely to be interested in source code, for interoperability purposes, but also since: (1) Access to source code can be important from a security perspective; to know what the software does, and what security holes it might have; (2) access to source code reassures the transferee that the software will outlive the transferor in the event of bankruptcy or lack of interest for further development; and (3) access to source code allows the transferee to modify and extend the software to its own needs.

Transferors may be more or less interested in giving transferees access to source code, depending on business model. Access to source code will reveal “technology secrets in the design” of the software, while software distributed

which has been encoded or encrypted in any manner.)). See also G. Gervaise Davis III, Scope of Protection of Computer-Based Works: Reverse Engineering, Clean Rooms and Decompilation, 370 PLI/Pat 115, 142–151 (1993) (Regarding reasons for software reverse engineered and how it is done.); Terril Lewis, Reverse Engineering of Software: An Assessment of the Legality of Intermediate Copying, 20 Loy. L.A. Ent. L. Rev. 561, 563–564 (2000) (A less detailed description on how reverse engineering is done.).

See Rod Dixon, Breaking Into Locked Rooms to Access Computer Source Code: Does the DMCA Violate a Constitutional Mandate When Technological Barriers of Access are Applied To Software?, 8 Va. J.L. & Tech 2, *29 (2003) (“Often, reverse engineering requires an end-user to use a software tool that reverses the process of software development to yield the source code. Reverse engineering, in this manner (often called decompilation), does not yield an exact copy of the original source code, but it does reveal at least sub-routines showing the structure and operation of a program.”).


in binary form will not “necessarily reveal” such secrets.\textsuperscript{479} Revealing such secrets are either a possible threat or an asset for a transferor, depending on business model.\textsuperscript{480} However, most commercial transferors do not distribute software as source code,\textsuperscript{481} and prevent source code access through technical and legal means.\textsuperscript{482}

\subsection*{2.1.2 Physical and Digital Software Distribution}

Before a transferee can use a program, in binary or source code form, it must be transferred to the transferee’s hardware (computer).\textsuperscript{483} The process of transferring software is commonly called software distribution. The primary method for distributing software during the history of computing has been to contain software in a vessel, that is, physical media.\textsuperscript{484} The software contained in the physical media has often only been available in binary form.\textsuperscript{485} Since the advent of the Internet, software distribution has grown less dependent on physical media, since software can be distributed directly in digital form through the Internet.\textsuperscript{486} This method of software distribution is to some extent replacing physical distribution of software.\textsuperscript{487} The emergence of software dis-

\begin{itemize}
\item \textsuperscript{479} See Nimmer, supra note 464, at §§ 3:17, 7:133.
\item \textsuperscript{480} Granting access to source code is central to business models based on the ideas of open source. See Simon M. H. Collin, Dictionary of Computing 239 (5th ed., Bloomsbury Publishing: London 2004) (“[D]escribes a program for which the source code is freely available and which anyone is legally able to modify and improve.”).
\item \textsuperscript{482} Dixon, supra note 476, at *28 (“[S]oftware developers … either block access or withhold access to the ideas embedded within source code from endusers through a number of methods, including technological barriers, hardware locks, licensing restrictions, and claims that reverse engineering software is unsupportable under copyright law.”).
\item \textsuperscript{483} A program transferred as a binary executable can be executed by the transferee (a setup- or installation process is often required first). A program transferred as source code must first be compiled before the transferee can execute it. While the two processes might seem similar, the latter is less automatic and arguably more complex for average transferees.
\item \textsuperscript{484} For example, punch cards, tapes, diskettes, CDs, or DVDs.
\item \textsuperscript{485} See Ravicher, supra note 466, at *29.
\item \textsuperscript{486} Pierre Hadaya & Dominique DeSerres, Determinants of Distribution Channel Choice for Online Software License Purchases: A Theoretical Model, 4 J. Digital Asset Mgmt. 354, 354 (2008) (“[T]he digital nature of software products combined with the advent of the internet has allowed for the proliferation of a new software delivery option: the digital distribution of software.”).
\item \textsuperscript{487} As an example, Apple is removing software on physical media from their retail stores, and is selling some of its software only digitally.
\end{itemize}
tribution channels, both for desktop software\textsuperscript{488} and mobile devices,\textsuperscript{489} has arguably taken digital software distribution a major leap forward.

\subsection*{2.1.3 Software Distribution or Access}
The above description of software, source code, binary executables, and software distribution has been based on the presupposition that software is distributed and then installed, stored, and run locally on a hardware device. Supporting data and files are also commonly stored and accessed locally in this model. This paradigm affects business models and software license agreements.

This paradigm is increasingly challenged by \textit{``cloud computing,''} a set of technologies, products, and services that allow a transferee to access software from a remote provider, rather than from the local computer.\textsuperscript{490} Software, and its supporting data, is not required to be installed, stored, and run on a local hardware device. This also means that software does not have to be distributed as binary executables or source code form in a way that is visible for a transferee. Since cloud computing is a relatively new phenomenon,\textsuperscript{491} a uniform

\textsuperscript{488} Matthew J. Turchyn, \textit{It Looks Like a Sale; It Quacks Like a Sale…But It’s Not? An Argument for the Application of the Duck Test in a Digital First Sale Doctrine}, 5 J. Bus. Entrepreneurship & L. 31, 40–42 (2011) (Regarding the emergence of digital software distribution, with special emphasis on software distribution channels such as Steam and Impulse.). Other examples include Apple’s Mac App Store and Microsoft’s Windows Store.

\textsuperscript{489} See infra section 2.1.5.


\textsuperscript{491} It can be argued that cloud computing is rather a return to the era of mainframes, the era that preceded the advent of microcomputers. Like in the era of mainframes, the focus lies on powerful centralized computers and shared resources. See Matthew A. Verga, \textit{Cloudburst: What Does Cloud Computing Mean to Lawyers?}, 5 J. Legal Tech. Risk Mgmt. 41, 43–46 (2010). See also Robison, supra note 490, at 1197–1204 (Regarding the development of computer networking and cloud computing.); BusinessWeek, \textit{Google’s CEO on the Power of Clouds}, in \textit{BusinessWeek} December 13, 2007 (Online Extra) (Former Google CEO Eric Schmidt on cloud computing: “What [cloud computing] has come to mean now is a synonym for the return of the mainframe. It used to be that mainframes had all of the data. You had these relatively dumb terminals. In the PC period, the PC took over a lot of that functionality, which is great. We now have the return of the mainframe, and the mainframe is a set of computers. You never visit them, you never see them. But they’re out there. They’re in a cloud somewhere. They’re in the sky, and they’re always around. That’s roughly the metaphor.”) quoted in Lindberg & Svensson, supra note 490, at 13.
definition has not yet been established. Another reason for non-uniformity is that the term is used as a grab bag of various services and technologies. The United States National Institute of Standards and Technology (NIST) aims to create a uniform definition, and their definition has become a common definition of cloud computing. NIST defines cloud computing as:

[A] model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Cloud computing is characterized for being on-demand, available over the network, serving multiple customers with high scalability in a way that can be automatically controlled and optimized by the service provider. Cloud computing is available in several forms, but many people associate cloud computing with Cloud Software as a Service (SaaS), which allow transferees to access application through different interfaces, for example web-based email through a browser, while all infrastructure is managed and controlled by the provider elsewhere. Cloud computing is a different paradigm than local software, and this affects business models and software license agreements.

492 William R. Denny, Survey of Recent Developments in the Law of Cloud Computing and Software as a Service Agreement, 66 Bus. Law. 237, 237 (2010); Jake Adkin, Unfriended Felons: Reevaluating the Internet’s role for the Purpose of Special Conditions in Sentencing in a Post-Facebook World, 9 J. Telecomm. & High Tech. L. 263, 279 (2011); Lindberg & Svensson, supra note 490, at 12–13 (Many IT consultants and service providers promote their own definition of cloud computing.).

493 See Verga, supra note 491, at 42.

494 Id. at 42.


497 Cloud Software as a Service (SaaS), Cloud Platform as a Service (PaaS), and Cloud Infrastructure as a Service (IaaS), in private, community, public, or hybrid clouds. The size of “clouds” can scale from small private clouds up to very large global public clouds. See Mell & Grance, supra note 496, at *3; Lindberg & Svensson, supra note 490, at 13–16.

498 Even though cloud providers are increasingly focused on Cloud Platform as a Service and Cloud Infrastructure as a Service. See Robison, supra note 490, at 1203–1204.

499 Mell & Grance, supra note 496, at *2.

500 The cloud model puts emphasis on other legal issues than the “local” model. Cloud computing can for example raise special privacy and jurisdictional questions. See Denny, supra note 492, at 238–241.
Some argue that cloud computing is the future of software. Other argue that cloud computing will replace some traditional software, but that it will not replace all traditional software in the near future. I concur with the latter prophecy, and think that both forms will likely coexist, and the division between the two might become less clear in the future when local software acquire more cloud capabilities. Thus, software license agreements for locally installed and cloud software will be examined.

### 2.1.4 Hardware and Software: Integration or Separation?
In the early days of computing, when computers were equal to mainframes, software was written specifically for these machines. With the advent of microcomputers, standardized software written for a large number of compatible machines become common. The advent of standardized software separated software from hardware, and a bright line between the two has been upheld since. However, this division is arguably becoming increasingly unclear when transferors are, once again, developing their own hardware; Apple, Google, and Microsoft being some examples of this. Some of these transferors only allow their software to be used with their own hardware. Integration of hardware and software creates new business models. Transferors that develop their own hardware primarily make money on hardware, not software.
Software transfers then becomes a less important income source for transfers. Software can instead become differentiators for hardware platforms, making make hardware platforms more interesting to transferees. If software becomes a less important income source for transferors, this might affect both software pricing and software license agreements. For example, some argue that this will lead to very inexpensive software.\textsuperscript{508}

2.1.5 \textit{Mobile Computing and “Apps”}

Not so long ago, there was a familiar product called software. It was sold in stores, in shrink-wrapped boxes. … Now there are “apps”—stylish, discrete chunks of software that live online or in your smartphone. … Apps are gateways, and when you buy an app, there is a strong chance that you are supplying its developers with one of the most coveted commodities in today’s economy: personal data.\textsuperscript{509}

Computers are moving from the desktop to the pocket and into new software platforms.\textsuperscript{510} Mobile applications, or “apps,” are transferred through software distribution channels. Each platform has its own software distribution channel,\textsuperscript{511} and mobile applications cannot be used interchangeably between platforms.\textsuperscript{512} Software distribution channels commonly contain a vast amount of software and transferees are downloading large amounts of software,\textsuperscript{513} taking digital software distribution to a new level.
2.1.6 The Outer Limits of Software?

The examples above show that the notion of “software” is constantly modified by technological developments. But the unifying theme is that it fulfills a “utilitarian function.” This raises some questions regarding how far the term “software” can be stretched. Some draw the line when it becomes “digital art.” This would mean that web applications and web services that fulfill a utilitarian function could be studied as software, and their software license agreements could be examined. But games and online worlds are not primarily utilitarian. Still, games and online worlds are also governed through license agreements (often known as “terms of use”), with similar provisions as software license agreements, and with similar problems. There is no fundamental difference between software license agreements for utilitarian software, web services, games, and online worlds, and some findings in this thesis might be extendable to non-utilitarian applications.

2.2 Software Business Models

2.2.1 Functions and Categories of Business Models

A core function of a software license agreement is to legally uphold a chosen software business model. Software business models change over time, partly as a result of new technical developments, but also when transferors find new ways to do business. Thus, business models and software license agreements are in constant flux.
Software, as any other product or service, must satisfy the needs of customers by adding value and satisfaction.\textsuperscript{519} Since many competing software products and services can satisfy the same basic needs, transferors aim to differentiate their software, that is, aiming to add “a set of meaningful and valued differences to distinguish a transferor’s offering from a competitor’s offerings.”\textsuperscript{520} Generally, such differentiator parameters can be, for example, features, interface design, ease-of-use, price, attached services, extendibility, or modifiability.\textsuperscript{521} This creates business opportunities,\textsuperscript{522} which are exploited through a business model. A \textit{business model} can be defined as depicting “the design of transaction content, design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities.”\textsuperscript{523} An important function of a business model is to specify revenue sources.\textsuperscript{524} A number of studies have identified common characteristics of business models.\textsuperscript{525} Rajala \& Westerlund summarizes commonly identified characteristics as:

(1) Value propositions or offerings; (2) The resources needed to develop and implement a business model; (3) The revenue logic (including sources of revenue, price-quotation principles and cost structures) that is characteristic of a particular business; (4) Relationship with other actors.\textsuperscript{526}

Some of these business models characteristics have been mentioned above as characteristics of software license agreements. For example, core functions of software license agreements includes legally securing the revenue streams that the software generates,\textsuperscript{527} and to govern the relationship with transferees.\textsuperscript{528}

\textsuperscript{520} \textit{Id.} at 315.
\textsuperscript{521} \textit{See Id.} at 318–328.
\textsuperscript{522} \textit{Id.} at 308, 315–317.
\textsuperscript{524} Kotler, \textit{supra} note 519, at 51.
\textsuperscript{525} See Risto Rajala \& Mika Westerlund, \textit{A Business Model Perspective on Knowledge-Intensive Services in the Software Industry}, 1 INT’L J. TECHNOENTREPRENEURSHIP 1, 5–6 (2007).
\textsuperscript{526} \textit{Id.} at 5–6.
\textsuperscript{527} See Liberman, \textit{supra} note 457, at *2.
Software business models can be organized into different categories. **Rajala & Westerlund** use two dimensions to distinguish software business models: (1) Degree of customer involvement; and (2) level of homogeneity in the offering. Specialized software has a high degree of customer involvement and a low degree of homogeneity in the offering, while standardized software has a low degree of customer involvement and a high degree of homogeneity in the offering. This shows why standard software is very relevant to this subject, due to: (a) Low customer involvement, combined with global mass-distribution, increases the risk of conflicts with underlying laws, since the parties have no direct contact with each other, and thus no knowledge of the underlying laws that might be applicable to their relationship; and (b) high homogeneity means that one problem is likely to be found in many software transfers.

Software business models can differentiate on the basis of several factors: (1) If the software is pre-installed or if the software is self-provided; (2) if software is transferred for a fixed price, on a subscription basis, per use, or cross subsidized; or (3) if the transferee buys, licenses or subscribes to the software. The choice of business model is often dependent on external factors, such as competitors, customers, financial and other resources, and the software’s characteristics.

In a study of “generic elements of business models in software business,” **Rajala & Westerlund** found a number of different business models, and categorized them according to four parameters: (1) “Product strategy”; (2) “Distribution strategies”; (3) “Revenue logic”; and (4) “Services and

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529 Rajala & Westerlund, supra note 525, at 7–8.
530 Id. at 7–13. See also Sterne & Kessler, supra note 504, at 158–160.
531 David Messerschmitt & Clemens Szyperski, Industrial and Economic Properties of Software: Technology, Processes 23–26 (University of California at Berkeley 2001). See also Daniel Ferrante, Software Licensing Models: What’s Out There?, 8 IT Professional No. 6, 24, 25–29 (2006) (Describing different enterprise software business models: (1) Packaged software. Single license, often for a single transferee or device. Can be: (a) perpetual; or (b) trial. (2) Server model, where the number of processors determine number of licenses. (3) Network model, where licenses are distributed through a network. (4) Subscription model, limited in time. And (5) utility model, transferee pays per use or time used.); Mikko Välimäki, Dual Licensing in Open Source Software Industry, 8 Systemes d’Information et Management 63, 65 (2003).
2 Business Context

implementation. Certain aspects of this categorization can be used for a model that is more suitable for standard software.

My categorization includes five elements: (alfa) Product strategy; (beta) revenue sources; (gamma) distribution strategy; (delta) transfer time; (epsilon) transferor valuables. These elements can be broken down into different subelements.

<table>
<thead>
<tr>
<th>α Product strategy</th>
<th>β Revenue sources</th>
<th>γ Distribution strategy</th>
<th>δ Transfer time</th>
<th>ε Transferor valuables</th>
</tr>
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<tbody>
<tr>
<td>2. Services</td>
<td>2. Recurring fees</td>
<td>(a) Local software</td>
<td>2. Limited in time</td>
<td>2. Transferees and their personal data</td>
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<tr>
<td>3. Hybrids</td>
<td>3. Personal data collection</td>
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<td>3. A community</td>
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<tr>
<td></td>
<td>4. Advertising</td>
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<tr>
<td></td>
<td>5. Time</td>
<td>3. Intermediaries/App Stores</td>
<td></td>
<td>5. The software platform</td>
</tr>
</tbody>
</table>

Based on these elements it is possible to describe some common examples and variations.

One clear business model — which we can call the Microsoft model — is to focus on software as products (alfa), acquire revenues from lump sum payments (beta), distribute software directly as local software (gamma), perpetually (delta), and primarily value the software in itself (epsilon). This traditional business model can be found among major transferors such as Microsoft. This model can be varied by offering the software as services or hybrids (alfa), acquire revenues from recurring fees (beta), distribute it through an intermediary or an OEM (gamma), or transfer the software for a limited time (delta).

A second emerging business model — which we can call the Apple model — focus on software as products (alfa), acquire revenues from lump sum payments (beta) from the hardware that the software runs on, not necessarily from the software itself, distribute software directly as local software (gamma), perpetually (delta), and primarily value the software platform (epsilon).

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533 Rajala, Rossi & Tuunainen, supra note 532, at *5–12.
534 A hybrid blurs the line between product and service.
535 Alternatively, through its own software distribution channel, that is, the transferor is also an intermediary.
lon). Apple uses this business model for their two operating systems OS X and iOS, and their productivity software iLife and iWork.

A third clear business model — which we can call the Facebook model — focus on software as services (alpha), acquire revenues from personal data collection or through advertising (beta), distribute the software directly as a cloud service (gamma), perpetually or for a limited time (delta), and the valuable property may be transferees and their personal data (epsilon). This modern business model can be found among transferors such as Google and Facebook.

A fourth clear business model — which we can call the Zynga model — focus on software as products, services, or hybrids (alpha), may acquire revenues from different sources (beta), distribute software as local software or as cloud software (gamma), perpetually (as long as the service is provided) or for a limited time (delta), and primarily value its community (epsilon). Among consumer software, this business model can be seen among transferors such as Zynga, Linden Lab, Supercell, and King. The software may be a clear product (for example, FarmVille or Candy Crush) or service (for example, Second Life), but may also blur the line between product and service. The software may often be accessed through a webpage, sometimes a third-party webpage such as Facebook, or through a mobile application. Transferors make revenues from transfers of digital goods, services, and content within the web or mobile application (“in-app” purchases), partnerships, or through advertising, and value vibrant communities of end users and partners. This model is sometimes described as a “freemium” or “in-app” purchase model.

A fifth clear business model — which we can call the Red Hat model — focus on software as products or services (alpha), acquire revenues often from recurring fees, sometimes from adjacent services (beta), distribute software directly as local software or as cloud software (gamma), perpetually or for a limited time (delta), and primarily value its community and reputation (epsilon). Among standard enterprise and developer software, this business model can be seen among transferors that attempt to monetize open source software, such as Red Hat and Canonical. These transferors may derive revenues from professional support, transfer software as local software or cloud software, and value vibrant communities of developers improving the software.

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536 This may include lump sum payments, often from in-app purchases, recurring service fees, advertising, partnerships, or personal data collection.
537 In this thesis, open source is not treated as a business model of its own, but as a foundation on which certain business models are built. Basing a business model on open source ideas will affect the elements above. In a commercial setting, open source software is often monetized through business models with different product strategies, revenue sources, distri-
software. Vibrant communities of end users, enterprise users, and developers may also be valuables, since they increase the perceived value of the software among potential transferees. Under a common variation of this business model, used for end user, enterprise, and developer software, the main revenue source is donated time.538

These different business models lead to different software license agreements.

In the Microsoft model, the software license agreement often attempts to: (1) Prohibit reverse engineering (and the software is only distributed in binary form);539 (2) limit the possibilities for transferees to further transfer the software (including OEMs) and limit software use to certain transferees; and (3) include procedural and liability provisions.

In the Apple model, the software license agreement often attempts to: (1) Prohibit reverse engineering (and the software is only distributed in binary form); (2) limit the possibilities for transferees to further transfer the software and limit software use to certain transferees; (3) limit software use to designated hardware; and (4) include procedural and liability provisions.

In the Facebook model, the software license agreement often attempts to: (1) Acquire the right to personal data; (2) sometimes prohibit transfer of user accounts; and (3) include procedural and liability provisions.

In the Zynga model, the software license agreement often attempts to: (1) Acquire the right to personal data; (2) prohibit the transfer of user accounts and in-app purchases; and (3) include procedural and liability provisions.

In the Red Hat model, the software is often distributed both in binary form and as source code. The software license agreement may attempt to: (1) Require grant-backs of improvements; (2) require derivative works to be transferred under the same conditions as the original work;540 (3) limit the use of trademarks to avoid freeriding on the transferor’s good reputation;541 and (4) include liability provisions.

bution models, transfer times, and transferor valuables. For some examples of such business models, see John Koenig, Seven Open Source Business Strategies for Competitive Advantage, IT MANAGERS J. May 10, 2004 (Including dual licensing, support strategy, consulting strategy, patronage strategy, hosted strategy, or the embedded strategy).

538 Wallace v. International Business Machines Corp., 467 F.3d 1104, 1107–1108 (7th Cir. 2006) (“Linux and other open-source projects have been able to cover their fixed costs through donations of time.”).

539 Even though there are exceptions when the software is distributed also as source code.

540 To prevent the software from being “hijacked” by competitors. See Ravicher, supra note 466, at *30.

541 See Apache Software Foundation, Apache License: Version 2.0, Section 6 (2004) (“This
In practice it is common to combine different business models. For example: (1) Separate the software into different parts (for example, frontend and backend) and use different business models and different software license agreements for different parts;\textsuperscript{542} (2) use different business models and different software license agreements for different transferees;\textsuperscript{543} and (3) separate the software into a product and service, and use different business models for the product and the service.

It is clear that software business models have evolved. The Facebook model has grown increasingly popular on the expense of the Microsoft model. But different categories coexist and some transferors attempt to distinguish themselves through business models.\textsuperscript{544}

\subsection{2.2.2 Active Use of Software License Agreements}

It might be possible to actively use software license agreements as part of a business strategy. Since software license agreements can be used to enforce price discrimination,\textsuperscript{545} transferors can tailor software to different customer segments with different requirements. For example: (1) Price-sensitive transferees may accept use restrictions and personal data collection; (2) transferees that are sensitive to use restrictions and personal data collection may accept to pay a higher price, or to use software that have fewer features or is less user-friendly; and (3) some transferees might be sensitive to features and ease of use, but less sensitive to price and restrictions.\textsuperscript{546} “This allows transferees to compete with software license agreements, as a form of “competing private lawmaking.”\textsuperscript{547} This strategy might be viable, since competing businesses use different restrictions, and shopping around for restrictions might thus pay

\begin{footnotesize}
\begin{itemize}
\item License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
\item Arnoud Engelfriet, \textit{The Best of Both Worlds}, 19 August/September 2006 \textsc{Intellectual Asset Management} 37, 38–41 (2006) (Describing how transferors can combine business models, based on the idea of making “the complement of your product a commodity,” thereby stimulating demand for the main product.).
\item Välimäki, supra note 531, at 66–67.
\item See infra section 2.2.2.
\item See supra section 1.1.3.
\item See Wallace v. International Business Machines Corp., 467 F.3d 1104, 1107 (7th Cir. 2006) (“People willingly pay for quality software even when they can get free (but imperfect) substitutes.”).
\item Cf. David V. Snyder, \textit{Private Lawmaking}, 64 \textsc{Ohio St. L.J.} 371, 407 (2003) (On private ordering and competing private lawmaking.).
\end{itemize}
\end{footnotesize}
off for consumers. Such possibilities could improve if tools for comparison based on software license agreements would emerge. Presently, it can be argued that some transferors actively use software license agreements as part of their business strategy to distinguish themselves. Perhaps as a reaction against the Facebook model, with its reliance on personal data collection or more or less sustainable advertising revenues, some transferors seek different business models, and might use software license agreements as a way to distinguish themselves.

2.3 Summary

As seen, transferors are faced with a number of different technical and business choices. Different choices will lead to different software license agreements and different legal issues. It may also be possible for transferors to actively use software license agreements to distinguish themselves.

It will be necessary to keep these technical aspects of software distribution in mind throughout the thesis. Since one purpose of a software license agreement is to legally secure the revenue streams that the software generates, it also becomes necessary to return to software business models when seeking cross-national validity improvements.


549 See Gomulkiewicz, supra note 460, at 705–707 (If “shopbots” would learn to “read” software license agreements potential transferees could compare software based on price, features, or provisions in software license agreements, for example warranties. However, this technology is probably a few years from being feasible.).

550 The paid bookmarking service Pinboard in an era where Internet services offered at no monetary cost is becoming the norm would be one example of this.

551 See Pinboard, Pinboard Terms of Service (as of Feb. 9, 2014) (“Your personal data, including your browsing history, email address and identity will not be shared with anyone without your consent.” “Any new features that affect privacy will be strictly opt-in.”).

552 See Liberman, supra note 457, at *2.

553 See infra section 12.3.2.
3 Legal Classifications and Applicable Laws

Four questions will be examined in this chapter: (1) Legal categorization of software transfers; (2) legal categorization of software license agreements; (3) applicable intellectual property protection in the absence of software license agreement; and (4) applicable law and forum in the absence of software license agreement.

3.1 Legal Categorization of Software Transfers

3.1.1 Software: Licensed or Sold?
Software is said to be “licensed rather than sold.” This is a central phrase (and question) in this thesis, since it affects software transfers and software license agreement validity. Whether software is licensed or sold affects, for example: (1) The validity of post-transfer use restrictions in software license agreements; (2) applicable laws to software transfers and software license agreements, which affects the legal rights and remedies that are available to transferors and transferees; and (3) the rights of intermediaries and subsequent transferees.


555 In this context, “licensed” must be used rather than the common “transferred,” since it is very important whether the software is sold, licensed, leased, or accessed. See supra section 1.6.1.


As implied, the fundamental difference between a license and a sale concerns ownership; a transferor retains ownership through a license, but not through a sale. If transferred software is licensed and not sold, it means that transferors retain ownership not only over intellectual property, but also over software copies, which can become controversial when software is transferred to end users. Unexpectedly, software license agreements aimed at end users claim ownership over intellectual property and software copies.

The idea of “licensed rather than sold” has a number of reasons, and history is one. Software license agreements are considered created to avoid the American first-sale doctrine. According to that doctrine, a legally purchased copy can be lent or leased to others without infringing copyright. This would allow a company to buy software copies and lease them to consumers, which was thought to increase the risk of software piracy. However, if a transaction were characterized as a license, rather than a sale, this would negate the first-sale doctrine. The 1990 amendment to the first-sale doctrine mainly...

559 At least using a sole or nonexclusive license.
560 The term licensing can create connotations of an act between undertakings, where one party commercially exploits the other party’s intellectual property. See Jay Pil Choi, A Dynamic Analysis of Licensing: The ‘Boomerang’ Effect and Grant-Back Clauses, 43 Int’l Econ. Rev. 803, 803 (2002) (“Licensing is a voluntary form of dissemination whereby an inventor can enjoy at least some of the gains to trade by availing other parties of the use of his superior knowledge. Firms often grant licenses because they do not have the resources to achieve full commercial exploitation of their intellectual property by themselves.”).
561 See Carver, supra note 554, at 1889.
562 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 1 (2013) (“The Apple Software... [is] licensed, not sold, to you...”). See also Id. at Section 6 (“This License is effective until terminated. Your rights under this License will terminate automatically or otherwise cease to be effective without notice from Apple if you fail to comply with any term(s) of this License.”). See also Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 8 (2009) (“The software is licensed, not sold. This agreement only gives you some rights to use the features included in the software edition you licensed. Microsoft reserves all other rights.”).
563 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 2(H) (2013) (“You may not rent, lease, lend, sell, redistribute or sublicense the Apple Software.”).
564 See Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96 n. 7 (3d Cir. 1991).
566 See Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96 fn. 7 (3d Cir. 1991).
567 This raised copyright preemption questions. See Id. at 96, fn. 7.
eliminated this potential problem. But transferors still claim that software is licensed rather than sold.

A license also gives the transferor additional advantages, such as limiting the transferor’s liability for the software, and the ability to induce different use restrictions on the transferee to protect the intellectual property. According to Wang, to understand the objection against the first-sale doctrine, and the purpose of software license agreements, we must separate prevention of “downstream user substitution” and “proliferation.” Under both forms, the right to use a copy of a copyrighted work has been transferred from person A to person B. Under the first form, person A gives up its right to use the copy, while under the second form person A and B may simultaneously use the copy. If a transferor may prevent user substitution, it becomes possible to facilitate price discrimination. Preventing downstream user substitution is not a goal of copyright law, as indicated by the first-sale doctrine. Preventing downstream user proliferation, on the other hand, lies as the core of copyright law, since proliferation requires reproduction, and control over reproduction is the main part of copyright law. However, reproduction of digital products is simple in practice, and original transferees can keep a digital copy and transfer the original physical or digital copy to a new transferee. With software license agreements, transferors can create a complementary protection to copyright law, by creating an enforcement mechanism against downstream proliferation.

568 17 USC § 109(b), 109(b)1(A); Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96, fn. 7 (3d Cir. 1991).
571 Wang, supra note 570, at 9.
572 17 USC § 106(1); GESETZ ÜBER URHEBERRECHT UND VERWANDTE SCHUTZRECHTE [Urheberrechtsgesetz] [UrhG] [Copyright Act] September 9, 1965, BGBl. 1273, § 15(1) pt. 1 (Ger.) (das Vervielfältigungsrecht). See also Wang, supra note 570, at 8–14.
573 See Appellant’s Opening Brief at 48, Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010) No. 09-35969, 2010 WL 894736, at *48 (“[A] copyright owner’s retention of ownership of its software copies protects against unauthorized reproductions of the software. After installing the software, a licensee of Autodesk’s software can transfer the tangible copy of the software while retaining and using the copy installed on its hard drive. Autodesk’s licensing of its software copies provides an enforcement mechanism against this possibility because it permits Autodesk to sue a downstream purchaser for copyright infringement.”) See also Wang, supra note 570, at 9–12.
Whether software is licensed or sold may vary between different software transfers. Certain software transfers may include elements of different transfer types, making it more difficult to assess whether software is licensed or sold. For example, some software transfers might ask for one-time fees but is governed by software license agreements that only cover a limited duration. And even standardized software might be transferred with software license agreements that cover customization and implementation, something that is more common for specialized software. But not all software transfers have such mixed elements, and the perhaps most common form of software transfer for standard software is more straightforward: The software is transferred perpetually against a one-time fee, without implementation or customization. The labeling of this category has led to a vibrant scholarly discussion in the United States. This will be examined below.

**United States**

First, the question of whether a transaction labeled as a “license” is in fact a license or a sale is far from new or unique to software. In *Bauer & Cie. v. O’Donnell*, the Supreme Court examined a transaction, labeled as a license, of a patented water-soluble albuminoid. The Court found the transaction to be a sale, saying that using the label “license” was “a mere play upon words,” and not of significance. In modern times, the uncertain nature of transactions labeled license has extended into software transactions. There have been two opposing views in American courts on whether software is licensed or sold. In recent years, most courts consider software to be licensed and not sold, and the validity of many older rulings is limited.

The first line of cases has considered software to be sold and not licensed. In *Softman Prod. v. Adobe*, the court said that software transfers have often been

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575 See Id. at Teil 1. B. IV. 1(c) recital 63–64.
576 Cf. the Microsoft model. See supra section 2.2.
577 See, e.g., Kim, supra note 558, at 1103; Lothar Determann & Aaron Xavier Fellmeth, Don’t Judge a Sale by its License: Software Transfers Under the First Sale Doctrine in the United States and the European Community, 36 U.S.F. L. Rev. 1 (2001); Nadan, supra note 569, at 555; Rothchild, supra note 557, at 1; Winston, supra note 557, at 93; David A. Rice, Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine, 30 Jurimetrics J. 157, 178 (1990).
578 229 U.S. 1 (1913).
579 Bauer & Cie. v. O’Donnell, 229 U.S. 1, 16 (1913).
considered sales of goods within the Uniform Commercial Code (UCC).  

The court determined the classification as a sale or license on the economic realities of the transaction, and based on this, the transfer was considered a sale. The second line of cases has taken the opposite view, stating that software is licensed and not sold. These cases have sometimes explicitly chosen not to adopt the *Softman* analysis, for example, when software license agreements have restricted further distribution of the software.

In recent years, a number of cases, primarily from the Ninth Circuit, have made the latter view dominant. In *Vernor v. Autodesk*, the Ninth Circuit did not look at the economic realities of the transaction, unlike the district court in *Softman*. The Ninth Circuit said that while the court had looked at the economic realities of a transaction in *Microsoft Corp. v. DAK Industries*, that ruling was exceptional, and the court in *Vernor* did not feel obliged to look at the economic realities. The court said that a perpetual transaction against a single payment could be a license and not a sale. The court clarified this by saying that "a software user is a licensee rather than an owner..."
of a copy where the copyright owner (1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions."592 The court argued that this method for assessing whether a transaction is a license or a sale was consistent with its earlier rulings.593 The court did not consider a software transfer to be a license in every situation, but when the software license agreement significantly restricts the transferee’s possibilities to transfer or use the software.594 The court also argued that the ruling was consistent with rulings by other federal appellate courts.595 Vernor was appealed to the Supreme Court, asking the Ninth Circuit to review the case (petition for writ of certiorari), but this petition was denied.596 In MDY Indus. LLC v. Blizzard Entm’t, Inc.,597 the Ninth Circuit reaffirmed the view that transferors are licensees and not owners.598 An exception is UMG Recordings, Inc. v. Augusto,599 where the court examined the transfer of promotion CDs with terms of use.600 The defendant had acquired promotion CDs, but not through the record label, and auctioned them on eBay.601 The court said that the circumstances were

592 Id. at 1111. Citing United States v. Wise, 550 F.2d 1180 (9th Cir. 1977); MAi Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993); Triad Sys. Corp. v. Se. Express Co., 64 F.3d 1330 (9th Cir. 1995); Wall Data, Inc. v. Los Angeles County Sheriff’s Dept, 447 F.3d 769 (9th Cir. 2006).
593 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1110–1111 (9th Cir. 2010). See United States v. Wise, 550 F.2d 1180, 1190 (9th Cir. 1977); MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993); Triad Sys. Corp. v. Se. Express Co., 64 F.3d 1330 (9th Cir. 1995); Wall Data, Inc. v. Los Angeles County Sheriff’s Dept, 447 F.3d 769, 785 (9th Cir. 2006).
594 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010).
595 Id. at 1113–1114. See DSC Communications v. Pulse Communications, 170 F.3d 1354, 1360–1361 (Fed. Cir. 1999); Krause v. Titleserv, Inc., 402 F.3d 119, 123–125 (2d Cir. 2005) (The software was considered sold, but the circumstances were special: (1) There was no written license agreement; (2) the transferor was an employee of the transferee; (3) the transferee has paid the transferor a substantial sum to develop the software specifically for the transferee; and (4) the transferor had allowed the transferee to use the software perpetually, even if their relationship ended.).
597 629 F.3d 928 (9th Cir. 2010).
598 MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938–939 (9th Cir. 2010).
599 628 F.3d 1175 (9th Cir. 2011).
600 UMG Recordings, Inc. v. Augusto, 628 F.3d 1175, 1177–1178 (9th Cir. 2011) (“This CD is the property of the record company and is licensed to the intended recipient for personal use only. Acceptance of this CD shall constitute an agreement to comply with the terms of the license. Resale or transfer of possession is not allowed and may be punishable under federal and state laws.”).
601 Id. at 1178.
Unlike those in *Vernor* due to the distribution method; the record company had “virtually no control over the unordered CDs,” had no assurance that the recipient had or would assent to the terms of use, and did not require the ultimate return of the CDs. Without this control, the record company did not retain ownership of the copies.

According to Nimmer, courts holding that a transferee is not the owner of software approaches this question in three distinct ways: (1) Examining the language addressing ownership: If the software license agreement provides that the transferor will remain ownership, the ownership is not transferred. In absence of clear writing, industry practice can influence a court’s view of the nature of the transfer. (2) Applying a categorical rule that a license is not a sale; thus, a transferor does not become the owner. (3) Examining the terms of the software license agreements; concerning “use restrictions, conveyance restrictions, and other variables to determine if the rights conveyed correspond to or support an inference of a transfer of ownership.” The last approach is the dominating approach. *Vernor* adds to this approach, and can be seen as an adoption of the formula in *DSC*. Some legal scholars have expressed concerns over the dichotomy between licenses and sales, but courts seem to use it. The “licensed” view dominates today, as long as the requirements in *Vernor* are met. It should be noted that this ruling

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602 *Id.* at 1183.
604 *See* RAYMOND T. NIMMER, LAW OF COMPUTER TECHNOLOGY § 1:110 (Westlaw through November 2013).
605 *See* S.O.S., Inc. v. Payday, Inc., 886 F.2d 1081, 1088–1089 (9th Cir. 1989).
607 *See* MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 518, fn. 5 (9th Cir. 1993) (“Since MAI licensed its software, the Peak customers do not qualify as “owners” of the software and are not eligible for protection under § 117.”).
608 NIMMER, supra note 604, at § 1:110; DSC Communications Corp. v. Pulse Communications, Inc., 170 F.3d 1354, 1360–1362 (Fed. Cir. 1999).
609 NIMMER, supra note 604, at § 1:110.
610 *See* Carver, supra note 554, at 1930 (Arguing that the dichotomy between a license and a sale is the result of a failure to distinguish between tangible and intangible copies.).
611 NIMMER, supra note 604, at § 1:110 (“With few exceptions, cases hold that licensees are not owners of the copy for purposes of copyright and, thus, that they do not receive the benefit of first-sale defenses.”).
612 MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938 (9th Cir. 2010); Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (That is, as long as the copyright holder: “(1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”).
only applies to restrictive software license agreements, but it can be argued that the question is more important for restrictive software license agreements. The view in Vernor applies at least within the jurisdiction of the Ninth Circuit (including California and Washington, but not New York), but the result could be different in other jurisdictions. Finally, it should be noted that the result might be different for specialized software.

Germany

This question has been less complex in Germany. German courts have primarily considered software transfers to be sales, or rather treated as them sales. This view applies both to software transferred on physical media and digitally transferred software. However, the result varies between different categories of software transfers. A very important factor is time. Under German law, a

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613 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010).
614 Robert W. Gomulkiewicz, Clariﬁcations and Complications in Enforcing Open Source Software Licenses, in Research Handbook on Intellectual Property Licensing 76, 88–89 (Jacques de Werra ed., Edward Elgar Publishing: Cheltenham 2013) (Arguing that the Vernor requirements are one way to prove that a transaction is a license, not the only way. And that granting more rights could be a way to show that a transaction is not a sale.).
616 See also MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938–939 (9th Cir. 2010); MDY Indus. LLC v. Blizzard Entm’t, Inc., 2008 WL 2757357, *9 (D. Ariz. Jul. 14, 2008) (Holding that the transferees were “licensees of the copies of the game client software” — not owners of the copies,); MAi Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 518, fn. 5 (9th Cir. 1993); Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330, 1333 (9th Cir. 1995); Wall Data Inc. v. Los Angeles County Sheriff's Department, 447 F.3d 769, 784–785 (9th Cir. 2006).
617 However, since the Ninth Circuit has appellate jurisdiction over, for example, California and Washington, it is very inﬂuential in practice. One older N.Y. district court ruling also suggests that software is licensed and not sold. See Microsoft Corp. v. Harmony Computers and Electronics Inc., 846 F.Supp. 208, 212 (E.D.N.Y. 1994).
618 That is, if the contract does not resolve the question of ownership, and the software has been developed (“or substantially modiﬁed”) for a customer. See Nimmer, supra note 604, at § 1:110. In Krause, the transferee had “paid substantial sums, to possess and use a copy indeﬁnitely without material restriction, as well as to discard or destroy it at will.” The court found, in the light of this, that the transferee was the owner of the software copy. See Krause v. Titleserv, Inc., 402 F.3d 119, 124–125 (2d Cir. 2005).
619 Determann & Fellmeth, supra note 577, at 81–89. Regarding treating software as goods, see BGH Nov. 4, 1987, NJW 1988, 406 (Ger.); Peter Rott, Germany, in Digital Content Services for Consumers; Report 1: Country Reports 85, 87 (University of Amsterdam: Centre for the Study of European Contract Law (CSECL); Institute for Information Law (IViR) 2010).
620 Rott, supra note 619, at 88.
characteristic of a license agreement is that the right to use is limited in time, either because the underlying right is limited in time, or because the granted right expires.621

Perpetual software transfers, against a single payment, have been considered as sales,622 even if the payment has been split into a number of installments.623 For this kind of software transfer, the software license agreement is categorized as a sales contract (Kaufvertrag), and the software license agreement is known as a “standard license” (Standardlizenz).624 The BGH focuses primarily on duration and payment of fees when assessing a transfer as a sale.625 But exceptions might exist. For example, if the transferred software, in digital form or on physical media, is only a ticket or access code for an online service that is governed by a software license agreement, the software is not considered to be sold. And the software license agreement in question is best described as a service contract.626 Another exception is perpetual software transfers without any payment, which can be considered as a gift.627 Open source software can arguably fall within this concept of a gift.628

Software transfers that are limited in time have been considered as leases.629 For this kind of software transfer, the software license agreement is categorized as a lease contract (Mietvertrag), and is known as a “duration license”

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621 Martinek, Semler, Habermeier & Flohr, supra note 556, at 12. § 47. ii. 2(c). recital 12.
623 BGH Oct. 18, 1989, NJW 1990, 320 (Ger.).
625 See Leupold & Glossner, supra note 574, at Teil 1. B. IV. 1(a) recital 58–59.
626 See Id. at Teil 1. B. IV. 1(a) recital 61.
627 See Id. at Teil 1. B. IV. 1(b) recital 62, Teil 1. C. II. 1, recital 228–230 (This might be mostly applicable to “lite” versions or “freeware,” or “open source,” without any form of compensation. Demo or trial versions are arguably loans, see below. One problem with compensation arises if the transferee should pay the transferor a nominal fee, for example to cover the cost of physical media, or similar. But if this nominal fee only should cover costs, it is probably still a gift.).
628 See Id. at Teil 1. C. II. 1, recital 229; Axel Metzger & Till Jaeger, Open Source Software and German Copyright Law, 32 Int’l Rev. Intell. Prop. & Competition L. 52, 71–72 (2001) (Grant-back clauses in such software license agreements could potentially be problematic from the perspective of viewing the transfer as a gift. But such provisions only apply when software has been modified, not when the software is only used, and thus are such provisions not directly connected with the core benefit — and such software can pass as a gift.).
(Dauerlizenz).\footnote{Maxeiner, supra note 624, at 167.} However, in order for a transfer to be considered a lease, the transferee must be required to return the property. This requirement might cause problems, since a transferee might keep a digital copy even if the leased software is returned. To meet this requirement, the transferor can use a digital lock that prevents the use of the software after the lease has lapsed.\footnote{See Leupold & Glossner, supra note 574, at Teil 1. B. IV. 3(a) recital 88.} Software can be considered leased if transferred for a limited time against compensation, but if it is transferred without compensation it might be considered a loan.\footnote{See Id. at Teil 1. B. IV. 3(c) recital 96 (This probably primarily applies to demo versions. In order to be a loan and not a gift, some kind of digital lock that prevents further use can be utilized.).}

These two categories will lead to different outcomes for software license agreements. Many mass-market software transfers are perpetual, transferred against a one-time fee, and do not create long-term relationships, in contrast to the above example of software leases. Such mass-market software transfers are treated like sales.\footnote{Rott, supra note 619, at 87; INEGEBORG SCHWENZER ET AL., GLOBAL SALES AND CONTRACT LAW 105 (Oxford University Press: Oxford 2012).} Consequently, many software license agreements should be considered as sales contracts under German law.\footnote{Maxeiner, supra note 624, at 167.} Other software transfers will be considered as leases and software license agreements for such software transfers as duration licenses. In practice, the outcome will be affected by technical and business choices. Primarily if software transfers are limited in time and requires recurring payments.

The German view that perpetual software transfers against a single payment or fee should be considered as a sale and not a license has also been confirmed by the CJEU, for the purpose of distribution right exhaustion within the Union. In UsedSoft v. Oracle,\footnote{Case C-128/11, UsedSoft GmbH v. Oracle i nternational Corp., judgment of 3 july 2012, not yet reported. See also BGH Feb. 3, 2011, GEWERBLICHER RECHTSSCHUTZ UND URHEBERRECHT [GRUR] 2011, 418 (Ger.).} the CJEU said that transferring software and concluding a software license agreement “form an indivisible whole.” The transfer and the agreement must “be examined as a whole for the purposes of their legal classification.” These operations were intended to make the copy perpetually usable to the transferee against a fee. Thus, the CJEU said that there was a transfer of ownership.\footnote{Case C-128/11, UsedSoft GmbH v. Oracle International Corp., Judgment of 3 July 2012, not yet reported, paras. 44–48, 84; Joined Cases C-145/08 & C-149/08, Club Hotel Loutraki AE and Others v. Ethniko Simvoulio Radiotileorrisis and Ipourgos Epikratias, 2010} A permanent transfer
of a software copy “in return of payment of a fee” was said to fall within the meaning of Article 4(2) of the Software Directive,\(^63^7\) exhausting the distribution rights of that copy within the Union.\(^63^8\) The CJEU said that if transferors would be able to circumvent the exhaustion by calling “the contract a ‘license’ rather than a ‘sale’” the effectiveness of the exhaustion provision would be undermined.\(^63^9\) In this matter, the CJEU agreed with Advocate General Bot, which said that if the term “sale” would be given “[a]n excessively restrictive interpretation [it] would undermine the effectiveness of that provision by divesting the exhaustion rule of all scope, since the marketing of computer software commonly takes the form of user licenses and suppliers would only need to call the agreement a ‘license’ rather than a ‘sale’ in order to be able to circumvent that rule.”\(^64^0\) If the transferor has authorized the downloading of the copy, the distribution rights of the copy will be exhausted. Both the original transferee and any potential subsequent transferee may rely on this.\(^64^1\)

It should be noted that this ruling does not imply that there are no limitations to how a transferee may transfer a tangible or intangible software copy under the national implementations of the Software Directive. If a transferee wishes to resell a tangible or intangible software copy, the transferee must make its own copy unusable, in order not to commit copyright infringement.\(^64^2\)

While *UsedSoft* concerned distribution exhaustion, it confirms the view that a software license agreement must be assessed by the entire transaction. If the whole transaction is a sale, this will affect the legal classification of the software license agreement. As seen, a court may find the intention of a perpetual transfer to be a transfer of ownership (sale). The view that transferred software might not always be licensed has been suggested before,\(^64^3\) but it has

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\(^63^7\) Directive 2009/24 of the European Parliament and of the Council on the legal protection of computer programs, 2009 (L 111) 16 (EC), Article 4(2) (“The first sale in the Community of a copy of a program by the rightholder or with his consent shall exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or a copy thereof.”).


\(^63^9\) *Id.* at para. 49.


\(^64^1\) Case C-128/11, UsedSoft GmbH v. Oracle International Corp., Judgment of 3 July 2012, not yet reported, para. 89.

\(^64^2\) *Id.* at para. 70.

\(^64^3\) This view is not entirely new. See Proposal for a Council Directive on the Legal Protec-
now been confirmed by the CJEU. Thus, the German result will extend to the other Member States, at least for the purposes of distribution exhaustion and transfer restrictions.

There is also additional support for extending the German view to other parts of Europe. Internationally oriented doctrine primarily makes references to German cases and German doctrine when attempting to answer whether sales law should be applied. But it also seems that transfer of standard software would be considered as sales contracts under French, Austrian, and Swiss law.644

Comparison

As seen above, the difference between German law and American law in the question of whether software is licensed or sold is quite clear. Software transfers that are limited in time have been considered as leases under German law.645 Perpetual software transfers, against a single payment, has been considered sales under German law;646 while the same software transfer should probably be considered as licensed under American law.647 With the ruling of the CJEU in UsedSoft v. Oracle,648 the divide between Europe and the United States in this regard has become even clearer. Whether a transferor chooses to call a software transfer a “license” or a “sale” does not affect its legal status from a German (and European Union) perspective, while the Ninth Circuit considered this an important element when deciding whether a transferee is a licensee or an owner under American law.649 With that said, this question under American law should not be reduced to branding. A software license agreement must meet the requirements set forth in Vernor in order for a software transfer to be considered a license and not a sale.650 As we will see, these

644 See SCHWENZER ET AL., supra note 633, at 104–105, fn. 85–86.
647 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010); MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938–939 (9th Cir. 2010).
649 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010).
650 MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938 (9th Cir. 2010); Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (Such software license agreements:
differences will have consequences throughout this thesis. However, these differences are not completely static, since a change of business model will change the evaluation under German law. It is possible that one consequence of UsedSoft will be other business models and technical choices to create a different outcome under German law, and the laws of the other Member States of the European Union.

3.1.2 Laws Applicable to Software Transfers

A number of legal consequences are associated with the above categorization. One example is the avoidance of distribution exhaustion/first-sale doctrine since the doctrine does not apply to licensed software. Other examples include questions regarding: (1) Laws applicable to software transfers; and (2) validity of post-transfer use restrictions. The first question is primarily a question of whether sales law will be applicable to software transfers.

United States

From an American perspective, the question of which laws should apply to software transfers and software license agreements has been quite complex. An important question has been whether common law contract law or the UCC should apply to software license agreements. This is important since: (1) Their contents differ, which can lead to different outcomes; and (2) the UCC is, at least theoretically, more harmonized between the States than common law contract law.

“(1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”.

651 See, e.g., Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96, fn. 7 (3d Cir. 1991). Distribution exhaustion also exists under German copyright law and in the European Union software and copyright directives.

652 See Vernor v. Autodesk, Inc., 621 F.3d 1102, 1112 (9th Cir. 2010).

653 Even whether software is a product or service has been a complex question. See Conwell v. Gray Loon Outdoor Marketing Group, Inc., 906 N.E.2d 805, 811 (Ind. 2009) (“[C]ourts have had a difficult time placing software into the established categories.”).


655 Private law is mainly within the competence of the States and there is no uniform contract law; it is mainly state law and case law. See Herbert L. Bernstein, Contracts, in Introduction to the Law of the United States 159, 159 (2nd ed., David S. Clark & Tugrul Ansay eds., Kluwer Law International: The Hague 2002). However, the Uniform Commercial Code, a model code applicable to sales of goods, has been adopted by all states to some extent (Louisiana has not adopted Article 2 regarding sales). See Peter de Cruz, Comparative Law in a Changing World 116 (3rd ed., Routledge-Cavendish: Oxon 2007); Reitz & Carlson, supra
Generally, if software is licensed and not sold under American law, it should not be considered a sale of goods within the UCC, and common law contract law would apply instead. Some early cases said that the UCC applies to software transfers, or said that a software transfer is not a sale of goods, but assumed that the UCC applies, and have examined software license agreements “through the lens of” the UCC. But several courts have said that if the software transfer is a license for intellectual property, the UCC does not apply, and common law contract law applies instead. Thus, if the Vernor requirements are met, common law contract law should be applied. It should be noted that it is possible that the parties agree to apply the UCC to their software transaction. In Mortenson v. Timberline, the parties agreed that the UCC applied to software licensing, which the court accepted without discussing the relevance of the UCC. Legal scholars have also debated whether the UCC should apply to software. Some have considered the UCC to be appropriate to software in certain matters, while others have disagreed.

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Note 654, at 282 (However, the UCC is state law, and the enactment may differ between states; meaning that the UCC has not led to a truly uniform law regarding sales of goods.).

656 See UCC §§ 2-102, 2-105, 2-106 (Westlaw through September 2013) (Regarding scope of the UCC, the definition of “goods,” and the definition of a ‘sale.’ ‘A sale’ consists in the passing of title from the seller to the buyer for a price.”).

657 Nimmer, supra note 604, at § 6:9 (Arguing that a software transfer is neither a sale of goods or a provision of services.).


663 Moringiello & Reynolds, supra note 673, at 1543, fn. 5.


and considered the UCC to be even “irrelevant” to software license agreements, except for aspects of the UCC that have been incorporated into common law. The latter view seems to have more support in case law as long as the Vernor requirements are met.

To resolve uncertainty, two major efforts have been put forward. The Uniform Computer Information Transactions Act (UCITA) is a uniform model law that regulates software transactions, including software license agreements. It was initially considered promising, later met with suspicion and criticism, to finally fail miserably. The UCITA can serve as a lesson of the difficulties to introduce law in this area. To avoid repeating that mistake, the American Law Institute (ALI) took a different approach with the Principles of the Law of Software Contracts (ALI Principles). Unlike the

667  The original label UCC 2B shows its intention to resolve issues regarding UCC and software.
668  See Mary Jo Howard Dively, The New Laws That Will Enable Electronic Contracting: A Survey of the Electronic Contracting Rules in the Uniform Electronic Transactions Act and the Uniform Computer Information Transactions Act, 38 Duq. L. Rev. 209, 253 (2000) (“Without UETA and UCITA, the promise of the Internet to transform the way we do business cannot be fully realized. With them, this promise can be achieved in a manner that considers the interests of all contracting parties, allows them the freedom in most cases to contract as they see fit, and provides protection where it is most needed.”).
669  See Robert W. Gomulkiewicz, The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing, 13 Berkeley Tech. L.J. 891, 892–893 (1998) ((1) Scholars feared a remake of law, as they knew it; and (2) practitioners feared that people unfamiliar with the industry, “or those with political and intellectual axes to grind,” would create an outcome that would not suit the industry.).
670  The project and the final model law became controversial, and most states have been very hesitant to adopt the UCITA; only Maryland and Virginia have adopted the act. See, e.g., Deborah Tussey, UCITA, Copyright, and Capture, 21 Cardozo Arts & Ent. L.J. 319, 323–326 (2003); Maureen A. O’Rourke, An Essay on the Challenges on Drafting a Uniform Law of Software Contracting, 10 Lewis & Clark L. Rev. 925, 929–930 (2006); Michael L. Rustad & Maria Vittoria Onufri, The Exportability of the Principles of Software: Lost in Translation?, 2 Hastings Sci. & Tech. L.J. 25, 37–40 (2010). For a discussion of UCITA’s content, see Tussey, supra note 670, at 326–332; Maxeiner, supra note 624, at 126–129. The controversy of the act is illustrated by the fact that more states have enacted UCITA “bomb-shelter” legislation, voiding forum selection or choice-of-law clauses against consumers that will lead to application of the UCITA, than states adopting the UCITA. See Iowa Code § 554D.125 (Westlaw through 2013); N.C. Gen. Stat. § 66-329 (Westlaw through 2013); W. Va. Code § 55-8-15 (Westlaw through 2013); Idaho Code § 29-116 (Westlaw through 2013); Vt. Stat. Ann. tit. 9 § 2463a (West, Westlaw through 2013); Tussey, supra note 670, at 323–326. In the light of this development, the UCITA can be considered a failure.
671  PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS (2009). See O’Rourke, supra note 670,
UCC and the UCITA, the ALI Principles is not a model law. The ALI Principles provide guidelines for courts.672 “The ALI Principles have two problems: (1) They have been met with criticism;673 and (2) they do not necessarily “reflect law as it is.”674 unless the ALI Principles are adopted by courts, in part or in whole.675 Still, transferors might have to take the ALI Principles into account if law would move in that direction. And perhaps more importantly, the ALI Principles may sometimes work as a “safe harbor,”676 since they might be more restrictive than American law as it currently stands, and be more in line with European Union legislation. In this way, the ALI Principles may help transferors improve cross-national validity.677

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672 Principles of the Law of Software Contracts Intro. (2009) (The ALI Principles “seek to clarify and unify the law of software transactions,” but it is not a restatement of the law. The ALI Principles are only accounting “for the case law and recommends best practices.”). Thus, the ALI Principles is a form of soft law. See Rustad & Onufri, supra note 670, at 43–44.


674 The ALI considers their “Principles” to express “the law as it should be, which may not reflect the law as it is.” See Principles of the Law of Software Contracts § 1.12 cmt. a. (2009).

675 Principles of the Law of Software Contracts Intro., § 1.12 cmt. a. (2009) (This is not completely unlikely since it would simply the work of courts.).

676 Hillman & O’Rourke, supra note 673, at 57–58.

677 Id. at 55 (“[W]e believe several of our proposals could constitute core elements of a global software licensing policy.”). See infra section 12.1 (Regarding the ALI Principles and achieving cross-national validity.).
Germany

Under German law, the question of what laws should apply to software transfers have been less problematic, except for specialized software. Perpetual standard software transfers should be considered as sales, and sales law should be applicable.

One relevant question is whether the software is a thing (chattel) since it affects a transferor’s legal obligations. If the software is embodied on physical media, the BGH has repeatedly confirmed software to be a thing. The answer could be more complicated for digitally transferred software. But in *NJW 2007, 2394*, the BGH also applied sales law to digitally transferred software. The Court noted that the form of the information carrier does not affect its characteristics of being a thing. The ultimate goal of the transaction, using the transferred software, is achieved regardless of information carrier.

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678 See Leupold & Glossner, *supra* note 574, at Teil 1. B. IV. 2(a) recital 65. A software license agreement for the transfer of specialized software, developed as a part of a contract, has traditionally been categorized as a service contract (*Werkvertrag*). BGH Mar. 7, 1990, *NJW* 1990, 3011 (Ger.); Oberlandesgericht [OLG] [Higher Regional Court] Celle Mar. 3, 1992, *Neue Juristische Wochenschrift, Rechtsprechungs-Report [NJW-RR]* 1993, 432 (Ger.). See also Maxeiner, *supra* note 624, at 167. However, since the reform of the law of obligations in 2002, provisions for sale of goods are applicable to movable things that are being produced. See BGB § 651 (Ger.). Thus, perpetually transferred specialized software should be a sale of goods in most situations. See Leupold & Glossner, *supra* note 574, at Teil 1. B. IV. 2(a) recital 65–69. However, if the dominating part of the work is planning to solve a design problem only contract law will apply. See BGH Jul. 23, 2009, *NJW* 2009, 2877, paras. 34–35 (Ger.); Leupold & Glossner, *supra* note 574, at Teil 1. B. IV. 2(b) recital 70–76; BGB § 631 (Ger.). The BGH said that the creation of specialized software is similar to web design, and Section 631 et seq. of the BGB should normally be applicable. See BGH Mar. 4, 2010, *NJW* 2010, 1449, paras. 20–28 (Ger.) (See also the discussion for different kinds of Internet system contracts.). Thus, if the focus is on planning, only contract law should be applicable. See Leupold & Glossner, *supra* note 574, at Teil 1. B. IV. 2(c) recital 77–86. The result should not differ if the software is transferred in a physical or digital form. See BGH Nov. 15, 2006, *NJW* 2007, 2394, para. 19 (Ger.); Leupold & Glossner, *supra* note 574, at Teil 1. B. II. recital 43.


680 See generally BGB § 90 (Ger.) (Only corporal objects are things in a legal meaning). See also Leupold & Glossner, *supra* note 574, at Teil 1. B. II. recital 41–44.

681 See BGB § 433 et seq., § 651 et seq. (Ger.).

682 See BGH Nov. 15, 2006, *NJW* 2007, 2394, para. 18 (Ger.) (And the listed cases confirming this.). See also Leupold & Glossner, *supra* note 574, at Teil 1. B. II. recital 42.

683 BGH Nov. 15, 2006, *NJW* 2007, 2394 (Ger.).

This case concerned business actors, but there are no reasons why the result should be different against consumers.

Under the new European Union Consumer Rights Directive, digitally transferred software is considered as digital content. Under the Directive, applicable to contracts concluded after June 13, 2014, contracts for digitally distributed content are not classified as sales or services contracts. The consumer will generally have a right to withdrawal, with some exceptions. Thus, the Directive creates a *sui generis* regulation of digital content, and does not follow the German view of applicability of sales law. Still, the Directive has few implications for software license agreements.

International Sales and Contract Laws

It is conceivable that international laws of sales and contractual obligations can become applicable to cross-national software transfers. In theory, international laws, principles, or agreements created by international organizations might seem as a good legal solution to the single software market. However, practice is often less uniform, meaning that such sources are not likely to eliminate differences between legal systems.

The *United Nations Convention on Contracts for the International Sale of Goods* (CISG) applies to the sale of goods between business actors, which

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686 However, practitioners are not always familiar with such international laws and conventions, or wish to avoid them. See Peter L. Fitzgerald, *The International Contracting Practices Survey Project: An Empirical Study of the Value and Utility of the United Nations Convention on the International Sale of Goods (CISG) and the UNIDROIT Principles of International Commercial Contracts to Practitioners, Jurists, and Legal Academics in the United States*, 27 J.L. & Com. 1, 7, 14 (2008) (The study showed that a majority of American practitioners did not consider themselves especially familiar with the CISG and especially the UNIDROIT Principles. And a majority of American practitioners that were familiar with CISG choose to opt-out from the Convention.).

687 See Pierre Legrand, *On the Singularity of Law*, 47 Harv. Int’l L.J. 517 (2006) (“Incoterms—yes, Incoterms!—as they are implemented by merchants, lawyers, arbitrators, and judges, generate, on each and every occasion, an original configuration. The originality may be slight, but it is present even in what seems most familiar. Every purported replication of the ‘legal’ in fact produces singularity—that is, generates ‘something’ that differs from what has come before and from what will come after.”).

688 Especially if not applied by practitioners.

689 The goods do not need to be used for industrial purposes. Use for professional purposes
have their place of business in different nation states, if at least one state is a Contracting State. The Convention does not apply against parties that have bought goods for personal use. The Convention only governs contract formation, and not the validity of the agreement. Thus, CISG would in any event have a limited application to software license agreement validity. Also, the parties may contract out the application of the Convention, which some software license agreements do. To avoid uncertainty, clear exclusion of the convention is preferred. The Convention is inapplicable to software transferred for personal use and also to specialized software.

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691 See Id. at Article 1(1)(a–b). Under Article 1(1)(b), the CISG can become applicable under rules of private international law, if the law of a contracting state becomes applicable, but both Germany and the United States have made exceptions from this rule when entering into the Convention. However, Article 1(1)(a) applies, since both Germany and the United States are Contracting States to the Convention.
692 Id. at Article 2(a).
693 Id. at Article 4.
694 Only Part II of the CISG, regarding formation of contracts would be applicable. Even though CISG Part II may lead to different results than under common law, some still argue it to be of little importance, since it is not difficult to accommodate to such differences. See also Roy Goode, Herbert Kronke & Ewan McKendrick, Transnational Commercial Law: Text, Cases, and Materials 271–272 (Oxford University Press: Oxford 2007).
695 CISG, Article 6.
696 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 12 (2013) (“This License shall not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded.”).
697 See Schlechtriem & Schwenzer, supra note 689, at Article 6, para. 3(a–c), 108–114, fn. 44 (For example, choosing Russian law or excluding German law might create interpretation problems, even if the law of a third country is chosen. Instead the CISG should specifically be mentioned as excluded. For example, “this contract is governed by German law under the exclusion of the CISG.”); Goode, Kronke & McKendrick, supra note 694, at 271–272 (Merely stating that “French” or “domestic law” will apply might not be sufficient to contract out CISG.).
699 The production of specialized software, with a sufficient amount of labor is excluded from the Convention. Software license agreements for such software have been considered a contract for services, and not “goods” under the Convention. See CISG, Article 3; OLG Köln Aug. 26, 1994, NJW-RR 1995, 245 (Ger.). See also Larson, supra note 698, at 464; James
CiSG does not cover leases, meaning that a software license agreement for a software transfer that is limited in time and is transferred against recurring fees fall outside the scope of the Convention. Finally, CiSG cannot apply to software that is transferred free of charge, since a price must be paid for the software. Thus, the Convention can only be theoretically applicable to standard software transfers between business actors, if the transferee pays a fee, and the Convention is not waivered. Since, it does not apply to invalidity, the Convention can only be of partial importance within a limited scope.

Courts in different legal systems are likely to have different views on CiSG’s applicability to software transfers and software license agreements. A German court has found the Convention to be applicable to the sale of standard software. American courts have not confirmed this, but scholars have argued CiSG to be applicable. Thus, the available case law confirming CiSG’s applicability to physical software distribution is minimal and increasingly dated.

The potential applicability of CiSG to digitally transferred software has
attracted a lot of discussion. CISG does not define the term “goods,” and scholars have argued that the term should not only encompass tangible movable things, but all sorts of merchandises.\textsuperscript{705} The Convention states that it is inapplicable to certain forms of intangible property, such as electricity and stocks.\textsuperscript{706} This has led to two views: (a) The Convention does not exclude intangibles per se, only specified intangibles;\textsuperscript{707} or (b) the examples of excluded intangibles suggest that the Convention is only applicable to tangible, movable things. An English Court of Appeals said that a computer program, in contrast to physical media containing the software, does not constitute a sale for the purpose of the Sale of Goods Act of 1979.\textsuperscript{708} Some mean that software must be contained in a physical medium for CISG to apply, while others mean that software does not lose its characteristic if it is separated from its physical medium,\textsuperscript{709} and that there is doctrinal support for applying CISG to digitally transferred software.\textsuperscript{710}

\textsuperscript{705} Kilian & Heussen, \textit{supra} note 700, at 1 Abschnitt, Teil 3, Mängelansprüche bei Hardware- und Softwareverträgen, VII. UN-Kaufrecht, 2(c)(bb), recital 287–296 (The French version of CISG uses the word “\textit{marchandises}” [merchandise], while the French version of the 1964 Hague Convention relating to a Uniform Law on the International Sale of Goods uses the term “\textit{objets mobiliers corporels}” [movable, tangible goods]. Both English versions use the term “goods.” The French terminology could suggest that CISG has a broader scope than the 1964 Hague Convention.).

\textsuperscript{706} CISG, Article 2(d) and (f).

\textsuperscript{707} Which could make the Convention applicable to digitally distributed software. See Joseph Lookofsky, \textit{In Dubio Pro Convention? Some Thoughts About Opt-Outs, Computer Programs and Preemption under the 1980 Vienna Sales Convention (CISG)}, 13 Duke J. Comp. & Int’l L. 263, 274, 278 fn. 77 (2003); Fawcett, Harris & Bridge, \textit{supra} note 699, at 514 (“Thus a standard computer software programme that has been delivered and installed by the supplier has been held by the district court (\textit{Landgericht}) of Munich to constitute goods under the Vienna Convention, which would suggest that the same programme transferred over the internet would be regarded in the same way. This fits with the view that the Vienna Convention extends to intangible property, provided that it is movable.”).

\textsuperscript{708} See St Alban’s City and District Council v International Computers Ltd, Court of Appeal [1997] F.S.R. 251 at 265–266 (Eng.) (Regarding the definition of goods: “Clearly a disc is within this definition. Equally clearly, a program, of itself, is not.” “Thus a transfer of the program in the way I have described does not, in my view, constitute a transfer of goods. It follows that in such circumstances there is no statutory implication of terms as to quality or fitness for purpose.”). Cf. Fawcett, Harris & Bridge, \textit{supra} note 699, at 514 (Arguing that this ruling should not be considered decisive for the question.).

\textsuperscript{709} See Kilian & Heussen, \textit{supra} note 700, at 1 Abschnitt, Teil 3, Mängelansprüche bei Hardware- und Softwareverträgen, VII. UN-Kaufrecht, 2(c)(bb), recital 287–296.

It can also be argued that the categorization of digitally transferred software as "goods" is wrong, and that provision of services is a closer equivalent.\(^{711}\) Another argument for this view can be found in the European Union Electronic Commerce Directive: When referring to selling goods online, it refers to the parties in electronic commerce as "service provider" and "recipient."\(^{712}\) Based on this, it could be argued that transfer of software is a provision of services.\(^{713}\) However, there are also arguments against this: (1) The sale of a digitized product is very different from Internet services and ordinary services, since, for software, there is a transfer of property and thus a sales element; and (2) services are normally continuous, but with a software transfer, a service would be "instantaneous."\(^{714}\) Finally, it can be argued that software is neither and should be regarded as \textit{sui generis}. However, case law and doctrine could suggest that a \textit{sui generis} categorization would be unnecessary.\(^{715}\)

This leaves us in an unsatisfied state. CISG has been found applicable to standard software on physical media by a German court in 1995.\(^{716}\) However, confirmations by other courts have not been found, so it is uncertain whether this applies in all jurisdictions where CISG can be applicable. More interestingly, the lack of case law in all these years is quite telling; CISG and software does not seem to be a practically important question. For digitally transferred software, there is case law and doctrinal support against applicability of CISG, but there is more doctrinal support in favor (but no case law). There are no known examples when CISG has been applied to digitally distributed software. Thus, the applicability of CISG is arguably more of academic importance than of practical importance.

The \textit{UNIDROIT Principles of International Commercial Contracts} (UNIDROIT Principles) should also be mentioned.\(^{717}\) The UNIDROIT Principles can, for example, be used for interpreting and supplementing CISG.

\(^{711}\) See Fawcett, Harris & Bridge, supra note 699, at 515.

\(^{712}\) See Directive 2000/31 of the European Parliament and of the Council on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce"), 2000 O.J. (L 178) 1 (EC), Preamble 18 (Selling goods online as an information society service.). \textit{See also} Article 2 of the Directive, regarding the definition of "service provider" and "recipient of the service."

\(^{713}\) See Fawcett, Harris & Bridge, supra note 699, at 515.

\(^{714}\) See Id. at 515. Still, as we have seen, some software should be considered services and not "goods," if specialized software with a sufficient amount of labor has been developed for the transferee. See OLG Köln Aug. 26, 1994, NJW-RR 1995, 245 (Ger.).

\(^{715}\) See Fawcett, Harris & Bridge, supra note 699, at 516.

\(^{716}\) LG München Feb. 8, 1995, 8 HKO 24667/93 (Ger.).

\(^{717}\) It can be considered an international restatement, since it reflects generally accepted aspects of the law of commercial contract law. See Fitzgerald, supra note 686, at 3.
or national law.\textsuperscript{718} The UNIDROIT Principles applies when the parties have agreed so,\textsuperscript{719} but may also be applied without any choice of law; however, this mostly applies to arbitration tribunals.\textsuperscript{720} Unless used when interpreting CISG,\textsuperscript{721} the UNIDROIT Principles are unlikely to be applicable to standard software license agreements.\textsuperscript{722} Like CISG, the UNIDROIT Principles only apply between business actors, but not only to sale of goods.\textsuperscript{723} Still, the UNIDROIT Principles are unlikely to have any practical importance for this subject.

Thus, international sales law and contract principles have a theoretical applicability to certain software transfers and software license agreements. This scope is: (1) Limited to business actors; (2) CISG does not apply to software transferred without payment; (3) it is uncertain whether CISG applies to digitally transferred software; (4) and CISG does not apply to validity questions; and (5) CISG and UNIDROIT may be waivered or not included in software license agreements. Finally, and perhaps most importantly, these international laws and principles have shown to be of almost no practical importance for software transfers. Thus, these international laws and principles will play a very negligent role for this subject.

Summary

As seen, the question of applicable laws to software transfers and software license agreements have sometimes been simple, and sometimes very difficult. German sales law is likely to be applicable to most German software transfers, while American sales law is unlikely to be applicable to most American software transfers. While international contract and sales law could be applicable to some cross-national software transfers and software license agreements in theory, practice shows a very negligent applicability. Thus, national contract and sales law are most likely to be applicable in most situations.

\textsuperscript{718} UNIDROIT Principles of International Commercial Contracts 2010, Preamble, Cmt. 5–6; BGH Jan. 9, 2002, NJW 2002, 1651 (“Milchpulverfall”) (Ger.).

\textsuperscript{719} UNIDROIT Principles of International Commercial Contracts 2010, Preamble, Cmt. 4(a–b). (The Principles can also be applied as a manifestation of “general principles of law” or “lex mercatoria” or similar writings in a contract.).

\textsuperscript{720} Id. at Preamble, Cmt. 4(c).

\textsuperscript{721} See BGH Jan. 9, 2002, NJW 2002, 1651 (“Milchpulverfall”) (Ger.).

\textsuperscript{722} Since: (1) A reference is generally needed; and (2) the UNIDROIT Principles are arguably even less familiar than CISG among practitioners.

\textsuperscript{723} Thus, removing a major issue with CISG.
3.2 Legal Categorization of Software License Agreements

Under German law, there is not one simple answer on legal categorization, since the term software license agreement does not have a legally fixed meaning or create any special connotations under German law.\textsuperscript{724} The term does not clarify if the transfer is a sale, lease, work contract, gift, or a rental. This has to be established for each transfer, based on the purpose of the contract. A software license agreement can be, for example, a sales contract, work contract, lease contract, service contract, rental agreement, or gift agreement.\textsuperscript{725}

Under American law, the legal categorization of software license agreements is more straightforward.\textsuperscript{726} If software is licensed,\textsuperscript{727} a software license agreement grants the transferee a license to use the software.\textsuperscript{728} This is often a nonexclusive license,\textsuperscript{729} since such allows the transferor to grant the same rights to an infinite number of transferees.\textsuperscript{730} This grant of license is often combined with several conditions. However, a license must be contained in something to form a relationship between transferor and transferee. A con-

\textsuperscript{724} See Leupold & Glossner, supra note 574, at Teil 1. A. I. 2(d) recital 13–14, Teil 1. B. I. recital 39, Teil 1. B. III. recital 45–46 (The term “software license” is not unknown, and a software license means generally a transfer of the right to use the software.). However, the transfer of a copy is seldom a license under German law. See supra section 3.1.1.

\textsuperscript{725} See Leupold & Glossner, supra note 574, at Teil 1. B. I. recital 39, Teil 1. B. III. recital 45–46, Teil 1. B. IV. 10. recital 118; See supra section 3.1.1 (A software license agreement for a perpetual software transfer, against a single payment, is categorized as a sales contract (Kaufvertrag), and the software license agreement is known as a “standard license” (Standardlizenz). A software license agreement for software transfers limited in time is categorized as a lease contract (Mietvertrag), and is known as a “duration license” (Dauerlizenz).). See Maxeiner, supra note 624, at 167.

\textsuperscript{726} However, there has still been some discussion and confusion regarding legal categorization of certain software license agreements. See Robert W. Gomulkiewicz, Conditions and Covenants in License Contracts: Tales From a Test of the Artistic License, 17 Tex. Intell. Prop. L.J. 335, 345–346 (2009). Some software license agreements do not seem to fit within traditional legal principles and concepts. This will be examined below. See infra section 3.2.2.

\textsuperscript{727} That is, if the requirements in Vernor are met. See supra section 3.1.1.

\textsuperscript{728} As we will see, software is protected by copyright, and the transferor thus has a legal right to grant such licenses. See infra section 3.3.

\textsuperscript{729} See Apple, Software License Agreement for OS X Mavericks [10.9], Section 2(b) (2013) (“[Y]ou are granted a limited, non-transferable, non-exclusive license.”).

tract is the common vessel for licenses, and software license agreements are thus considered contracts that contain licenses under American law.\textsuperscript{731}

Thus, it is impossible to present a uniform legal classification of software license agreements under both American and German law. Still, both German and American law accepts that software license agreements are contracts.\textsuperscript{732}

For standard software, software license agreements are generally standard-form agreements (\textit{Allgemeine Geschäftsbedingungen}),\textsuperscript{733} which is expected, since standard-form agreements dominate the paper world, e-commerce, internet agreements, and agreements for software.\textsuperscript{734}

\subsection{Classification of Provisions}

Under American law, provisions in software license agreements can be divided into \textit{conditions} and \textit{covenants}. Conditions may denote provisions concerning limitations to the scope of the license. Covenants then denote all other provisions in a software license agreement.\textsuperscript{735} In \textit{Storage Tech. Corp. v. Custom Hardware Engg & Consulting, Inc.},\textsuperscript{736} the distinction was presented like this:

[C]onsider a license in which the copyright owner grants a person the right to make one and only one copy of a book with the caveat that the licensee may not read the last ten pages. Obviously, a licensee who made a hundred copies of the book would be liable for copyright infringement because the copying would violate the Copyright Act’s prohibition on reproduction and would exceed the scope of the license. Alternatively, if the licensee made a single copy of the book, but read the last ten pages, the only cause of action would


\textsuperscript{733} See supra section 1.1.5.


\textsuperscript{735} MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 939 (9th Cir. 2010).

\textsuperscript{736} 421 F.3d 1307 (Fed. Cir. 2005).
be for breach of contract, because reading a book does not violate any right protected by copyright law.\footnote{37}

Conditions and covenants can either be “pure” or “blended,” that is, they may be independent from each other or may be a blend of each other. Pure conditions have copyright implications, while pure covenants only have contract law implications. A breach of a pure condition is therefore a copyright infringement, while a breach of a covenant is a breach of contract.\footnote{38} Whether a provision is considered a condition or a covenant can be of importance for transferors. Generally, injunctive relief is available to violations of license conditions, but not to violations of covenants.\footnote{39} Injunctive relief, especially preliminary injunctions, is arguably one of the most important remedies for transferors. Damages are difficult to calculate,\footnote{40} judicial wheels grind slowly, and the technology in question might be obsolete when the court has ruled on the matter. Thus, injunctive relief may be of major importance when transferors aim to enforce software license agreements,\footnote{41} making the distinction between conditions and covenants important.

There are two views on the distinction between pure conditions and pure covenants. According to the first view, pure conditions must touch upon the

\footnote{37} Storage Tech. Corp. v. Custom Hardware Eng’g & Consulting, Inc., 421 F.3d 1307, 1316 (Fed. Cir. 2005).
\footnote{38} See Gomulkiewicz, supra note 726, at 344. See also Sun Microsystems, Inc. v. Microsoft Corp., 188 F.3d 1115, 1122 (9th Cir. 1999).
\footnote{39} MDY Industries v. Blizzard Entertainment, 629 F.3d 928, 941, fn. 3 (9th Cir. 2010). But cf. Ticor Title Ins. Co. v. Cohen, 173 F.3d 63, 69–72 (2d Cir. 1999) (The Second Circuit awarded injunctive relief for a covenant breach.).
\footnote{40} Jacobsen v. Katzer, 535 F.3d 1373, 1382 (Fed. Cir. 2008) (“Indeed, because a calculation of damages is inherently speculative, these types of license restrictions might well be rendered meaningless absent the ability to enforce through injunctive relief.”). See Ticor Title Ins. Co. v. Cohen, 173 F.3d 63, 69 (2d Cir. 1999); Register.com v. Verio, 356 F.3d 393, 404 (2d Cir. 2004) (The Second Circuit has awarded injunctive relief when it has been “very difficult to calculate monetary damages that would successfully redress the loss of a relationship with a client that would produce an indeterminate amount of business in years to come.”).
\footnote{41} However, preliminary injunctions may in certain situations be problematic from a legal and economic perspective. See Michael J. Meurer, Controlling Opportunistic and Anticompetitive Intellectual Property Litigation, 45 B.C. L. Rev. 509, 526 (2003) (“Preliminary injunctions promote opportunistic and anticompetitive suits by disrupting the defendant’s business, raising the total cost of litigation, and causing financial distress.”). Citing Jean O. Lanjouw & Josh Lerner, Tilting the Table? The Use of Preliminary Injunctions, 44 J.L. & Econ. 573, 573–574 (2001) (“An injunction proceeding itself raises the legal expenditure required to pursue a case through to a trial ruling. If, in addition, a plaintiff can shut down a significant fraction of a defendant’s operations for months or years while an issue is being resolved, the defendant is likely to experience a sharp reduction in operating cash flow.”).
exclusive rights of copyright. The second view is that the parties may freely choose what is a condition. The ruling in Jacobsen v. Katzer suggests that whether a provision is a condition or a covenant depends on how it is used in a software license agreement, but the court left the question open. Thus, the distinction between pure conditions and covenants is currently not entirely clear. However, the Ninth Circuit, which have federal appellate jurisdiction over, inter alia, California and the State of Washington, makes a clear distinction. In MDY Indus. LLC v. Blizzard Entm’t, Inc., the court examined a provision labeled as “Limitations on Your Use of the Service,” implying a condition rather than a covenant. The court cited Bhd. of R.R. Trainmen v. Balt. & Ohio R.R., in which the Supreme Court said, “headings and titles are not meant to take the place of the detailed provisions of the text,” and that “the heading of a section cannot limit the plain meaning of the text.” The Ninth Circuit did not consider the labeling to be important, since the content could not be considered to limit the scope of the limited license. Due to a choice of law-clause, the Ninth Circuit applied Delaware law. Under Delaware law “equity … will, wherever possible, construe an ambiguous contract provision as covenants rather than conditions.” Thus, in order to be able to define a provision as a condition, which gives the option of injunctive relief, it is probably necessary that there is a “nexus between the condition and the licensor’s exclusive rights of copyright” within the Ninth Circuit’s jurisdiction. But the result may be different in other jurisdictions. Gomulkiewicz argues that this can be problematic for open source software license agreements, since

742 See MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 941 (9th Cir. 2010) (“We conclude that for a licensee’s violation of a contract to constitute copyright infringement, there must be a nexus between the condition and the licensor’s exclusive rights of copyright.”).
743 See Gomulkiewicz, supra note 726, at 354–358.
744 535 F.3d 1373 (Fed. Cir. 2008).
745 Jacobsen v. Katzer, 535 F.3d 1373, 1382 fn. 5 (Fed. Cir. 2008). See also Gomulkiewicz, supra note 726, at 351.
746 See Robert W. Gomulkiewicz, Enforcement Of Open Source Software Licenses: The MDY Trio’s Inconvenient Complications, 14 YALE J. L. & TECH. 106, 111 (2011) (Being critical of this case due to potential problematic consequences for open source software license agreements.).
747 629 F.3d 928 (9th Cir. 2010).
748 MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 940 (9th Cir. 2010).
751 MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 940 (9th Cir. 2010).
753 See MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 941 (9th Cir. 2010).
many provisions would not be classified as license conditions, for example attribution provisions, share-alike clauses, and anti-DRM clauses.\textsuperscript{755}

Since much standard software is sold and not licensed under German law,\textsuperscript{756} the above division is irrelevant under German law. However, the question of conditions and covenants is somewhat related to the general division of provisions in contracts into conditions and terms found in several legal systems; the first category are provisions on which the entire contract is dependent, breach of conditions give the right to terminate the contract. Breach of the second category will only allow claims for compensation, not termination. This also applies to German law, where they are known as principal and subsidiary duties.\textsuperscript{757} Covenants and terms are less important than conditions, and possible penalties for breach reflect this. One major consequence of this, which applies to both Germany and the U.S., is the question of severability, that is, if invalidity of a provision will allow the remainder of the contract to be kept in force.\textsuperscript{758}

The potential distinction between contract law and copyright law can be important if a transferee violates a software license agreement. Sometimes, the available action is only breach of contract; in other situations the available action might be both a breach of contract and copyright infringement.\textsuperscript{759} As seen, being able to sue for copyright infringement has certain advantages. Also, a transferor might be able to seek greater damages for copyright infringement than for breach of contract. It is also possible that the availability of suing for copyright infringement, or lack thereof, might influence when and whether a transferor will enforce a software license agreement.\textsuperscript{760} Thus, whether a transferee commits breach of contract, copyright infringement, or both may be of practical importance.

\textsuperscript{755} Gomulkiewicz, \textit{supra} note 614, at 92–95.
\textsuperscript{756} See \textit{supra} section 3.1.1.
\textsuperscript{757} See \textsc{Raymond Youngs, English, French & German Comparative Law 601–605} (2nd ed., Routledge-Cavendish: London 2007).
\textsuperscript{758} See \textit{infra} section 4.4.3.
\textsuperscript{759} See \textsc{Jan Rosén, Upphovsrättens avtal} 24–26 (3rd ed., Norstedts Juridik: Stockholm 2006) (Regarding sanctions for copyright license agreements, including breach of contract or copyright infringement. If a violation also constitutes a copyright infringement, copyright law’s sanction system, with punishment, tort, and coercive measures, becomes available.).
\textsuperscript{760} See \textit{infra} section 11.2.4.
3.2.2 “Pure Licenses” Under American Law

Under American law, the above legal classification of certain software license agreements has been questioned.\textsuperscript{761} It has been suggested that certain software license agreements,\textsuperscript{762} are not contracts containing licenses, but simply “pure licenses.”\textsuperscript{763} A “pure,” or “bare,” license is a non-contractual license, without exchange of promises between licensor and licensee.\textsuperscript{764} A “pure software license,” according to this theory, would be a software license agreement that does not place any obligations on the transferee. This theory separates the requirements for making a “pure license” and a license agreement binding on the transferee. A license agreement that places obligations on the transferee is considered a contract, and normal requirements for contract formation apply. A “pure license,” on the other hand, places no obligations on the transferee, and would therefore not be a contract. The transferee would not be required to accept the “pure license” to be bound by it, according to this theory.\textsuperscript{765} This idea is repeated in certain software license agreements.\textsuperscript{766} A “pure license” would be a form of middle path between a grant and a contract, with the ability to place certain restrictions on a grant without requiring the grantee to accept those restrictions.

This construct is arguably the result of fear; the fear that certain software license agreements would be unenforceable, or that certain remedies would be unavailable to transferors, if categorized as license contracts.\textsuperscript{767} It has been feared that some software license agreements would not meet the requirements of a binding agreement, and would therefore not be legally binding without the idea of a “pure license.”\textsuperscript{768} Other fears and arguments have also been

\textsuperscript{761} See Gomulkiewicz, supra note 726, at 345–346.
\textsuperscript{762} The GNU General Public License v. 2.0 has been at the center of this debate.
\textsuperscript{764} Mark Henley, Jacobsen v Katzer and Kamind Associates — an English legal perspective, 1 INT’L FREE & OPEN SOURCE SOFTWARE L. REV. 41, 41–42 (2009) (“A simple example of a bare license would be a cinema owner’s permission for you to enter the foyer of the cinema to enquire about the start time of the new John Grisham movie and to stand in line for the box office.”).
\textsuperscript{765} See Kumar, supra note 763, at 5–6, 12–14.
\textsuperscript{766} See GNU General Public License, v. 2.0, Section 5.
\textsuperscript{767} NIMMER, supra note 604, at § 10:15.
\textsuperscript{768} See Gomulkiewicz, supra note 726, at 345–346. Regarding consideration, see infra section 4.1.1.
brought forward. However, many scholars have questioned the existence of “pure licenses,” and as we will see, the concept may even be unnecessary for the requirement of consideration. Open source software license agreements have been granted injunctive relief, but the result might be different within the Ninth Circuit’s jurisdiction, which could be problematic for certain provisions. Still, this does not make the idea of “pure licenses” more likely.

### 3.3 Protection in the Absence of Software License Agreements

Since software license agreements have been very common on the market for a long time, it raises questions about the need for additional protection. But when drafting the Software Directive, the European Commission noted that...
contractual protection is not always possible or the best solution for software protection, and argued that legal protection was necessary. As we will see, most states have created legal protection for software.

However, intellectual property protection does not make software license agreements unnecessary. If transferors wish to extend or modify rights to secure a different business model, software license agreements are necessary. And software license agreements cover other elements than intellectual property law, so validity of such elements is not dependent on intellectual property protection. However, intellectual property law can affect the validity of other elements, and use restrictions must be examined against intellectual property law. Thus, it is still necessary to establish protection in the absence of a software license agreement, and later examine the possibility of modification.

776 Id. at paras. 3.3–3.4 (Software license agreements “allow right holders to circumscribe the activities of users in respect of all the acts connected with the use of the program. The user is free to accept or reject the limitations on his activities which the licensing contract proposes. However, in some areas, the balance of power between producers and users of computer programs may not permit the latter to negotiate equitable contract conditions, due to the market strength of some software suppliers. Therefore, it seems necessary to provide for basic principles of protection which apply regardless of specific contractual provisions.” “Contract law alone does not provide efficient protection against most forms of misappropriation. In particular, as regards mass-marketed programs for personal computers and computer games which do not need maintenance, contract law does not provide an adequate means to prevent the copying and use of computer programs by third persons. Nor is it entirely clear whether the practice of so-called ‘shrink-wrap licensing’ where use conditions are attached to a product which is, to all intents and purposes ‘sold’ to the user, constitutes a valid licence in all circumstances.”). In Europe, this led to legal rights without using contracts.

777 See Florencia Marotta-Wurgler, What’s in a Standard Form Contract? An Empirical Analysis of Software License Agreements, 4 J. Empirical Legal Stud. 677, 689 (2007) (For example, warranties, limitations on liability, conflict resolution, and maintenance and support.).

778 See BGH Nov. 15, 2006, NJW 2007, 2394, paras. 20–21 (Ger.).

779 See Leupold & Glossner, supra note 574, at Teil 3, B. VI. 1. recital 62.

780 See Martinek, Semler, Habermeier & Flohr, supra note 556, at 12. § 47. II. 4(b). recital 30–32.
Intellectual property rights come in many forms, but on a global level, copyright is the most important intellectual property protection for software. Copyright protection for software is now a well-established principle. However, it has not always been so, and copyright protection for software has not always been seen as appropriate. Thus, due to this uncertainty, trans-

781 Compare MacQueen et al., supra note 730, at 4–7 (Including, copyright, patents, designs, and trademarks, as well as sui generis rights such as database rights.).

782 Other forms of intellectual property rights can also be important, especially software patents and, to a lesser degree, database protection, but these do not have the same protection in all jurisdictions. For an overview of software patents in the U.S. and Europe, see, e.g., Tim Press, Patent Protection For Computer-Related Inventions, in Computer Law 283, 289–319 (6th ed., Chris Reed & John Angel eds., Oxford University Press: Oxford 2007). Within the European Union, databases that do not meet the requirement of copyright protection — not constituting a personal intellectual creation — can be protected by a sui generis protection if the collection is “arranged in a systematic or methodical way,” see Directive 96/9 of the European Parliament and of the Council on the legal protection of databases, 1996 O.J. (L 77) 20 (EC), Article 1(1–2). American law only protects databases by copyright, as a compilation; if the selection, arrangement or coordination constitutes a personal intellectual creation, see 17 USC § 101.

783 Prior to 1980, intellectual property protection for software was equal to trade secret law. See Kumar, supra note 763, at 2. The United States was the exception, having awarded copyright protection for since 1964 (in those days, under the old Copyright Act of 1909, registration was necessary). See Rebecca K. Lively, Microsoft Windows Vista: The Beginning or the End of End-User License Agreements as We Know Them?, 39 St. Mary’s L.J., 339, 345 (2007); Vault Corp. v Quaid Software Ltd., 847 F.2d 255, 259 (5th Cir. 1988) (Became a statutory right in the 1976 Copyright Act.). Since the birth of the computer software industry in the early 1980s, software transferors have tried to protect their work against imitations and copying with copyright protection. See William Cornish & David Llewelyn, Intellectual Property: Patents, Copyrights, Trademarks and Allied Rights 763–764 (5th rev. ed., Sweet & Maxwell: London 2003) (In those days, the level of copyright protection varied between different legal systems.). As an example of varying protection, see Andreas Günther & Ulrich Wuermelings, Software Protection in Germany — Recent Court Decisions in Copyright Law, 11 COMPUTER L. & SECURITY REV. 12, 13 (1995) (Before the adoption of the Software Directive in Germany, copyright protection for software did exist in theory, but not in practice, because of the high threshold for originality laid down by the BGH.).

784 See Hart v. Dan Chase Taxidermy Supply Co., Inc., 86 F.3d 320, 321 (2d Cir. 1996) (Since copyright law does not protect “useful articles,” that is, articles “having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.”). Some argue that utility is the primary function of mass-distributed software. See Andrew Beckerman-Rodau, The Problem With Intellectual Property Rights: Subject Matter Expansion, 13 YALE J. L. & TECH. 36, 63–66 (2010–2011); Peter S. Menell, An Analysis of the Scope of Copyright Protection for Application Programs, 41 STAN. L. REV. 1045, 1046 (1989) (“Computer software, by its very nature as written work intended to serve utilitarian purposes, defies easy categorization within our intellectual property system. The copyright law has traditionally served as the principal source of legal protection for original literary work, while the patent system and trade secret law have been the primary means for protecting novel utilitarian works.”); Harvard Law Review: Note, Clarifying the Copyright Misuse Defense:
ferors at the time thought that contracts could be a more efficient protection for software than copyright, and software license agreements therefore emerged.\textsuperscript{785} If that initial uncertainty has been resolved,\textsuperscript{786} the use of software license agreements remains.

Today, software is protected by copyright on an international, regional, and national level. Regulation on an international and regional level primarily means that software will be guaranteed legal protection on a national level for a specified time.\textsuperscript{787} Neither international nor regional regulation usually creates rights that copyright holders can rely on,\textsuperscript{788} and international regulation is very rudimentary.\textsuperscript{789} But many of world’s legal systems are parties to this interna-

\textit{The Role of Antitrust Standards and First Amendment Values}, 104 Harv. L. Rev. 1289, 1299 (1991) (“Computer software, however, differs from other works of authorship in ways that make it more like a patented invention. What users value most in a computer program is rarely the expression contained in its coded instructions; rather, it is the utility of the program in accomplishing some purpose.” It has therefore been suggested that patent law would be a more appropriate software protection than copyright law. See Dennis S. Karjala, \textit{A Coherent Theory for the Copyright Protection of Computer Software and Recent Judicial Interpretations}, 66 U. Cin. L. Rev. 53 (1997).

\textsuperscript{785} See O’Rourke, supra note 670, at 927–930.

\textsuperscript{786} See Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96, fn. 7 (3d Cir. 1991).

\textsuperscript{787} And duration of copyright is largely irrelevant for software in practice due to the fast-paced development of technology.

\textsuperscript{788} See Case T-201/04, Microsoft v. Commission, 2004 E.C.R. II-4463, paras. 798–813, 1189–1193 (The European Union judiciary is only required to examine the legality of Union legislation under TRiPS if the Union legislation refers expressly to a TRiPS provision, or if the Union “has intended to implement a particular obligation assumed under the WTO.” “Microsoft cannot rely on Article 13 of the TRIPS Agreement in support of . . .”).

\textsuperscript{789} The Berne Convention is the fundamental convention on copyright. See Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 1 B.d.i.e.L. 715. It requires recognition of works published or performed within a jurisdiction, regardless of origin (Article 5(1)). It prohibits formal requirements for copyright protection (Article 5(2)), and requires protection for “the life of the author and fifty years after his death.” (Article 7(1)). The author shall enjoy exclusive rights authorizing reproductions (Article 9(1)) and adaptations (Article 12) of their creations. The Convention aims to protect “literary and artistic works,” regardless of expression (Article 2(1)), but it does not mention software. For software protection, the Berne Convention must be used in conjunction with the WIPO Copyright Treaty. See World Intellectual Property Organization Copyright Treaty, Dec. 20, 1996, 36 I.L.M. 65 (hereinafter WIPO Copyright Treaty). The latter protects software as a work of literature (Article 4), but only to expressions and “not to ideas, procedures, and methods of operation or mathematical concepts as such” (Article 2). The WIPO Copyright Treaty is meant to be consistent with Article 2 of the Berne Convention and Article 10 of the TRIPS agreement (Article 2, Note 4). See Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 1869 U.N.T.S. 299, 33 I.L.M. 1125, 1197 (hereinafter TRIPS Agreement).
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tional regulation; so many legal systems have a basic copyright protection for software. A fundamental principle of international (copyright) law is the principle of territoriality, meaning that a country only has competence to regulate activities that occur within its national borders. Thus, there is no single, copyright law, in spite of this harmonization. Unlike international copyright protection, regional copyright protection for software in Europe is more detailed and interesting. The Member States are bound by several directives and international treaties that concern copyright protection for software; the “Software Directive” being most important, since its national transpositions clearly affect software license agreement validity.

3.3.1 National Copyright Regulation

A jurisdiction’s copyright law will only apply if a matter, such as, creation or exploitation of copyright, has some connection with that jurisdiction. Contractual provisions cannot alter this. Thus, different copyright laws can be applicable to different software transfers. And if a copyright infringement lawsuit takes place in several countries, the copyright law of each legal system must be examined.

793 See LEUPOLD & GLOSSNER, supra note 574, at Teil 5. C. I. recital 33–35.
797 See LEUPOLD & GLOSSNER, supra note 574, at Teil 5. C. I. recital 33–35.
United States

The U.S. Congress has exclusive competence to regulate copyright, meaning that any other law than federal law will be preempted from granting intellectual property rights comparable to the exclusive rights of copyright. The United States is a party to the Berne Convention, but it did not come into force until March 1, 1989, later than most other countries. Computer programs are protected as "literary works," as long as the software is sufficiently original, creative, and fixed in a tangible medium, regardless of source code or machine language form. Copyright protection extends to different categories of software, and to its structural elements. Whether the "look and feel" of software is copyrightable has not been finally settled.

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798 U.S. Const. Article 1, Section 8. See also Halpern et al., supra note 565, at 1.
802 17 USC §§ 101, 102, 117.
804 See Baltimore Orioles v. Major League Baseball Players, 805 F.2d 663, 668–669 (7th Cir. 1986).
805 17 USC § 102.
807 Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1249–1254 (3d Cir. 1983) (Regarding operating systems.).
809 Meaning both the visual design and behavior of a graphical user interface (GUI) application.
810 Halpern et al., supra note 565, at 16.
but the majority of courts have held the look and feel to be unprotectable elements.\textsuperscript{811} Copyright protection gives the rights holder certain exclusive certain exclusive moral rights,\textsuperscript{812} and certain economic rights.\textsuperscript{813} Those economic rights include several limitations: For example, the public’s right to fair use.\textsuperscript{814} Software comes with additional limitations. An \textit{owner of a copy}\textsuperscript{815} is allowed to make a backup copy for archival purposes,\textsuperscript{816} may lease, sale, or otherwise transfer, the transferred software,\textsuperscript{817} and to make a copy for the activation or repair of a machine that contains a lawful copy.\textsuperscript{818}

Germany
The \textit{Bund} has exclusive competence to regulate copyright.\textsuperscript{819} However, Germany has a duty under European Union law to be parties to international copyright treaties and to transpose European Union directives relating to copyright law. Copyright is shaped by the constitutional guarantee of (intellectual) property,\textsuperscript{820} and is expressed in the Copyright Act (\textit{Urheberrechtsgesetz} (UrhG)). German copyright is monistic (same rules apply to both economic and moral rights), so economic and moral rights are generally not transferable, but licensable.\textsuperscript{821} The primary source of copyright protection for software is


\textsuperscript{812} 17 USC § 106A (Such as the right of attribution.).

\textsuperscript{813} \textit{Id.} at § 106 (Such as the right to reproduce the work, prepare derivative works, and distribute copies of the work.).

\textsuperscript{814} \textit{Id.} at § 107. \textit{See also} 17 USC §§ 108–112.

\textsuperscript{815} \textit{See} Wall Data Inc. v. Los Angeles County Sheriff’s Dept., 447 F.3d 769, 784–786 (9th Cir. 2006) (Notice the word “owner.”). Whether ownership to a copy will be transferred can be modified by a software license agreement. \textit{See supra} section 3.1.1.

\textsuperscript{816} 17 USC § 117(a).

\textsuperscript{817} \textit{Id.} at § 117(b).

\textsuperscript{818} \textit{Id.} at § 117(c).

\textsuperscript{819} \textit{Grundgesetz} [GG] art. 73(9) (Ger.).


\textsuperscript{821} UrhG §§ 29, 31(1) (Ger.). \textit{See} Goldstein, \textit{supra} note 792, at 9–10; Pascal Kamina, \textit{Film Copyright in the European Union} 177 (Cambridge University Press: Cambridge 2002).
the European Union “Software Directive.” According to the Directive, the Member States shall protect computer programs as literary works within the meaning of the Berne Convention. The protection applies to an “expression in any form of a computer program.” A computer program has to be “original in the sense that it is the author’s own intellectual creation” before given copyright protection.

Under the national transposition, computer programs are protected as literary works, in any form, as long as they are original, that is, being the result of the author’s intellectual creation. If the software is complex, the requirement of originality is presumed to be met under the current regulation. The “look and feel” of software has sometimes been held copyrightable, but most courts have rejected such protection. Copyright protection gives the

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824 Id. at Article 1(2).
825 Id. at Article 1(3).
827 UrhG § 69a (1) (Ger.).
829 BGH Mar. 3, 2005, NJW-RR 2005, 1403 (“Fast 2000”), para. 17 (Ger.). (The burden of proof lies on the party that wishes to challenge the protection to show that the programming is “banal,” or should otherwise not be protected by copyright.).
831 For a review of cases regarding “look and feel” copyright protection, see OLG Karlsruhe Apr. 14, 2010, GRUR-RR 2010, 234, para. 51 (Ger.).
rights holder certain exclusive moral rights, and certain economic rights. Those exclusive rights have general limitations: Transferees are, for example, allowed to make copies for private or personal use. The UrhG includes a number of special provisions for software, which specify a number of rights for transferor and transferee. For copyright infringement, remedies include injunctive relief, and monetary claims for actual or immaterial damages.

Development by Employees

Employed programmers often develop software, which raises ownership questions. If an employed programmer within a private software company develops software, the initial ownership under American law will be allocated with the employer, and the economic rights under German law will exclusively belong to the employer, unless agreed otherwise. These similarities are an exception to the general rule, but differences still exist: Moral rights will

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832 UrhG §§ 12(1), 13 (Ger.) (To determine when and how a work is published, and to be recognized as a author.).
833 Id. at §§ 16(1), 17 (The right of reproduction and distribution.).
834 UrhG § 53 (Ger.). See also UrhG §§ 44a–53 (Ger.).
835 Id. at §§ 69(a–g) (The author is given the exclusive right to permanent or temporary reproductions, adaptations and alterations, all forms of distribution, and the right of making the computer program available to the public. The transferee is allowed to use the software for intended purposes, including correcting bugs, making a backup copy to ensure future use, and to study the functioning of the software in order to determine the underlying ideas and principles, as long as this done while performing a permitted act of loading, displaying, running, transmitting, or storing the software. The transferee is also allowed to decompile the software if this is required for interoperability purposes.).
838 17 USC §§ 201(b), 101 (A work will be considered a “work made for hire” if there is an employment and the work was prepared “within the scope” of the employment.). See also Birnhack, supra note 837, at 113.
839 UrhG § 69b(1) (Ger.); Directive 2009/24 of the European Parliament and of the Council on the legal protection of computer programs, 2009 (L 111) 16 (EC), Article 2(3) (That is, if a program is developed by an employee “in the execution of his duties or following the instructions given by his employer.”).
840 In the United States, and other common law countries, the general rule is the right is initially allocated with the author, and material rights are transferable. See 17 USC § 201(a, d). But if the requirements for works-made-for-hire are met, the initial allocation is with the employer. See 17 USC §§ 201(b), 101. In Germany, the main rule is that ownership remains with the author, even if created within the scope of the employment, but the author/employee may grant an exploitation right to the employer. See UrhG § 31 (Ger.). See also Birnhack,
remain with the author/employee under German law, while all rights will be transferred under American law.\textsuperscript{841}

### 3.3.2 Software License Agreements and Copyright

As seen, transferors enjoy certain exclusive rights, with exceptions, in the absence of software license agreements. One clear difference between copyright and software license agreements is that copyright is enforceable against everyone, while software license agreements are only enforceable against the contracting parties.\textsuperscript{842} Generally, contracting parties can be sued for breach of contract or copyright infringement,\textsuperscript{843} while non-contracting parties can only be sued for copyright infringement.\textsuperscript{844} As seen, this distinction can be important, since injunctive relief is not always available to breach of contract,\textsuperscript{845} meaning transferors will rely on copyright protection when available. Also, while software license agreements attempt to modify the rights given by

\textsuperscript{841} In the United States, copyright is considered unlimitedly alienable from the author. See H.R. Rep. No. 1476, 94th Cong., 2d Sess. 21, 123 (1976) ("The principle of unlimited alienability of copyright is stated in clause (1) of section 201(d)."); 17 USC § 201(d)(1). In Germany, and other civil law countries, copyright is considered inalienable from the author's personality. This can be seen in the doctrine of moral right in civil law countries, and the prohibition of copyright transfers, except through testamentary disposition. See UrhG § 29 (Ger.). See also Neil Weinstock Netanel, \textit{Alienability Restrictions and the Enhancement of Author Autonomy in United States and Continental Copyright Law}, 12 Cardozo Arts & Ent. L.J. 1, 1–2, 21–26 (1994); Wolk, supra note 840, at 422–423 (Moral rights lies outside the scope of the Software Directive. Since moral rights are inalienable from the author in civil law countries, voluntary transfer to the employer is not possible.).

\textsuperscript{842} Assessment Technologies of Wi, Llc v. Wiredata, Inc., 350 F.3d 640, 646 (7th Cir. 2003) ("[C]opyright is enforceable against persons with whom the owner has no contractual relations; so a property owner can eject a trespasser even though the trespasser had not contractually bound himself to refrain from entering the property. … ") ("The scope of a copyright is given by federal law, but the scope of contractual protection is, at least prima facie, whatever the parties to the contract agreed to.").

\textsuperscript{843} This depends on what provisions has been breached. See supra section 3.2.1 (Regarding conditions and covenants in software license agreements, and the legal consequences of the differences.).

\textsuperscript{844} See Assessment Technologies of Wi, Llc v. Wiredata, Inc., 350 F.3d 640, 646 (7th Cir. 2003).

\textsuperscript{845} See supra section 3.2.1. See also MDY Indus. LLC v. Blizzard Entm't, Inc., 629 F.3d 928, 941 (9th Cir. 2010).
3.4 Applicable Law and Forum in the Absence of Choice

In a given software transfer, only one jurisdiction’s law can be applied. In a cross-national context, the question of applicable law becomes important. If the parties are located in different jurisdictions, and the law relevant to software license agreements varies substantially between these jurisdictions, the question of applicable law will ultimately decide software license agreement validity in a specific software transfer. Questions regarding applicable law and forum are relevant for all international transactions, but such questions have become much more complicated for e-commerce.

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846 See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1453–1455 (7th Cir. 1996).

847 See BGH Nov. 15, 2006, NJW 2007, 2394, paras. 20–21 (Ger.); Marotta-Wurgler, supra note 777, at 689 (including warranties, limitations on liability, and conflict resolution.).

848 See Leupold & Glossner, supra note 574, at Teil 3. B. VI. 1. recital 62.

849 See Martinek, Semler, Habermeier & Flohr, supra note 556, at 12. § 47. II. 4(b). recital 30–32.

850 That is, when transferor and transferee are located in different jurisdictions. Interstate relationships under American law might create similar situations.

851 See David R. Johnson & David Post, Law and Borders—The Rise of Law in Cyberspace, 48 Stan. L. Rev. 1367, 1370 (1995) (Arguing that cyberspace affects both governments and individuals. For individuals, cyberspace is destroying “the ability … to give notice of which sets of rules apply.”); Zheng Tang, Exclusive Choice of Forum Clauses and Consumer Contracts in E-Commerce, 1 J. Priv. Int’l. L. 237, 260–261 (2005) (Such complicated questions include: (1) Should a transferor’s place of business be decided by (a) physical location of the company, (b) where its website is located, or (c) where it can be accessed; (2) where is a contract concluded — the place of the server or the place of the transferee; and (3) where does a transaction take place — the place where the software is uploaded or downloaded?); Wang, supra note 710, at 234 (A plaintiff might have some practical difficulties with determining the domicile of a party that the plaintiff only deals with through the Internet.); Raquel Xalabarder, Copyright: Choice of Law and Jurisdiction in the Digital Age, 8 Ann. Surv. Int’l. & Comp. L. 79, 79 (2002) (“It is undeniable that the Internet is a legal and jurisdictional ‘no-man’s land.’”); Tim Gerlach, Using Internet Content Filters to Create E-Borders to Aid in International Choice of Law and Jurisdiction, 26 Whittier L. Rev. 899, 899–900 (2005) (“Traditionally, in the world before the Internet, it would have been very hard for someone to ‘accidentally’ cause an injury within the borders of a foreign nation without having either been in the country or knowingly initiating some harm in the country. With the emergence of the Internet this is no longer the case.”).
3.4.1 Applicable Forum

As a moth is drawn to the light, so is a litigant drawn to the United States. This chapter focuses on the question of applicable forum, sometimes known as jurisdiction. That is, which court will have jurisdiction over a question related to a specific software transfer? From the perspective of cross-national validity of software license agreements, this question is arguably less important than the question of applicable law, sometimes known as choice of law. That is, what law will a court apply to a specific software transfer? The latter question will directly affect the validity of a software license agreement, and will be examined below. But in practice, the question of applicable forum is important, since the forum state’s law (lex fori) will apply in procedural matters, including its choice of law rules. While it has sometimes been argued that a court will apply lex fori to substantive law as well, a court can-

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852 Smith Kline & French Laboratories Ltd. and Others v Bloch, Court of Appeal [1983] 1 W.L.R. 730 at 733 (Eng.).
853 See infra section 3.4.2.
854 Trevor C. Hartley, INTERNATIONAL COMMERCIAL LITIGATION: TEXT, CASES AND MATERIALS ON PRIVATE INTERNATIONAL LAW 5–6 (Cambridge University Press: Cambridge 2009) (“[T]he outcome of a case depends much more on jurisdiction than choice of law. This has become clearly apparent, at least in leading centres of litigation, in recent times. It explains why parties will fight tooth and nail on jurisdictional issues; then, once these are decided, settle the case without further litigation.”).
856 See Albert A. Ehrenzweig, LEX FORI–BASIC RULE IN THE CONFLICT OF LAWS, 58 Mich. L. Rev. 637, 637 (1960) (“Once a court has taken jurisdiction, it will usually apply its own law, unless the parties’ own choice or an important foreign fact, such as a foreign domicile, a foreign situs, or a foreign conduct, appears to require application of another law. Most judges and lawyers will agree with this simple proposition—and yet text books, class notes, the Restatement, and even much language of the courts, would have it otherwise: foreign domicile, foreign situs, foreign conduct and other foreign ‘contacts’ are said a priori to require application of a foreign law, unless the court can be persuaded for special reasons to turn to its own law or to the law chosen by the parties. This blatant discrepancy between the actual doing of the courts and ‘official’ theory in the law of conflict of laws has made an awesome mystery or an object of ridicule of this subject in the eyes of many.”).
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not routinely apply *lex fori* to substantive law, without examining applicable law, if one party argues that another state’s substantive law should apply. This means that the question of *where* a lawsuit is initiated might affect applicable law, and by extension cross-national validity. As we will see, applicable forum can sometimes be modified by forum selection clauses.\(^{857}\)

There are two views whether applicable forum is important: (1) It is important, a party is more likely to enforce or challenge a software license agreement when a court in its own legal system has jurisdiction; or (2) this is only important for large enterprises, not consumers.\(^{858}\) This thesis is mainly based on predictions of how courts will assess software license agreements under applicable law,\(^{859}\) not whether software license agreements will be enforced or challenged in practice. However, it will be analyzed whether private international law could affect the practical consequences of invalidity.\(^{860}\)

### United States

The United States has a dual judicial system, with both federal and state courts in each state that works in parallel.\(^{861}\) The Constitution and federal laws define exclusive, subject matter jurisdiction to certain issues, for example copyright,\(^{862}\) while state courts have general jurisdiction over other matters.\(^{863}\) But in practice there is some overlap,\(^{864}\) and federal courts sometimes apply

\(^{857}\) See infra section 8.3.2.

\(^{858}\) See Pablo Cortés, *Online Dispute Resolution for Consumers in the European Union* 34 (Taylor & Francis: London 2010) (“In practice, however, only large corporations are concerned about the conflict of laws because they are the likely ones to be involved in these disputes. B2C transactions on the internet are usually low cost transactions. Realistically, no-one is going to pursue a lawsuit for a small amount of money, even when the competent forum is his own jurisdiction. If a lawsuit is initiated in one country for a small amount of money, a default judgment is likely to result since it is doubtful that a defendant would spend money to defend himself in the plaintiff’s forum. Hence, conflict of laws rules would be applicable only where a large amount of money is involved, eg in some personal injury cases.”).

\(^{859}\) See supra section 1.4.1.

\(^{860}\) See infra section 11.2.


\(^{862}\) Copyright is a federal matter, 17 USC § 101, and falls within the jurisdiction of federal district courts, 28 USC § 1338(a), 1400(a).


\(^{864}\) Yeazell, *supra* note 863, at 175–178 (Regarding concurrent state and federal jurisdiction.).
state law and state courts sometimes apply federal law.\textsuperscript{865} Thus, it is not certain that a state court will have jurisdiction over state law, for example, contract law. One such situation is known as diversity jurisdiction: If two parties are citizens of different jurisdictions, different states or different countries, federal courts will have diversity jurisdiction — as long as “the matter in controversy exceeds the sum or value of $75,000.”\textsuperscript{866} While 75,000 USD is a substantial amount of money for an individual lawsuit concerning standard software, this sum is less unlikely in a class action lawsuit. And if a federal court will have jurisdiction, those are regarded as preferable over state courts among foreigners.\textsuperscript{867}

The relevant question is which court will have personal jurisdiction, that is, jurisdiction over a dispute concerning specific natural or legal persons.\textsuperscript{868} For a legal person, this is typically the corporation’s headquarters.\textsuperscript{869} Personal jurisdiction can be either general or specific. The former allows jurisdiction for any claim, which requires continuous and systematic contacts. The latter allows jurisdiction for a specific claim, and requires minimum contacts. In our context, the latter is more common. Specific jurisdiction requires: (1) Coverage by the state’s long arm statute; and (2) observance of due process.\textsuperscript{870}

In some states, such as California, the first requirement is not a problem since California only restricts claims of jurisdiction that is incompatible with the Constitution.\textsuperscript{871} Some states,\textsuperscript{872} such as New York, is more restrictive to claim jurisdiction. New York allows jurisdiction over persons that “transacts any business within the state or contracts anywhere to supply goods or services in the state,” or “commits a tortious act within the state.”\textsuperscript{873} The latter

\textsuperscript{865} See Symeon C. Symeonides, \textit{American Federalism and Private International Law}, 63 REVUE HELLENIQUE DE DROIT INTERNATIONAL 537, II.C (2010).
\textsuperscript{866} See U.S. Const., Article 3, § 2; 28 USC § 1332(a)(3). This sum/value increases over time to adapt to inflation.
\textsuperscript{867} Hartley, \textit{supra} note 854, at 135 (Noting that federal courts may be preferable among foreign companies. Federal judges are appointed for life, while state judges are often elected by the people of the state and must frequently face re-election. This creates a fear that state judges might be more influenced by popular feeling towards local parties.).
\textsuperscript{868} Nimmer, \textit{supra} note 604, at § 19:2.
\textsuperscript{869} See 28 USC § 1332(c)(1) (A corporation is considered a citizen of a State where it has been incorporated and where it has “its principal place of business.”); Hertz Corp. v. Friend, 130 S.Ct. 1181, 1185–1286 (2010) (The principal place of business has been typically held to be the headquarters of a corporation.).
\textsuperscript{870} See Nimmer, \textit{supra} note 604, at §§ 19:6, 8.
\textsuperscript{871} CAL. CODE CIV. PROC. § 410.10 (West, Westlaw through 2013).
\textsuperscript{872} Nimmer, \textit{supra} note 604, at § 19:3–4.
\textsuperscript{873} N.Y. C.P.L.R. § 302(a)(2) (McKinney, Westlaw through 2013).
might sometimes be relevant to software license agreement validity, if a tortious act, such as copyright infringement requires examination of software license agreement validity. Under New York law, it has been found that a party that was not physically present in the state can commit a tortious act.\textsuperscript{874} And in-state injury for copyright infringement has been found claimable when a work has been uploaded on the Internet, even when: (1) Uploading has occurred elsewhere; and (2) even though it could not be proved that the works had been downloaded in the state.\textsuperscript{875}

However, extending personal jurisdiction to non-state residents must not violate due process.\textsuperscript{876} A process in a forum state must not offend “traditional notions of fair play and substantial justice.”\textsuperscript{877} This requires: (1) Minimum contacts,\textsuperscript{878} (2) an issue that relates to the defendant’s activities with the state; and (3) exercise of jurisdiction must be reasonable.\textsuperscript{879}


\textsuperscript{876} U.S. Const. am. 14. \emph{See} World-Wide Volkswagen Corp. v. Woodson, 444 US 286, 298 (1980) \emph{citing} Hanson v. Denckla, 357 U.S. 250, 251, 254 (1958) (“Even if the defendant would suffer minimal or no inconvenience from being forced to litigate before the tribunals of another State; even if the forum State has a strong interest in applying its law to the controversy; even if the forum State is the most convenient location for litigation, the Due Process Clause, acting as an instrument of interstate federalism, may sometimes act to divest the State of its power to render a valid judgment.”).

\textsuperscript{877} International Shoe Co. v. Washington, 326 U.S. 310, 316 (1945).

\textsuperscript{878} \emph{Id.} at 316–317; World-Wide Volkswagen Corp. v. Woodson, 444 US 286, 291, 297–298 (1980) (“The non-resident’s ‘conduct and connection with the forum State’ must be ‘such that he should reasonably anticipate being haled into court there.’”). This can be expected if a person owns property in the forum state. \emph{See} Manley v. Fong, 734 F.2d 1415, 1418–1420 (10th Cir. 1984). This can also be expected if a party “purposefully avails itself of the privilege of conducting activities within the forum State, thus invoking the benefits and protections of its laws.” \emph{See} Hanson v. Denckla, 357 U.S. 250, 253 (1958); Keeton v. Hustler Magazine, Inc., 465 U.S. 770, 774 (1984); Burger King v. Rudzewicz, 471 U.S. 462, 475 (1985) (Ensuring ‘that a defendant will not be haled into a jurisdiction solely as a result of‘ random,’ ‘fortuitous,’ or ‘attenuated’ contacts.”). If this requirement is met, it is not necessary to have physically entered the forum state. \emph{See} Burger King v. Rudzewicz, 471 U.S. 462, 476 (1985). If a temporary visitor has been served with process, it may be constitutionally possible to claim transient jurisdiction. \emph{See} Burnham v. Superior Court of California, 495 U.S. 604, 607–628 (1990). \emph{See also} \emph{Hartley, supra} note 854, at 136–150.

\textsuperscript{879} Southern Machine Company v. Mohasco Industries, Inc., 401 E.2d 374, 381 (6th Cir. 1968); Asahi Metal Industry Co. v. Superior Court, 480 U.S. 102, 113 (1987) (Determination of reasonableness requires examination of: (1) “[T]he burden on the defendant”; (2) the
Jurisdiction may also be constitutionally possible even if there are insufficient contacts with a single state to meet the requirements of a state’s long arm statute, as long as there are sufficient contacts with the United States as a whole. Rule 4(k)(2) of the Federal Rules of Civil Procedure may then function as a sort of federal long arm statute.\footnote{United States of America v. Swiss American Bank, 191 F.3d 30, 41 (1st Cir. 1999) (“We hold that a plaintiff who seeks to invoke Rule 4(k)(2) must make a prima facie case for the applicability of the rule. This includes a tripartite showing (1) that the claim asserted arises under federal law, (2) that personal jurisdiction is not available under any situation-specific federal statute, and (3) that the putative defendant’s contacts with the nation as a whole suffice to satisfy the applicable constitutional requirements.”); Fed. R. Civ. P. 4(k)(2). See also Hartley, supra note 854, at 151–155 (If there is no state jurisdictional rule, a federal court may “obtain jurisdiction on the basis of a nation-wide minimum-contacts test,” under Rule 4(k)(2) of the Federal Rules of Civil Procedure, taking “the defendant’s contacts with the whole of the United States” into account.).}

The question of reasonableness becomes especially important if the defendant is foreign.\footnote{Asahi Metal Industry Co. v. Superior Court, 480 U.S. 102 (1987).} In Asahi Metal Industry Co. v. Superior Court,\footnote{480 U.S. 102 (1987).} the Supreme Court said that “when minimum contacts have been established, often the interests of the plaintiff and the forum in the exercise of jurisdiction will justify even the serious burdens placed on the alien defendant.” But since the plaintiff was not a California resident, the state’s legitimate interests had diminished considerably. The California Supreme court argued that California courts had an interest in “protecting its consumers by ensuring that foreign manufacturers comply with the state’s safety standards.” However, the Supreme Court found this definition of interests to be too broad. Additionally, it was not certain that California law would apply to the substantive question. The Court concluded that personal jurisdiction over the foreign defendant would be “unreasonable and unfair” due to: (1) “[T]he international context”; (2) “the heavy burden on the alien defendant”; and (3) “the slight interests of the plaintiff and the forum State.”\footnote{Asahi Metal Industry Co. v. Superior Court, 480 U.S. 102, 113–116 (1987).}
These basic principles also apply on the Internet. Early case law led to the creation of the, so-called, “Zippo test” or the “passive-versus-active website test.” In *Manufacturing Co. v. Zippo Dot Com, Inc.*, the court said that if a person does business in another forum-state by selling products or services, minimum contacts will be established. And also when information has been exchanged through interactive webpages, but not generally through a purely passive webpages. Thus, this created a sliding scale where the level of interaction determined exercise of jurisdiction. Another test, rooted in *Calder v. Jones*, known as the “effects test,” have sometimes also been applied

884 *But see* Digital Equipment Corp. v. Altavista Tech., Inc., 960 F.Supp. 456, 463 (D. Mass. 1997) (“[C]ourts have been, and should be, cautious in applying traditional concepts.” Arguing that “[t]o impose traditional territorial concepts on the commercial uses of the Internet has dramatic implications, opening the Web user up to inconsistent regulations throughout fifty states, indeed, throughout the globe.”). *Citing* Johnson & Post, supra note 851, at 1370 (Regarding that physical boundaries create signposts giving notice that rules change as the border is crossed.).


887 *Manufacturing Co. v. Zippo Dot Com, Inc.*, 952 F.Supp. 1119, 1124 (W.D. Pa. 1997). *See* Digital Equipment Corp. v. Altavista Tech., Inc., 960 F.Supp. 456, 464–466 (D. Mass. 1997) (The defendant's agreement with an in-state company and “resulting Internet activities, including sales and advertising to Massachusetts residents taken together constitute transacting business [t]here.”); CompuServe, Inc. v. Patterson, 89 F.3d 1257, 1264–1268 (6th Cir. 1996) (The defendant entered into an agreement to transfer software on the plaintiff's shareware platform. By entering into that agreement and injecting software into the stream of commerce, the defendant's contacts with the forum-state were sufficiently deliberate and repeated. The controversy was related to these contacts and jurisdiction was reasonable.).


892 Calder v. Jones, 465 U.S. 783, 789–790 (1984) (“The allegedly libelous story concerned the California activities of a California resident. It impugned the professionalism of an entertainer whose television career was centered in California. The article was drawn from California sources, and the brunt of the harm, in terms both of respondent's emotional distress and the injury to her professional reputation, was suffered in California. In sum, California is the focal point both of the story and of the harm suffered. Jurisdiction over petitioners is therefore proper in California based on the ‘effects’ of their Florida conduct in California.”).
to Internet activities. In *Nissan Motor Co. v. Nissan Computer Corp.*, the court exercised jurisdiction over the defendant, since the “brunt of the harm,” confusingly similar domain names and potential trademark infringement, was felt in California. In *Blakey v. Continental Airlines, Inc.*, the court exercised jurisdiction over a nonresident allegedly posting defamatory comments in an online forum, since “defamation was alleged to be part of the harassing conduct that took place on the [forum], it would be fair to posit jurisdiction where the effects of the harassment were expected or intended to be felt.”

Today, most courts use a test with several elements, either the test established by the Ninth Circuit — often cited by other federal jurisdictions and scholars — or tests with similar language. The Ninth Circuit test consists of three steps: (1) “The nonresident defendant must do some act or consummate some transaction with the forum or perform some act by which he purposefully avails himself of the privilege of conducting activities in the forum, thereby invoking the benefits and protections of its laws”; (2) “[t]he claim must be one which arises out of or results from the defendant’s forum-related activities”; and (3) “[e]xercise of jurisdiction must be reasonable.”

When an American court tries to claim jurisdiction over a foreigner that has acted on the Internet, the process is much the same as with a resident of another state. In *McBee v. Delica Co., Ltd.*, the plaintiff sued a Japanese web site, written in Japanese, for trademark infringement (subject matter jurisdiction). The court said that the web site was not directed to the American market, and most Americans would not understand its content, and that it did not have any substantial effects on American commerce. Thus, the plaintiff was denied subject matter jurisdiction. In *Pebble Beach Co. v. Caddy*, a web

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896 751 A.2d 538 (N.J. 2000).
899 *Nimmer, supra* note 604, at § 19:5.
900 *Data Disc, Inc. v. Sys. Tech. Assocs., Inc.*, 557 F.2d 1280, 1287 (9th Cir. 1977); *Lake v. Lake*, 817 F.2d 1416, 1421 (9th Cir. 1987).
901 *Nimmer, supra* note 604, at § 19:15.
902 417 F.3d 107 (1st Cir. 2005).
903 *McBee v. Delica Co., Ltd.*, 417 F.3d 107, 123–126 (1st Cir. 2005).
904 453 F.3d 1151 (9th Cir. 2006).
site using the name of a California golf course was not subject to personal jurisdiction in California, since minimum contacts could not be established.\textsuperscript{905} Both cases are examples of passive web sites.\textsuperscript{906} However, there are Internet cases when American courts have been claiming personal jurisdiction over foreigners.\textsuperscript{907} This has for example happened if “the defendant is alleged to have engaged in wrongful conduct targeted at a plaintiff whom the defendant knows to be a resident of the forum state,” by sending cease and desist letters.\textsuperscript{908} Still, these are exceptions.

Germany
The German regulation of applicable court can be found both on a national and European Union level. Different regulation will have to be applied depending on which party initiates a lawsuit. If a person is domiciled in a Member State, that person shall be sued in the courts of that Member State.\textsuperscript{909} If the party is a legal person, an undertaking is considered domiciled where it has its “statutory seat,” “central administration,” or “principal place of business.”\textsuperscript{910} In order to determine where a natural person is domiciled, the national law of the court shall be applied,\textsuperscript{911} and under German law, the general venue\textsuperscript{912} of a natural person is its place of residence.\textsuperscript{913} For sales and service contracts, the defendant may be sued in the place of performance, which is considered the place where goods or services should be delivered or provided.\textsuperscript{914} CISG can be used for interpretation of sales of goods,\textsuperscript{915} meaning

\textsuperscript{905} Pebble Beach Co. v. Caddy, 453 F.3d 1151, 1154–1160 (9th Cir. 2006).
\textsuperscript{906} See also See, Inc. v. Imago Eyewear Pty, Ltd., 167 Fed.Appx. 518, 520–523 (6th Cir. 2006) (Overall contacts, including website with information and feedback dialogue boxes did not create sufficient contacts with the United States since it was not possible to purchase products through the site.).
\textsuperscript{908} Bancroft & Masters, Inc. v. Augusta Nat. Inc., 223 F.3d 1082, 1087–1088 (9th Cir. 2000).
\textsuperscript{909} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC) (EC), Article 2(1).
\textsuperscript{910} Id. at Article 60(1).
\textsuperscript{911} Id. at Article 59(1).
\textsuperscript{912} In German national law, jurisdiction is established through interpretation by analogy of the rules for local venue, not through special private international rules.
\textsuperscript{913} ZPO § 13 (Ger.).
\textsuperscript{914} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC) (EC), Article 5(1).
that digitally distributed between business actors could at least theoretically be applicable.\textsuperscript{916} But the place of delivery becomes complicated for digitally distributed software. In a situation where something “is not subject to any geographical limit and is therefore characterised by a multiplicity of places for its performance,” such as an obligation not to do something, Article 2 must be applied instead.\textsuperscript{917} W\an{g} argues that the transferee’s place of business should be used as a connecting factor.\textsuperscript{918} It should be noted that the CJEU has found that a license agreement for video and audio recordings is not a service agreement within the meaning of the Regulation,\textsuperscript{919} but it could be argued that a software license agreement for a software service is different. The grant of intellectual property rights is arguably less significant than the obligation to provide the cloud service,\textsuperscript{920} meaning that the contract could be defined as a contract for provision of services. Still, regardless of applied presumption, the outcome is not completely certain.

If the defendant is not domiciled in a Member State, the court’s jurisdiction will be determined under the national law of that Member State.\textsuperscript{921} Thus, in that situation, the German national regulation has to be applied. For a natural person, the general venue is the court within the jurisdiction where the person is resident.\textsuperscript{922} For legal persons, the general venue is where the undertaking has its registered seat.\textsuperscript{923} For disputes arising from contractual relationships, the place of performance determines jurisdiction,\textsuperscript{924} more specifically, the underlying contractual obligation that has been violated.\textsuperscript{925}

\textsuperscript{916} See supra section 3.1.2 (Regarding CISG and standard software.).
\textsuperscript{917} Case C-256/00, Besix SA v Wasserreinigungsbau Alfred Kretzschmar GmbH & Co. KG (WABAG), 2002 E.C.R. I-1699, paras. 48–55. See also Fawcett, Carruthers & North, \textit{supra} note 915, at 245.
\textsuperscript{918} Wang, \textit{supra} note 710, at 237.
\textsuperscript{919} Case C-533/07, Falco Privatstiftung & Thomas Rabitsch v Gisela Weller-Lindhors, 2009 E.C.R. I-03327, paras. 18–44 (The CJEU found that “a contract under which the owner of an intellectual property right grants its contractual partner the right to use the right in return for remuneration is not a contract for the provision of services.”).
\textsuperscript{921} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 4(1).
\textsuperscript{922} ZPO § 13 (Ger.).
\textsuperscript{923} Id. at § 17.
\textsuperscript{924} Id. at § 29. See also BGB § 269 (Ger.) (The default place for performance is the place of the obligor.).
\textsuperscript{925} BGH Jan. 18, 2011, NJW 2011, 2056, para. 38 (Ger.). See also Leo Rosenberg, Karl
For a sales agreement concerning software downloaded from a server against cash payment, there is no uniform place of performance, as for regular sales contracts.\(^{926}\) The transferee’s forum has jurisdiction over questions concerning payment. The forum over the place where the software is located may have jurisdiction over questions of cancellation of a contract and return of the software.\(^{927}\) And the transferor’s forum may have jurisdiction over questions concerning defective software. Thus, if a German transferee sues an American transferor, we apply German national law, and the applicable forum may vary depending on violated underlying obligation. If a German transferee sues Austrian transferor, we apply European Union law, and if the agreement is considered a sales or service contract, and we can determine the place of delivery, the court of that place has jurisdiction. Otherwise, the court where the transferor has its registered seat has jurisdiction.

Consumers have additional protection from being hauled into courts in other legal systems if: (1) A consumer enters into an agreement with a transferor that has a “branch, agency or other establishment” in a Member State, and the dispute arises from its operations;\(^{928}\) or (2) when a consumer enters into an agreement with a commercial or professional person domiciled in a Member State that direct activities against the consumer’s Member State.\(^{929}\) Under those rules, it is possible for a consumer to sue the other party in the Member State where the consumer is domiciled, or in the Member State where the other party is domiciled.\(^{930}\) On the other hand, a proceeding against a consumer may only be brought in the Member State where the consumer is domiciled.\(^{931}\)

The first rule is often applicable since it is common for major transferors to have “a branch, agency or other establishment” in a Member State,\(^{932}\) commonly in Ireland.\(^{933}\) This means that the Brussels I Regulation can be appli-

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\(^{928}\)  OLG Bamberg Aug. 18, 2010, BAURECHT [BauR] 2010, 2166, paras. 45–49 (Ger.).
\(^{929}\)  Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 15(2) (That entity is considered domiciled in that Member State for disputes arising from that entity’s operations.).
\(^{930}\)  *Id.* at Article 15(1)(c).
\(^{931}\)  *Id.* at Article 16(1).
\(^{932}\)  *Id.* at Article 16(2).
cable for consumers even if the transferor is not domiciled under Article 4, as long as the dispute arises from the operation of this entity. Whether this rule is applicable thus depends on the operational function of the entity and the conflict in question.

The second rule may be applicable if the transferor is located in a Member State or has a branch in a Member State and has directed commercial or professional services to the consumer’s Member State. As long as a party directs activity, it is not necessary that the contract is concluded at a distance, it is sufficient if a consumer establishes a contact at a distance, or reserves goods or services at a distance.934 In *Alpenhof*, the CJEU said that an accessible website, unlike traditional forms of advertising, is not sufficient to direct commercial or professional activities under the Brussels I Regulation.936 Additional evidence regarding the transferor’s intention must be established. Such evidence include: (1) If the transferor mentions that it offers goods or services in that Member State; (2) if the transferor pays an operator of a search engine to improve their visibility in that Member State; (3) if the activity has an international nature (for example, tourism or voyages by freighter); (4) if the transferor presents telephone numbers with their land codes; (5) uses a top-level domain other than the top-level domain of the country where the transferor is established (for example, “.de” instead of “.au,” if the transferor is established in Austria, or neutral domains such as “.com” or “.eu”); (6) presents itineraries to the location of a service from one or several Member States; (7) mentions or presents clients that are domiciled in other Member States; and (8) if the site allows the customer to use another language or currency than used in the transferor’s country.937 A court must thus examine a transferor’s website and overall activities in order to determine whether a transferor foresaw doing business with consumers in the transferee’s Member State. Also, if an inter-

934 See Case C-190/11, Daniela Mühlleitner v. Ahmad Yusufi & Wadat Yusufi, Judgment of 6 September 2012, not yet reported, paras. 43–45.
936 Id. at paras. 66–67, 69. See also Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Preamble 24 (“[A] joint declaration by the Council and the Commission on Article 15 of Regulation … 44/2001 states that” … “the mere fact that an Internet site is accessible is not sufficient for Article 15 to be applicable, although a factor will be that this Internet site solicits the conclusion of distance contracts and that a contract has actually been concluded at a distance, by whatever means. In this respect, the language or currency which a website uses does not constitute a relevant factor.”).
mediate website is used, it does not preclude the transferor from directing activities, if the intermediate is acting for and on behalf of the transferor.\footnote{Id. at paras. 89–94 (THE CJEU left it to the Austrian court to decide whether evidence existed in that situation.).}

If neither of these rules are applicable, we must fall back on German rules, meaning that the claim in question determine applicable forum.\footnote{See ZPO § 29 (Ger.).}

It should be noted that jurisdiction might be more or less extensive in different Member States, both under the Brussels I Regulation and under national law. For example, different Member States seem to interpret directing activities under the Brussels I Regulation differently; French courts seem to interpret it broadly, while English courts seem to take a more cautious approach.\footnote{See Cortès, supra note 858, at 29–30.}

The broad interpretation by French courts is not unexpected, since French civil jurisdiction under national law is very extensive;\footnote{Hartley, supra note 854, at 23 ("Article 14 [of the French Civil Code] is one of the most exorbitant rules of civil jurisdiction anywhere in the world.").} courts will have jurisdiction almost whenever a French national is involved,\footnote{Code Civil [C. Civ.] [Civil Code] art. 14 (Fr.) ("L’étranger, même non résidant en France, pourra être cité devant les tribunaux français, pour l’exécution des obligations par lui contractées en France avec un Français; il pourra être traduit devant les tribunaux de France, pour les obligations par lui contractées en pays étranger envers des Français." ["An alien, even if not residing in France, may be cited before French courts for the performance of obligations contracted by him in France with a French person; he may be called before the courts of France for obligations contracted by him in a foreign country towards French persons."]).} and this right applies also to companies domiciled in France.\footnote{Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 4(2). See also Hartley, supra note 854, at 23.} Granted, it should be noted that German courts have claimed very extensive jurisdiction over foreigners for material illegal in Germany but legal in the hosting state,\footnote{Yulia A. Timofeeva, Worldwide Prescriptive Jurisdiction in Internet Content Controversies: A Comparative Analysis, 20 Conn. J. Int’l L. 199, 206–207 (2005).} for example Internet Holocaust denial accessible in Germany,\footnote{BGH dec. 12, 2000, NJW 2001, 624 (”Töben”) (Ger.).} but that case is naturally very special and cannot be applied to software transfers. Also, jurisdiction is generally less extensive in German courts than in French courts.

If the lawsuit concerns tort, for example tortious use of disapproved provisions, the court where the harmful event happened or may happen will have jurisdiction.\footnote{Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 5(3).} It is not necessary to prove an actual damage. A German court
will have jurisdiction if the plaintiff claims that the defendant used a standard-terms agreement, which the legal order disapproves of, inside the country.\footnote{BGH May 20, 2010, NJW 2010, 2719, para. 20 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 17 (Ger.).} Or tort for online copyright infringement or unfair competition when the effect is felt in Germany, interpreted as when a tortious site is directed at Germany.\footnote{See BGH Mar. 30, 2006, NJW 2006, 2630, paras. 24–26 (Ger.) (Regarding acts of unfair competition. The effect was felt in Germany since the Internet site was intended at German-speaking Europeans: The site was written in German and prices were also given in DM (the currency at the time).); OLG Köln Oct. 30, 2007, \textit{Multimedia und Recht} [MMR] 2008, 342, paras. 2–4 (Ger.) (Regarding copyright infringing photos sold on a English website. Mere global availability of an offer and allowing payment in Euros did not prove that the offer was directed towards Germany. The site used the top-level domain ".uk" and was written in English. Translations were available, but not in German. Based on this, the German court found that it did not have international jurisdiction.); OLG Karlsruhe Jul. 10, 2002, MMR 2002, 814, paras. 11–13, 45–50 (Ger.) (The court found that it had jurisdiction under the Brussels I Regulation, since the material could be retrieved from the location of the plaintiff. Still, mere accessibility was found insufficient for an act of infringement in Germany.).} But it should be noted that courts other Member States have interpreted jurisdiction for online copyright infringement more extensively than German courts.\footnote{Case C-170/12, Peter Pinckney v. KDG mediatech AG, Opinion of AG Jääskinen, 13 June 2013, para. 59, fn. 52. Compare the result under German law in \textit{MMR} 2008, 342, contra Svea hovrätt [Svea Court of Appeals], 2008-02-04, Ö6063-07 (Swed.); also reported in \textit{Rättsfall från hovrättena [RH]} [Ct. of App. Law Reports] 2008:4 (Swed.) (A Norwegian newspaper published an image protected by copyright in its online edition. Even though the primary audience was in Norway, the newspaper had a number of readers in Sweden. An immediate damage might had occurred in Sweden, and this was sufficient for jurisdiction for those damages under Article 5.3 of the Lugano Convention.).} In \textit{Pinckney},\footnote{Case C-170/12, Peter Pinckney v. KDG mediatech AG, Judgment of 3 October 2013, not yet reported.} the CJEU examined the place on damage for an alleged copyright infringement accessible online. The court noted that unlike Article 15(1)(c) of the Brussels I Regulation, Article 5(3) does not require an activity to be directed to a Member State.\footnote{Id. at paras. 41–42.} The CJEU said that the evaluation may vary between different rights,\footnote{Id. at paras. 31–34 (The CJEU said that: (1) The place of damage may vary “according to the nature of the allegedly infringed right”; (2) the right on which the claim is based must be protected within the Member State of the court’s jurisdiction; and (3) “the identification of the place where the alleged damage occurred also depends on which court is best placed to determine whether the alleged infringement is well founded.”).} but if the question concerns an alleged copyright violation, a court will have jurisdiction if: (1) The law of the Member State where the court is situated protects the rights that the plaintiff relies on; and (2) the harmful event may occur within the juris-
diction of the court. The CJEU said that the second requirement is met if a work, which is protected by “the rights relied on by the” plaintiff, is available on an “[I]nternet site accessible within” the court’s jurisdiction. But since the protection only applies within that Member State, the court only has jurisdiction over damage caused within that Member State.\textsuperscript{953} It remains to be seen if German courts will lower their requirements for international jurisdiction under the Brussels I Regulation after this ruling.

Under German national law, the court where the tortious act was committed shall have jurisdiction.\textsuperscript{954} For unallowed actions through media, such as an Internet message, the tortious act is not only committed at the place of publication, but everywhere, as long as the content is directed there.\textsuperscript{955} That is, the act is committed both at the place of action and at the place of effect.\textsuperscript{956} While there are instances when it has been assumed that all German courts have jurisdiction for copyright infringement on the Internet,\textsuperscript{957} the dominating view is that jurisdiction must be determined by access in the targeted jurisdiction.\textsuperscript{958} German courts may claim international jurisdiction for other online torts such as defamation when the effect is felt in Germany. Such as when statements with clear references to Germany endangers or disturbs the plaintiff’s respect in Germany.\textsuperscript{959}

\textsuperscript{953} Id. at paras. 43–47.
\textsuperscript{954} ZPO § 32 (Ger.).
\textsuperscript{955} Rosenberg, Schwab & Gottwald, supra note 925, at 210–211, § 36, recital 25–30.
\textsuperscript{956} See OLG Schleswig Sep. 13, 2013, 2 AR 28/13, para. 27 (Ger.).
\textsuperscript{957} See Id. at paras. 26–28 (“Das Amtsgericht Norderstedt geht vorliegend selbst davon aus, dass grundsätzlich für Urheberrechtsverletzungen im Internet die Zuständigkeit jedes deutschen Gerichts nach § 32 ZPO eröffnet sei.” Under this view, availability of illegal content is sufficient; targeting the German market is not necessary. Citing the case MMR 2002, 814, see supra note 948.).
\textsuperscript{958} OLG Schleswig Sep. 13, 2013, 2 AR 28/13, paras. 29–30 (Ger.) (In this case, the target group was mainly located in Germany, since the game in question was in German and developed by a German company. So in this situation, jurisdiction extended to all German courts.).
\textsuperscript{959} Compare BGH Mar. 2, 2010, NJW 2010, 1752, paras. 6, 10–29 (Ger.) (The alleged defamatory against a businessman was available in the online edition of the New York Times. The businessman’s country of residence was pointed out to be Germany. The businessman was said to have connections with the Russian mafia, was said not to be allowed entry into the United States, and that his company was involved in international organized crime. The BGH found that German courts had international jurisdiction since the effect of the alleged defamation was felt in Germany. The plaintiff’s respect in Germany was endangered or disturbed by the statements.), and BGH Mar. 29, 2011, NJW 2011, 2059, paras. 9–22 (Ger.) (No international jurisdiction. The article was written in Russian and primarily destined for foreign countries, meaning that there would not be a special interest in the article even among Germans who understood Russian.).
It should be noted that a new Brussels I Regulation will become applicable in 2015.\footnote{Regulation 1215/2012 of the European Parliament and of the Council on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast) ("Brussels I a Regulation"), 2012 O.J. (L 351) 1 (EU).} Jurisdiction over non-domiciled defendants will still be examined under national law,\footnote{Id. at Article 6(1).} but no longer in relation to consumers and employees.\footnote{Id. at Articles 18 and 22.} The court in the consumer's Member State will have jurisdiction regardless of where the defendant is domiciled.\footnote{Id. at Article 18(1).} This will simplify and may extend jurisdiction for German courts regarding software transfers.

Comparison

From a cross-national perspective, it is important to establish the initiator of the lawsuit, since the result may vary. As a defendant, the main principle is that the court where the defendant is domiciled will have jurisdiction. However, the interesting question is when the court where the plaintiff is domiciled will have jurisdiction. Both the German — Union and national level — and the American regime include such exceptions.

The German and the American regimes are quite different, with different theoretical approaches. Under American law, it is important that a person knows or should have known that an action would expose that person to the risk of being subject to jurisdiction of another state before granting jurisdiction. Under the Brussels I Regulation, other objectives may override this. Differences become clear when comparing general and specific jurisdiction. The former can be more extensive under American law, while the latter can be more extensive under the Brussels I Regulation.\footnote{Hartley, supra note 854, at 161–162 (Under American law, it is constitutionally possible to claim general jurisdiction even if the defendant is not domiciled or resident in the forum-state, as long as there is some “deliberate, voluntary act” aimed at the state, while the Brussels I Regulation requires domicile. Under the Brussels I Regulation, it is possible to claim specific jurisdiction as long as there is a link between the claim and the forum-state, which would not be constitutionally possible under American law.).} Under American law, it may be possible to claim general jurisdiction over an individual through transient jurisdiction, and general jurisdiction over companies that have continuous and systematic contacts with the forum-state, neither that would be possible under the Brussels I Regulation. Under the Brussels I Regulation, and sometimes under national law, it can be possible to claim jurisdiction for
personal injury, even if the defendant had no contacts with the forum state whatsoever.\textsuperscript{965}

Another fundamental difference is the protection of foreign defendants. Hartley means that the Brussels I Regulation discriminates against non-Europeans, since protective provisions are only applied against defendants domiciled within the European Union, while American law will observe the Due Process Clause equally against foreigners and Americans.\textsuperscript{966}

Under the Brussels I Regulation, the assessment is often more mechanical than under the American rules, but the two can still lead to similar results. This can be seen in the example of consumers. Under the Brussels I Regulation, the consumer’s forum will often have jurisdiction based on the status of being a consumer. But even though the American approach requires establishing minimum contacts, the consumer’s forum will often apply under American law as well.\textsuperscript{967} However, this becomes more complicated for Internet transactions. While it is possible that consumers’ fora will grant themselves jurisdiction, Alpenhof shows that jurisdiction can be complicated, and that assessing multiple elements of the transferor’s activities becomes necessary.\textsuperscript{968}

Both German and American law recognize the difficulty of claiming jurisdiction over foreigners for online activities, even though both German and American courts have done this, especially for tortious acts. For contractual issues, jurisdiction depends on the question at stake both in German and American courts. An American court may claim jurisdiction over a foreigner if the plaintiff and forum state has a strong interest. A German court may claim jurisdiction if the plaintiff must do something, for example return software when claiming cancelation of a contract. But in 2015, under the recast Brussels I Regulation, a German court may be able to claim jurisdiction for a German consumer regardless of where the defendant is domiciled,\textsuperscript{969} meaning that it will be easier to claim jurisdiction over foreigners in a German court.

\textsuperscript{965} Id. at 156–162 (Also examining the very far-reaching Article 14 of the French Civil Code, allowing French courts to claim jurisdiction if the plaintiff is of French nationality.).

\textsuperscript{966} Id. at 156–162.


\textsuperscript{969} Regulation 1215/2012 of the European Parliament and of the Council on jurisdiction
3.4.2 Applicable Law

The question of applicable law to a specific software transfer will often be of major practical importance for software license agreement validity. Applicable law can sometimes be modified by choice-of-law clauses. Whether such clauses exist and are effective are two primary questions for a court. The validity and effectiveness of such provisions will be examined later.

Different types of questions might arise, but conflicts with foreign law are most important in this thesis. From an American perspective, such conflicts can either arise between state law and foreign law, or federal law and foreign law. From a German perspective, such conflicts can either arise between national law and foreign law, or, in special situations, between European Union law and foreign law.

The structure of applicable law regulation is very different in the United States and Europe. Under American law, federal regulation of applicable law is almost nonexistent. If federal courts have diversity jurisdiction, they should generally apply state substantive law according to the Erie doctrine, and this also applies to state rules of applicable law, as long as there are suf-
ficient contacts with that state.\textsuperscript{978} From a European perspective, the situation is almost the opposite, since applicable law has been Europeanized.\textsuperscript{979}

United States

Under American law, there are several ideas on how to determine applicable law. In modern times, these ideas are primarily the governmental interest analysis, the better law approach, and the \textit{lex fori}-approach. A “watered-down form” of the interest analysis found its way into the Restatement (Second) of Conflicts of Law (“Second Restatement”), which has been found popular among courts.\textsuperscript{980}

Under the Second Restatement, the principle is that, in order to protect the justified expectations of the parties,\textsuperscript{981} the law of the jurisdiction with the most significant relationship to the parties and the transaction shall be applied,\textsuperscript{982} based on, for example “the place of contracting,” negotiation, performance, “the location of the subject matter,” or domicile.\textsuperscript{983} The place of contracting is the place where the last act occurred necessary to give the contract a binding effect.\textsuperscript{984} If the question concerns tort, applicable law is determined by “the most significant relationship to the occurrence and the parties,”\textsuperscript{985} based on, for example “the place where the injury occurred,” “the place where the conduct causing the injury occurred,” domicile, residence, or center of the parties’ relationship.\textsuperscript{986}

While the relevance of these approaches to Internet activities can be discussed,\textsuperscript{987} American courts have “applied standard choice of law methodology—the Restatement (Second) of Conflict of Laws, Governmental Interest

\textsuperscript{981} \textit{Restatement (Second) of Conflict of Laws}, § 188(1), cmt. b. (1971).
\textsuperscript{982} Id. at § 188(1).
\textsuperscript{983} Id. at § 188(2)(a–c) (These factors should be “evaluated according to their relative importance with respect to the particular issue.”).
\textsuperscript{984} Id. at § 188(1), cmt. b. For certain particular contracts, special rules apply. See §§ 189–197.
\textsuperscript{985} Id. at § 145(1).
\textsuperscript{986} Id. at § 145(2).
\textsuperscript{987} Andrews & Newman, \textit{supra} note 885, at 372–373.
Analysis, and the like—in internet disputes involving multiple states of the United States and foreign countries.\textsuperscript{988}

Different courts have applied different reasonings and analyses to this question.\textsuperscript{989} In \textit{GlobalSantaFe Corp. v. GlobalSantaFe.com},\textsuperscript{990} the court examined alleged “cybersquatting,” that is registering, trafficking in, or using domain names in bad faith,\textsuperscript{991} by a South Korean citizen. The court applied the American Anticybersquatting Consumer Protection Act, and found that it had jurisdiction under that act.\textsuperscript{992} But it did not examine whether it should apply American law.\textsuperscript{993} In \textit{Mzamane v. Winfrey},\textsuperscript{994} the court examined alleged online defamation. First, the court found that Pennsylvania had a more significant interest in applying its law than Illinois. Second, the court found that Pennsylvania had a more significant interest in applying its law than South Africa. The plaintiff was domiciled in Pennsylvania when the allegedly defamatory comments were published and had a stronger reputational interest in that state than South Africa.\textsuperscript{995}

In \textit{CRS Recovery, Inc. v. Laxton},\textsuperscript{996} the court examined ownership over an Internet domain name. The court said that California applies the governmental interest analysis, consisting of three steps: (1) Examine if the substantive law of each jurisdiction differs; (2) if so, the court must examine if there is a true conflict, that is, each relevant jurisdiction “has a interest in having its law applied”; and (3) if there is a true conflict, the court performs a “comparative impairment” analysis, identifying and applying “the law of the state whose interest would be the more impaired if its law were not applied.”\textsuperscript{997}

\textsuperscript{988} Laura E. Little, \textit{Internet Choice-of-Law Governance}, China Private International Law Forum, 2012, Temple University Legal Studies Research Paper Series No. 2012-20, at 4 (2012). See also CRS Recovery, Inc. v. Laxton, 600 F.3d 1138, 1139–1140 (9th Cir. 2010) (“This case requires application of traditional choice-of-law, tort, and property principles to an increasingly common factual setting, a dispute over the ownership of an Internet domain name.”).

\textsuperscript{989} Andrews & Newman, supra note 885, at 373–383.

\textsuperscript{990} 250 F. Supp. 2d 610 (E.D. Va. 2003).

\textsuperscript{991} See Anticybersquatting Consumer Protection Act, 113 Stat. 1536, enacted November 29, 1999, codified at 15 USC § 1125(d) (a.k.a. ACPA).


\textsuperscript{993} Andrews & Newman, supra note 885, at 373–374.

\textsuperscript{994} 693 F.3d 442 (E.D. Pa. 2010).


\textsuperscript{996} 600 F.3d 1138 (9th Cir. 2010).

\textsuperscript{997} CRS Recovery, Inc. v. Laxton, 600 F.3d 1138, 1141–1142 (9th Cir. 2010). Citing Abo- gados v. AT & T, Inc., 223 F.3d 932, 934 (9th Cir. 2000).
But the court also noted that, “[a]s a default, the law of the forum state will be invoked, and the burden is with the proponent of foreign law to show that the foreign rule of decision will further the interests of that state.” Under the governmental interest analysis, the court could not find a conflict between California and Virginia law. Since the defendant failed to prove that another law should apply, the court then defaulted to the *lex fori*. And if there would have been a conflict, it would at best been a false conflict, since Virginia had no interest in having its law applied unlike California.

In *Specht v. Netscape Communications Corp.*, the district court concluded that the forum state’s choice-of-law rules must be applied, and under those rules (New York law), “the most significant relationship to the transaction and the parties” was established by evaluating the transaction’s “center of gravity” or “grouping of contacts.” This was concluded to be California, the jurisdiction of the transferor. California was thought to have the strongest interest in the issue, since: (1) The software was designed in the state; (2) it was downloaded from a website that was maintained in the state; (3) the state had a interest in arbitration clause enforceability related to products created by corporations in the state; (4) it also had an interest whether any corporations in the state had created products that violated federal law; and (5) no other state seemed to have a comparable interest.

Other courts also try to determine the most significant relationship using similar methods.

As seen, there is no straightforward solution, and each situation has to be evaluated. Sometimes, it seems as if local can apply, a court will apply it and

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998 CRS Recovery, Inc. v. Laxton, 600 F.3d 1138, 1142 (9th Cir. 2010).
999 Id. at 1142–1144 (Since, *inter alia*, the defendant was domiciled in California, the tortious conduct occurred there, and “California’s deterrent policy of full compensation is clearly advanced by application of its own law.”). *Citing Hurtado v. Superior Court, 522 P.2d 666, 672 (Cal. 1974).* See also Andrews & Newman, *supra* note 885, at 376–381 (Being very critical of the court’s analysis.).
1002 Detroit Tigers, Inc. v. Ignite Sports Media, LLC., 203 F.Supp.2d 789, 794–795 (E.D. Mich. 2002) (The defendant’s law applied since (1) The hosting of a website was to be performed at the defendant’s place of business; (2) “[m]ost of the requirements of the alleged agreement were to be performed” in the defendant’s state; and (3) the defendant’s in-state attorney drafted the agreements.); Doe 1 v. AOL LLC, 552 F.3d 1077, 1086, 1085–1088 (9th Cir. 2009) (The concurring judge wanted the plaintiffs to be required on remand to show sufficient contacts with California to establish that they were protected by California law and policy.).
not examine whether the law of another jurisdiction has a greater claim.\textsuperscript{1003} And even a more extensive analysis, such as in \textit{CRS Recovery}, may still favor local interests.\textsuperscript{1004} Thus, the question of applicable forum may sometimes be important for applicable law.\textsuperscript{1005}

It should be noted that if more states had adopted the UCITA,\textsuperscript{1006} the question of applicable law would have been simplified. Under the UCITA, if the software was delivered digitally, the law of the jurisdiction where the transferor is located would govern the software license agreement.\textsuperscript{1007} If the software had been delivered in a physical medium to a consumer, the law of the jurisdiction where the physical medium is delivered would govern the software license agreement.\textsuperscript{1008}

**Germany**

From a German perspective, most of choice-of-law regulation will be found at a European Union level.\textsuperscript{1009} This regulation also applies to conflicts with countries outside the European Union.\textsuperscript{1010} It contains several presumptions of which law that should govern the agreement: (1) An agreement shall be governed by the laws of the state where the seller or provider has its habitual residence.\textsuperscript{1011} If this is inapplicable, or if contradicting rules are applicable, other presumptions follow: (2) The laws of country “where the party required to effect the characteristic performance of the contract” is habitually resident;\textsuperscript{1012} (3) the law of another jurisdiction, if all circumstances in a situation points to the law of another jurisdiction;\textsuperscript{1013} or if the above presumptions are inap-

\textsuperscript{1003} Little, \textit{supra} note 988, at 7 (Describing this as unilateral decision-making.); Andrews & Newman, \textit{supra} note 885, at 381–382.

\textsuperscript{1004} Andrews & Newman, \textit{supra} note 885, at 382.

\textsuperscript{1005} Little, \textit{supra} note 988, at 8 (“Thus, in these circumstances, personal jurisdiction analysis ends up being determinative of what law governs the merits of the controversy.”).

\textsuperscript{1006} \textit{See supra} section 3.1.2 (Regarding the NCCUSL attempt to resolve uncertainty regarding software transfers.).

\textsuperscript{1007} \textsc{Uniform Computer Information Transactions Act} § 109(b)(1) cmt. 3 (Westlaw through 2013) (This only applies to contract law and not other fields of law).

\textsuperscript{1008} \textit{Id.} at § 109(b)(2) cmt. 3.


\textsuperscript{1010} \textit{See Id.} at Article 2. \textit{See also} Hartley, \textit{supra} note 854, at 572–573; Michaels, \textit{supra} note 979, at 1635.

\textsuperscript{1011} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Article 4(1)(a–b). The other provisions — Article 4(2)(c–h) — are seldom applicable to software transfers.

\textsuperscript{1012} \textit{Id.} at Article 4(2).

\textsuperscript{1013} \textit{Id.} at Article 4(3).
callable (4) the laws of the jurisdiction with the closest connection to the contract. 1014

Thus, if the agreement concerns sale of goods or provision of services, the seller’s law applies. 1015 These concepts should be interpreted uniformly with the Brussels I Regulation, 1016 which would suggest that this applies for digitally transferred between business actors. 1017 Also, German courts have applied sales law to physical and digital software transfers, 1018 and considers software license agreements for perpetual software transfers to be sales contracts. 1019

Thus, this presumption should arguably generally apply, and so also the seller’s law. While a license agreement for video and audio recordings should not be considered a service agreement under the Regulation, 1020 it could be argued that the intellectual property grant is less significant than the obligation to provide the service, 1021 and the entire agreement should be considered a service agreement. If we would rely on the “characteristic performance,” 1022 the result is likely to be the same, since delivery of goods is considered the “characteristic performance.” 1023 And if a software license agreement for standard software should be interpreted as a license agreement, and not a sales or service contract, the transferor’s law would still apply. 1024 If we would rely on connection, 1025

1014 Id. at Article 4(4). For all presumptions, the applicable law cannot override mandatory provisions of public policy. See Article 9.
1015 Id. at Article 4(1)(a–b).
1016 Id. at Preamble 17.
1017 See supra section 3.4.1 (Regarding Article 5(1) of the Brussels I Regulation and digitally transferred software.). And unlike the question of applicable forum, we do not need to establish the place of performance.
1018 See BGH Nov. 15, 2006, NJW 2007, 2394, paras. 18–19 (Ger.) (And the listed cases confirming this.). See also LEUPOLE & GLOSSNER, supra note 574, at Teil 1. B. II. recital 43.
1020 Regarding Falco and the Brussels I Regulation, see supra note 919. See also de Miguel Asensio, supra note 920, at 324.
1021 de Miguel Asensio, supra note 920, at 324.
1022 Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Article 4(2). For example, if the contract is covered by several elements of Article 4(1). 1023 FAWCETT, CARRUTHERS & NORTH, supra note 915, at 712 (Applying the Rome Convention.).
1024 See de Miguel Asensio, supra note 920, at 325 (”The prevailing opinion is that the party who is to effect the characteristic performance in a typical assignment or a transfer of rights contracts is the assignor or transferor.”).
the most flexible rule, elements such as place of: (1) Residence; (2) the contract’s center; (3) contracting; (4) performance; and (5) nature and subject matter can be taken into account.\textsuperscript{1026} However, if the transferor is resident in the United States, the transferee is resident in Germany, and the software license agreement is entered through an American website on American server, it is difficult to argue that the contract is more closely connected with Germany than the United States. Thus, the seller’s law should apply in many situations.

If the transferee is a consumer and concludes an agreement, the laws of the consumer’s habitual jurisdiction will govern the agreement, as long as the transferor pursues or direct commercial or professional activities in that country.\textsuperscript{1027} If the requirement of pursuing or directing commercial or professional activities is not met, the ordinary rules described above will apply instead.\textsuperscript{1028} In \textit{Alpenhof},\textsuperscript{1029} which was presented above,\textsuperscript{1030} the CJEU examined the requirement of pursuing or directing commercial or professional activities through the Internet under the Brussels I Regulation. The Rome I Regulation should be interpreted consistently with the Brussels I Regulation,\textsuperscript{1031} so the \textit{Alpenhof} analysis should also apply to applicable law. Thus, a transferor’s international activities become important. Based on this, it is more likely that larger transferors will be found to direct activities in the transferee’s Member State, especially if they have subsidiaries there, but also if they use the top-level domain “.de,” presents their websites in German, with Euro as an alternative currency, presents telephone numbers with area codes, or pays search engines for better ranking in that country. Minor transferors, on the other hand, might be less likely to pursue such indicative actions, and might therefore perhaps be less likely to direct activities to a Member State. If a transferor does not direct activities to Germany, applicable law has to be determined using the principles applied between business actors.\textsuperscript{1032}

For cloud computing, the law of the transferor is likely to apply if the transferee is a business actor. If cloud computing is considered a service,
which seems reasonable, the law of the service provider’s habitual residence applies.\textsuperscript{1033} If that presumption cannot be applied, the characteristic performance is provided by the transferor, meaning that the law of the transferor’s habitual residence applies.\textsuperscript{1034} For consumers, this can be more complicated. Consumer protection does not apply if services are exclusively supplied in another country,\textsuperscript{1035} so this raises the question where cloud services are supplied. One view is that the placement of a server should not be important, and as long as the transferee can reach a service through the Internet, the service should touch upon the transferee’s legal system, meaning that the law of the consumer’s habitual residence would apply.\textsuperscript{1036} However, I am not completely convinced by this. If cloud services are considered exclusively supplied in another country, the default rules for business actors apply. If cloud services are not considered exclusively supplied in another country, the Alpenhof ruling applies, and an accessible website is not sufficient to direct commercial activities. Thus, the result should arguably be similar to local software.

If the lawsuit concerns tort — that is, if there is a lawsuit regarding tortious use of disapproved provisions — the law of the country where the damage occurs, or is likely to occur, will be applied.\textsuperscript{1037} This is the place where the contractual provisions, which the legal order disapproves of, have been or are likely to be used, affect the legally protected collective interest of consumers.\textsuperscript{1038}

In practice, validity questions could also arise if a transferor sues for copyright infringement and breach of contract. Different regimes become applicable to contractual obligations and torts/intellectual property infringement. Generally, in torts, the law of the country where damage occurs is applicable.

\textsuperscript{1033} Id. at Article 4(1)(b).
\textsuperscript{1034} Id. at Article 4(2). See LEUPOLD & GLOSSNER, supra note 574, at Teil 5. F. III. recital 336–337.
\textsuperscript{1035} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 6(4)(a).
\textsuperscript{1036} See LEUPOLD & GLOSSNER, supra note 574, at Teil 5. F. III. recital 338; Carl Friedrich Nordmeier, \textit{Cloud Computing und Internationales Privatrecht Anwendbares Recht bei der Schädigung von in Datenwolken gespeicherten Daten}, 2010 MMR 151, 152–153 (2010) (To comply with the Bluebook citation manual, the common German way of citing articles in this type of publication must be modified. In Germany, this article would be cited as MMR 2010, 151. That is, like a reported case.).
\textsuperscript{1037} Regulation 864/2007 of the European Parliament and of the Council on the law applicable to non-contractual obligations ("Rome II"), 2007 O.J. (L 199) 40 (EC), Articles 4(1) and 2(3)(b).
\textsuperscript{1038} BGH May 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.).
But when a question concerns ownership of property, the law of the country where the property is situated is applied (lex rei sitae). For intellectual property rights infringements, lex loci protectionis applies, meaning that applicable law is “the law of the country for which protection is claimed”, for copyright, this allows a rights holder to claim infringement under the laws where a work has been uploaded or can potentially be accessed, subject to the jurisdictional requirement of “a harmful event.” Different regimes for harm and contractual obligations might lead to different result. However, even if a lawsuit concerns both harm and contractual obligations, with different applicable laws, the applicable law to the harm cannot modify the law applicable to the contractual obligations.

Comparison
As a general difference between the American and German (mostly European Union) rules, it can be noted that the American regulation is arguably more flexible, while the German regulation is arguably simpler. The latter means that the outcome is often more predictable under German law.

Another difference is that the German rules contain special rules for consumers, unlike the American rules. To understand this, it might be necessary to compare the rules for sales of goods between business actors. These might lead to completely different results in the German and American regu-

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1040 EINFÜHRUNGSGESETZ ZUM BÜRGERLICHEN GESETZBUCH (EGBGB) [Introductory Act to the Civil Code] August 18, 1896, RBGl. 604, § 43, Preamble 16. See also Haimo Schack, The Law Applicable to Unregistered IP Rights After Rome II, 26 Ritsumeikan L. Rev. 129, 130 (2009). Regulation 864/2007 of the European Parliament and of the Council on the law applicable to non-contractual obligations (“Rome II”), 2007 O.J. (L 199) 40 (EC), Article 38(1), Preamble 26. If a Union intellectual property right has been infringed, the law of the country where the infringement act was committed applies (lex loci delicti) Id. at Article 8(2). Neither rules can be modified by contract. See also Haimo Schack, The Law Applicable to Unregistered IP Rights After Rome II, 26 Ritsumeikan L. Rev. 129, 132–137 (2009) (This rule only applies for infringement, not other questions regarding intellectual property rights.).


1044 While rules of applicable law is found on a state level, many courts follow the Second Restatement and the like.
3 Legal Classifications and Applicable Laws

The German regulation focuses on habitual residence, while the American regulation focuses on the place of the contracting, negotiation, performance, or the subject matter. The outcome of these different approaches becomes very clear in a sale of goods. Under the German regulation, “the law of the country where the seller has his habitual residence” will govern such contracts, while the law of the jurisdiction where the goods are delivered will govern the contract under American law. The German approach will favor the seller, while the American approach will favor the buyer. These differences might explain why the German regulation includes special provisions protecting consumers, while American law does not.

For Internet activities, the result might be slightly different than for physical transactions. As we have seen, it is not clear that the German special provisions become applicable to consumers for all Internet transactions, if the transferor does not pursue or direct activities towards a Member State of the European Union. Thus, it is not certain that the consumer protection found in German law will always be applicable to software transfers, but at least in certain situations, since at least major transferors will likely meet these requirements. Additionally, for torts, German law might become applicable. For other situations, the transferor’s law will likely become applicable.

While American courts have often applied standard principles for applicable law to Internet activities, case law is not uniform, which can be expected due to the rules’ flexibility. Still we can discern a couple of tendencies: (1) The court will sometimes apply lex fori when it can be applied, not examining other options; (2) the court may find that the law of the defendant has

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1047 RESTATEMENT (SECOND) OF CONFLICT OF LAWS, § 188(2)(a–d) (1971). Nonetheless, habitual residence may be of importance as well. See Id. at § 188(2)(e).
1050 Cf. Solomon, supra note 1045, at 1717 (Regarding the perceived bias of the Rome Convention in favor of economically stronger parties by relying on habitual residence of the characteristic performance supplier.) Under the Rome I Regulation, the same principle applies to sellers and service providers.
1051 Little, supra note 988, at 7 (Describing this as unilateral decision-making.); Andrews & Newman, supra note 885, at 381–382.
the strongest interest if the defendant allegedly committed a tortious act;\textsuperscript{1052} or (3) or for contractual issues using the elements in \textit{Specht}.\textsuperscript{1053}

The American rules suggest that the question of applicable forum is very important for Internet activities,\textsuperscript{1054} which could increase the risk of forum shopping,\textsuperscript{1055} while the German rules suggest that transferors’ actions are very important for Internet activities. In the end, it might be more likely that a German court would apply foreign law than an American court to Internet activities.

\textsuperscript{1052} CRS Recovery, Inc. v. Laxton, 600 F.3d 1138, 1142–1144 (9th Cir. 2010).
\textsuperscript{1053} Specht v. Netscape Communications Corp., 150 F.Supp.2d 585, 590–591 (S.D.N.Y. 2001) (Place where software was designed, site where software was downloaded from, provisions related to products created by companies in the state, or whether any company in the state violated a law.).
\textsuperscript{1054} Little, supra note 988, at 8 (“Thus, in these circumstances, personal jurisdiction analysis ends up being determinative of what law governs the merits of the controversy.”).
PART III

MAPPING VALIDITY

Wir sind im Vertrage und im Geschäft – mit deinem Blut hast du's bezeugt und dich gegen uns versprochen und bist auf uns getauft von uns genommen, geniale Zeit, hochtragende Zeit, volle vierundzwanzig Jahre ob dato recessi, die setzen wir dir zum Ziel. Sind die herum und vorübergelaufen, was nicht abzusehen, und ist so eine Zeit auch eine Ewigkeit, – so sollst du geholt sein. Herwiderumb wollen wir dir unterweilen in allem unternäg und gehorsam sein, und dir soll die Hölle frommen, wenn du nur absagst allen, die da leben, allem himmlischen Heer und allen Menschen, denn das muß sein.\textsuperscript{1056}

\textit{Mapping Structure}

This mapping consists of two parts: (1) Software license agreement formation, modification, and severability; and (2) substantive cross-national validity. The second part is divided into: (a) Certain formal requirements and limitations in certain areas of law, which transferors must take into account; and (b) applying these requirements to certain provisions in software license agreements.\textsuperscript{1057}

\textsuperscript{1056} Thomas Mann, \textit{Doktor Faustus: Das Leben des deutschen Tonsetzers Adrian Leverkühn erzählt von einem Freunde} 331 (S. Fischer Verlag GmbH: Frankfurt am Main 1965).

\textsuperscript{1057} See supra section 1.4.4 (Regarding my comparative structure.).
4 Software License Agreement Formation

Since a software license agreement is a standard-term agreement, a binding agreement must be formed between transferor and transferee. This is perhaps the most basic question for cross-national validity. This mapping is done in two steps: (1) Examine formal requirements for contract formation; and (2) apply those requirements software license agreements. This chapter will also examine: (3) Software license agreement modification; and (4) some potential problems, including severability of invalid provisions.

4.1 Formal Requirements

A software license agreement is a promise between transferor and transferee to observe certain rights and obligations. To make this recognizable as a duty by the judiciary, the parties must form a binding contract. The requirements to form binding agreements vary to some extent between legal systems, especially when consumers are involved. However, at its core, a mutual intention to be bound by the agreement — “a meeting of the minds” — and a mutual assent to the exchange, often described as manifesting offer and acceptance, are needed.

In certain legal systems, additional requirements apply. Common law countries, including the United States, require the parties to bargain for consideration. Certain legal systems influenced by Roman law have had a requirement for causa/cause in order to enforce a contract; France and Italy still have this requirement, but not Germany. This is one clear, theoretical, difference between American and German contract law. Other

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1058 See supra section 3.2.
1059 See, e.g., BGB § 311(1) (Ger.); Restatement (Second) of Contracts § 1 (1981).
theoretical differences include: (1) An obligation under German contract law arises from a promise, but an obligation under common law arises from a bargain; and (2) Continental law (including German law) searches for principles, while common law is attached to casuistry.\textsuperscript{1063}

Both German and American law determine the common core of contract formation, mutual assent, through “external acts and manifestations,” as provided through the objective contract theory. Thus, this theory focuses on the parties’ conduct, not their thoughts.\textsuperscript{1064}

Contract formation in the Internet age has raised some questions about these requirements. They originate from a distant past,\textsuperscript{1065} far from today’s “mass market online and technology contracting.”\textsuperscript{1066} They are based on the, so-called, “paper paradigm” in contract law. The adequacy of this paradigm in the Internet age is being debated,\textsuperscript{1067} but courts apply most of these old principles to software license agreements.\textsuperscript{1068} A software license agreement

\textsuperscript{1065} See Kötz & Flessner, supra note 1060, at 17 (Regarding the origin of contract formation requirements in European contract law.).
\textsuperscript{1067} Compare Robert A. Hillman & Jeffrey J. Rachlinski, Standard-Form Contracting in the Electronic Age, 77 N.Y.U. L. Rev. 429, 430–431 (2002) (Arguing that traditional principles of contract law have faced technological shifts before, and can continue to do so.), and John J. A. Burke, Reinventing Contract, 10 Murdocoh U. Elec. J.L. No. 2 +1, *249–289 (2003) (Arguing that contract law has to be reinvented.). Among advocates for new principles, there is no consensus on what is needed. Some advocate for principles that better facilitate the interests of consumers, while other argue for principles that better facilitate the development of e-commerce.
\textsuperscript{1068} See Register.com, Inc. v. Verio, Inc., 356 F.3d 393, 403 (2d Cir. 2004) (“While new commerce on the Internet has exposed courts to many new situations, it has not fundamentally changed the principles of contract.”). See also Fteja v. Facebook, Inc., 841 F.Supp.2d 829, 835 (S.D.N.Y. 2012).
Software License Agreement Formation has to be formed in order to become enforceable, and traditional contract formation principles also apply in the digital world.

Since most legal systems have special regulation concerning contract formation and consumers, formation requirements may vary between different transferees.

4.1.1 Consideration
Some legal systems require more than intent to make a party bound by an agreement, in order to avoid enforcement of unlawful and unserious agreements. This kind of requirement has been found in both common law and Roman law. Roman law had a requirement for *causa*, that is, “a legal reason for enforcing a pact,” and some legal systems influenced by Roman law have or have had this requirement in some form. German law was clearly influenced by Roman law, but in what is today Germany, both the term and idea of a requirement for *causa* disappeared among scholars before the unification of Germany (the Second German Empire). In common law countries, the requirement of *causa* became part of contract law through the requirement of consideration, a requirement that has survived until today.

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1069 See Principles of the Law of Software Contracts § 2.01 (2009) (Stating that a software license agreement can be “formed in any manner sufficient to show an agreement, including by offer and acceptance and by conduct”).
1070 See Specht v. Netscape Communications Corp., 306 F.3d 17, 29 (2d. Cir. 2002) (“Mutual manifestation of assent, whether by written or spoken word or by conduct, is the touchstone of contract.”).
1071 See Naylor & Patrikios, supra note 1066, at 53.
1074 See Zimmermann, supra note 1062, at 549–553 (Regarding the meaning of *causa*).
1076 See Zimmermann, supra note 1062, at 553 (Regarding the decline of *causa*. However, the requirement has survived in France and Italy); Beale et al., supra note 1062, at 127, 153 (Regarding the absence of *causa* in German law, in spite of Roman law influence.).
In American law, consideration is required to make a contract legally binding. The requirement of consideration is commonly defined as: “[T]o constitute consideration, a performance or a return promise must be bargained for.” A contract where consideration is found in the form of a performance is traditionally termed a unilateral contract, while a contract where consideration is found in the form of a return promise is traditionally termed a bilateral contract. Both require that a promisor is compensated by the promisee in some way. Monetary compensation is the most common way of compensation, but other forms of compensation are also conceivable. The latter could be relevant to certain software business models where money is not the primary form of compensation. The compensation is not required to be equivalent in value to the promise, but the promisor must receive something in return. The threshold is low. For example, the promise to refrain smoking, drinking, and gambling until the age of 21 has been considered as sufficient consideration. If a transaction has not been truly bargained for, it can be rejected for lack of consideration, but as long as there has been bargaining, even one peppercorn can constitute consideration. As a result of this, many American lawyers do no seek the bargain in the promise, but instead ask whether refusing to enforce that promise would serve any purpose. Thus, the requirement of consideration is sometimes considered a theoretical formal requirement; the threshold is so low in practice that the requirement is mostly of symbolic nature.

Still, we have to examine whether sufficient consideration is likely to

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1078 See Restatement (Second) of Contracts § 17(1) (1981).
1079 Id. at § 71.
1081 See UCC § 2-304 (Westlaw through September 2013).
1086 Gordley & von Mehren, supra note 1082, at 423.
be found in software transfers. In many situations this is very uncomplicated. Consideration can be assumed when software is transferred against monetary compensation, and even when a transferee promises to pay for the software in the future.\textsuperscript{1088} Even if software is offered without monetary compensation transferees may derive value from other sources. For example: (1) If the software collects user data, which is valuable for the transferor, the transferee can be said to compensate the transferor in the form of privacy instead of money;\textsuperscript{1089} (2) a transferor providing software free of charge can benefit by generating market share or increasing its reputation;\textsuperscript{1090} or (3) a transferor may receive suggestions for improvements from transferees, leading to improvements in the software.\textsuperscript{1091} These broad examples are likely to cover most situations, and should resolve most uncertainty regarding certain software transfers without monetary compensation.\textsuperscript{1092} Granted, exceptions might exist with uncertainty regarding consideration, but it seems more likely that courts would extend the doctrine of consideration than to deny enforcement of software license agreements based on insufficient consideration.\textsuperscript{1093} Thus, a transferor will likely receive sufficient consideration in most thinkable situations.

\textsuperscript{1088} See Storm Impact, Inc v. Software of the Month Club, 13 F.Supp.2d 782, 791 (N.D. Ill. 1998) (Consideration is not mentioned, but the court finds the software license agreement valid and enforceable, thus consideration must have been present.).


\textsuperscript{1090} See Jacobsen v. Katzer, 535 F.3d 1373, 1379 (Fed. Cir. 2008).

\textsuperscript{1091} Planetary Motion, Inc. v. Techsplosion, Inc., 261 F.3d 1188, 1200 (11th Cir. 2001).


\textsuperscript{1093} Also, if sufficient consideration cannot be found, there are alternatives that can make a contract binding. For example, the doctrine of promissory estoppel, if: (1) The promisee has reasonably and foreseeably relied on a clear and unambiguous promise by the promisor; and (2) the promisee has sustained substantial detriment from this reliance. Then, a transferee could have relied on this promise. \textit{See Restatement (Second) of Contracts} § 90 (1981). But this is unlikely to become relevant even as an extreme exception.
4.1.2 Offer and Acceptance

Both German and American law require offer and acceptance,\(^{1094}\) which is "[a] proposal for concluding a contract addressed to one or more specific persons constitutes an offer if it is sufficiently definite and indicates the intention of the offeror to be bound in case of acceptance."\(^{1095}\) Thus: (1) The offer must be addressed to specific persons — a mere invitation to treat does not suffice as an offer;\(^{1096}\) (2) the offer must be sufficiently definitive and complete;\(^{1097}\) and (3) the offeror must have an intention to be bound.\(^{1098}\) The acceptance must be free, without reservations, matching the offer, and communicated.\(^{1099}\)

These requirements can sometimes cause problems on the Internet, since: (1) The circle of potential contractees is indefinite; and (2) it can be difficult to know whether an offer is actually an offer or a mere invitation to treat. However, this should not be a problem for software license agreements. Unlike ads, they become visible to transferees when transferring software,\(^{1100}\) and the circle of potential contractees is therefore limited. Also, it should be sufficiently clear to the transferee that a software license agreement is an offer,\(^{1101}\) and software license agreements should be sufficiently clear and complete to its essential

\(^{1094}\) See, e.g., Restatement (Second) of Contracts § 17(1) (1981); UCC §2-204 (Westlaw through September 2013); Kötz & Flessner, supra note 1060, at 16–18.


\(^{1096}\) See Reichgericht [RG] [Imperial Court of Justice] Nov. 7, 1931, Entscheidungen des Reichsgerichts in Zivilsachen [RGZ] 133, 388 (Ger.) (Announcement of a theatre performance). See also Markesinis, Unberath & Johnston, supra note 1063, at 62–63.

\(^{1097}\) German law requires an offer to be so clear and complete with regard to the essential terms — essentialia negotii — that the recipient of the offer can conclude the contract by simply accepting the agreement. See, e.g., Beale et al., supra note 1062, at 193; Markesinis, Unberath & Johnston, supra note 1063, at 59; BGH Nov. 7, 2001, NJW 2002, 363 (Ger.); OLG Hamm Dec. 14, 2000, NJW 2001, 1142 (Ger.); Zumbansen, supra note 1064, at *1.

\(^{1098}\) Although an offeror can sometimes become unintentionally bound, see BGH Mar. 8, 1984, NJW 1984, 1885 (Ger.).

\(^{1099}\) See, e.g., Cal. Civ. Code § 1565 (West, Westlaw through 2013); Markesinis, Unberath & Johnston, supra note 1063, at 70–75.

\(^{1100}\) Even though it may be possible to look up the software license agreement on the Internet.

\(^{1101}\) Although some courts have held that a transferee can be the offeror and the transferor the offeree, see Klociek v. Gateway, Inc., 104 F.Supp.2d 1332, 1340 (D. Kan. 2000).
terms so that the transferee may — and only can — accept or decline the terms with a “yes” or “no.” Thus, these requirements should be met.

Incorporation of Provisions

Since software license agreements are non-negotiated and therefore standard-terms agreements, the provisions must become part of the agreement.

Under German law, such provisions must become incorporated into the agreement, either by reference or being part of the main agreement. The other party must: (1) Be given notice of the terms at the time the agreement is concluded; (2) be given opportunity to review the terms; and (3) accept that the terms will apply to the agreement. For Internet transactions, the requirement of reasonable opportunity to review the terms is met if the terms are available through a highly visible link on the transaction page, and the terms can be printed. Longer texts should also be available for download. Provisions must be readable for the average consumer without effort. This requirement is a question of typography and clearness. Additionally: (1) Provisions that are so unusual (surprising) that the other party does not need to expect to encounter them will not be incorporated; and (2) unclear or ambiguous terms will be interpreted contra proferentem (against the offeror).

The requirements of notice and opportunity to review do not apply when both parties are business actors. For business actors, the general rules of offer and acceptance apply. Notice and time to review are exceptions to

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1102 As we will see, many software license agreements use assent mechanisms that require a “yes” or “no.”
1103 See BGB § 305(1) (Ger.).
1104 Id. at § 305(2).
1106 BGH Jun. 14, 2006, NJW 2006, 2976 (Ger.).
1108 See BGH May 30, 1983, NJW 1983, 2772 (Ger.) (The provisions could only be read with a magnifying glass, and not even then without effort. The provisions were not incorporated.).
1109 See Jauernig, supra note 1107, at Buch 2. Abschnitt 2. § 305. 4(b)(bb), recital 14.
1110 BGB § 305c(1) (Ger.). See also Maxeiner, supra note 1105, at 152 (Products that require the buyer also to obtain services from the seller fall within this category.).
1111 BGB § 305c(2) (Ger.).
1112 Id. at § 310(1); Markesinis, Unberath & Johnston, supra note 1063, at 172.
these rules. Provisions can become incorporated if the offeree knew or should have known about the provisions. However, a contract must, at least, include references to non-customary provisions in order to incorporate them. For standard software, there are generally no customary software license agreements, so a reference will be a minimum requirement between business actors.

Under American law, such provisions are also considered as standard business terms. But unlike German law, American law lacks explicit incorporation control. When it comes to standard-term agreements, there is an assumption of trust to the good faith of offerors. Still, there is some level of incorporation control. This incorporation control is manifested partly by a requirement to make the offeree aware of the terms. That is to say, the offeror must give the offeree due and reasonable notice of the terms. Due notice means a notice that “is intended to and likely to reach a particular person or the public; notice that is legally adequate given the particular circumstance.” Certain provisions must also be conspicuously written in

1113 Markesinis, Unberath & Johnston, supra note 1063, at 172; Maxeiner, supra note 1105, at 151–152; Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(a), recital 129.
1115 Säcker & Rixecker, supra note 1114, at Buch 2. Abschnitt 2. § 305. VI. (a), recital 97 (A requirement to know (wissenmüssen) the provisions only applies under special circumstances.).
1116 See James R. Maxeiner, Are Your Click-Wrap Terms Valid? — Internet Contracting in the Global Electronic Age: Comparative Perspectives for Taiwan: An Address to International Conference on Innovative Information Technology Policy and E-Society of the National Chengchi University B–9 (Taipei, Republic of China in Taiwan: November 13, 2003).
1117 Restatement (Second) of Contracts § 211, cmt. b (1981) (Standard provisions become part of an agreement when a party manifests assent to the agreement, if the party “has reason to believe that like writings are regularly used to embody terms of agreements of the same type,” unless the “other party has reason to believe that the party manifesting such assent would not do so if he knew that the writing contained a particular term.”).
1118 The doctrine of procedural unconscionability will, inter alia, examine whether a transferee had the chance to read a software license agreement, which is to some extent a form of incorporation control. See Maxeiner, supra note 1116, at 9.
1119 Also known as adequate notice, see Black’s Law Dictionary 1164 (9th ed. 2009).
1121 Black’s Law Dictionary, supra note 1119, at 1164. See also reasonable notice Black’s Law Dictionary, supra note 1119, at 1165. (“Notice that is fairly to be expected or required under the particular circumstances.”).
order to be valid and enforceable against consumers.\footnote{1122} Like German law, the requirement of notice primarily applies to consumers.\footnote{1123} Also, like in German law, standard terms can be construed contra proferentem. But if given an opportunity to know the existence of provisions, transferees are considered to have accepted them.\footnote{1124}

Thus, the requirements for incorporation vary between consumers and business actors. Naturally, transferors do not need to meet the consumer requirements for business actors. However, if a transferor transfer software to both consumers and business actors, it might be best to use a uniform set of provisions, and aim for consumer requirements. Especially since it is difficult in practice for a transferor to know whether a transferee is a consumer or a business actor,\footnote{1125} it becomes difficult to present the right transferee with the correct software license agreement. Thus, meeting the stricter consumer requirements might be the best approach for certain transferors. 

To conclude the exchange, both German and American law requires the transferee to accept the offer.\footnote{1126} Assent is shown by some manifestation, often a declaration of assent or by conduct.\footnote{1127}

Timing of Disclosure

In practice, especially for online transactions, the question of incorporation is often a question of timing. That is, when in the transaction/transfer process provisions are disclosed to transferees. German law requires notice at least at the time when the agreement is concluded.\footnote{1128} In practice, American law

\footnote{1122} \textit{Cf.} UCC § 1-201(b)(10) (Westlaw through September 2013) (Regarding the requirement for conspicuous provisions under the UCC, which include size of text, contrasting type, font, or color compared to the surrounding text.); UCC § 2-316(2) (Westlaw through September 2013) (Warranty disclaimers against consumers require conspicuous writing.).

\footnote{1123} \textit{See} Markesinis, Unberath & Johnston, \textit{supra} note 1063, at 172.

\footnote{1124} \textit{See} Maxeiner, \textit{supra} note 1116, at 8–9.


\footnote{1126} \textit{See}, e.g., \textit{Restatement (Second) of Contracts} § 17(1) (1981); UCC §2-204 (Westlaw through September 2013); Kötz & Flessner, \textit{supra} note 1060, at 16–18.

\footnote{1127} \textit{See}, e.g., UCC § 2-204 (Westlaw through September 2013); \textit{Restatement (Second of Contracts} § 54 (1981); Kötz & Flessner, \textit{supra} note 1060, at 25. \textit{See also} Softman Prod. v. Adobe, 171 F.Supp.2d 1075, 1087 (C.D. Cal. 2001). Silence/inaction can also constitute acceptance in specific situations. \textit{See} \textit{Restatement (Second of Contracts} § 69 (1981); RG Feb. 26, 1926, Juristische Wochenschrift [JW] 1926, 2674 (Ger.). \textit{See also} Beale et al., \textit{supra} note 1062, at 216–219. As an exception, it is not always necessary to notify the offeror of the acceptance either. \textit{See} BGB § 151 (Ger.). However, this exception is not generally likely to be important for software license agreement formation.

\footnote{1128} BGB § 305(2)(1) (Ger.).
allows delayed disclosure, but the ALI Principles do not, creating a safe harbor for transferors doing business globally. The time when a contract is concluded may vary between different kinds of software transfers, depending on, for example, whether the software is transferred against payment, or how the software is acquired. But for software transfers where transferors use payment forms, the final acceptance of the transaction will likely be the time when the contract is concluded.

A little over a decade ago, Braucher found that among the 100 largest American software companies, 87.5 percent of those participating in online transactions did not disclose their provisions prior to the transaction. No current data have been found. E-commerce was in its infancy then, and much might have happened since, but it seems unlikely that the practice of delayed disclosure would have come to an end.

Thus: (1) Delayed disclosure violates the German requirement of disclosing provisions before the contract is concluded; and (2) data suggests that delayed disclosure has at least previously very been common among transferors. Timing of disclosure might therefore be a cross-national validity problem among at least certain transferors.

A Simplified Model

Granted, the contract model described above is a simplification that cannot be applied to all contracts. For example: (1) An agreement might contain more than two parties; and (2) a party can have different capacities, being

1129 ProCD v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996) (“Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable.”).
1130 PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 2.02(c) cmt. c (2009) (A transferee is “deemed to have adopted a standard form” if “reasonably accessible electronically prior to initiation of the transfer at issue.”). See also Jean Braucher, Unfair Terms in Comparative Perspective: Software Contracts, in COMMERCIAL CONTRACT LAW: A TRANSATLANTIC PERSPECTIVE 339, 350–351 (Larry DiMatteo, Qi Zhou, Severine Saintier, & Keith A. Rowley eds., Cambridge University Press: Cambridge 2013).
1131 As well as the requirements found in the ALI Principles.
1133 Cf. PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 2.02(c)(2) cmt. c (2009) (Under these safe harbor rules, the transferee is considered to have adopted the standard-form agreement, if having “reasonable notice and access to the standard terms before payment.”).
1135 See RESTATEMENT (SECOND) OF CONTRACTS §§ 9, 10 (1981).
both a promisor and promisee. In some situations, it can be difficult to determine who is the promisor and who is the promisee, but this is not a problem for software license agreements, due to the limited possibilities of interaction between transferor and transferee.

The distinction between bilateral and unilateral agreements have been argued to be relevant to certain software license agreements, even though there are generally different views on the importance of unilateral agreements. In a bilateral agreement, “the parties obligate themselves reciprocally” by promising performance. In a unilateral contract, “only one party makes a promise or undertakes a performance.” An example of the first category is a contract of sale; an example of the latter is a promise for a reward, followed by doing the prescribed act. A promisor of a unilateral contract does not receive consideration until performance, meaning that unilateral contracts are only enforceable to the extent they are performed, and can be revoked until

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1136 See Id. at § 9 cmt. b, § 11.
1137 Gomulkiewicz, supra note 1092, at 346. See infra section 4.2.5.
1138 Some argue that unilateral contracts are unimportant. See K. N. Llewellyn, On Our Case-Law of Contract: Offer and Acceptance, 1, 48 Yale L. J. 1, 36 (1938) (Arguing that unilateral contracts “is not an important type on which an innocent law student’s teeth should be cut to the eternal misshaping of his view of Contract, but belongs in the freaktent as an interesting and often instructive curiosity.”); Samuel J. Stoljar, The False Distinction Between Bilateral and Unilateral Contracts, 64 Yale L.J. 515, 520–523, 534 (1955) (Arguing that the dichotomy between unilateral and bilateral agreements is false. If a promisee relies on a promise in a unilateral contract, and the promisee begins to perform, the promise is irrevocable to the extent the promisee’s reliance is protected.). See also Restatement (Second) of Contracts § 1 reporter’s note, cmt. f (1981) (The Restatement does not define unilateral and bilateral agreements “because of doubt as to the utility of the distinction … between the two types.”). Others are more positive. See Mark Pettit, Jr., Modern Unilateral Contracts, 63 B.U. L. Rev. 551, 551–552 (1983) (Arguing that unilateral contracts can be important and “useful for expanding contracting analysis into new areas.”). See also Peter Meijes Tiersma, Reassessing Unilateral Contracts: The Role of Offer, Acceptance and Promise, 26 U.C. Davis L. Rev. 1, 4 (1992).
1139 Black’s Law Dictionary, supra note 1119, at 367.
1141 Black’s Law Dictionary, supra note 1119, at 367. See also Great Northern Railway Co. v Witham, Court of Common Pleas (1873) L.R. 9 C.P. 16 at 19 (Eng.) (“If I say to another, ‘If you will go to York, I will give you 100l.’ that is in a certain sense a unilateral contract. He has not promised to go to York; but if he goes it cannot be doubted that he will be entitled to receive the 100l.”); Allen & Widdison, supra note 1134, at 33.
the prescribed act has been completed, which create uncertainty. If a contract is a unilateral contract, it will have two consequences under American law: (1) The contract will not require acceptance; and (2) acceptance cannot bind the transferor, only full performance. Under German law, acceptance is generally required for unilaterally binding agreements.

4.2 Software License Agreement Formation

Software license agreement formation is subject to traditional principles of contract law, and the requirement of assent to form an agreement also applies to software license agreements. But the nature of online software transfers can put a stronger emphasis on certain questions. For example, whether the transferee has been given reasonable notice before the completion of the transfer, and whether the transferee has assented to the

1144 See Wormser, supra note 1143, at 136–137 (A promises B $100 if B walks across the Brooklyn Bridge. B starts to walk across the bridge, but before B reaches the goal, A revokes the offer.); K. N. Llewellyn, On Our Case-Law of Contract: Offer and Acceptance, II, 48 Yale L. J. 779, 787, fn. 9 (1939) (“There is a fine flagpole outside my classroom window, with a golden crown on top, and something very lovely went out of my life two years ago when the cases finally compelled me to stop revoking with the student almost up to the crown.”). See also Tiersma, supra note 1138, at 1–2. This uncertainty can be resolved by creating option contracts. See Warner Bros. Pictures v. Brodel, 31 Cal.2d 766, 772 (Cal. 1948) (“In an option contract the optionor stipulates that for a specified or reasonable period he waives the right to revoke the offer.”); Restatement (Second) of Contracts § 25 cmt. c, §§ 71–81 (1981) (A promise to keep an offer open must be supported by consideration in order to be valid. This requirement is met if the promisee pays money, performs, or promises to perform.).
1145 Tiersma, supra note 1138, at 25–27.
1146 See Principles of European Contract Law, supra note 1085, at Article 2:101, 139, n. 2. (The exception is when an offeror has promised to donate something. If the receiver remains silent, acceptance is presumed. See BGB § 516(2) (Ger.).)
1147 Register.com, Inc. v. Verio, Inc., 356 F.3d 393, 403 (2d Cir. 2004).
1148 See Specht v. Netscape Communications Corp., 150 F.Supp.2d 585, 596 (S.D.N.Y. 2001); Principles of the Law of Software Contracts § 2.01 (2009). However, some scholars are less certain whether this is actually true. See Mark A. Lemley, Terms of Use, 91 Minn. L. Rev. 459, 465 (2006) (Arguing that thanks to software license agreements, the requirement of assent has “withered away.”); Melissa Robertson, Is Assent Still a Prerequisite for Contract Formation in Today’s Economy?, 78 Wash. L. Rev. 265 (2003) (Questioning whether assent is still an actual prerequisite for contract formation.).
4 Software License Agreement Formation

To solve the problem of online assent, many software license agreements use one of three common methods for indicating assent; known as shrink-wrap, click-wrap (web-wrap), or browse-wrap license agreements. While such methods could solve a number of problems associated with assent, these methods have caused debate on whether they actually constitute assent, and whether there is a “meeting of the minds.”

4.2.1 Shrink-Wrap License Agreements

For at least one generation, shrink-wrap license agreements have likely shaped the image of software license agreements. “Shrink-wrap” refers to the transparent plastic that physical software boxes are wrapped in. The box commonly has a notice of the software license agreement, and a requirement to consent to the software license agreement. The software license agreement is found either on or inside the box. The software license agreement states the acceptance procedure for the license agreement. Some software license agreements state that the transferee manifests assent simply by breaking the plastic barrier, others that the transferee manifests assent by reviewing the license agreement and not returning the software for a full refund within a set time.

Granted, shrink-wrap license agreements are mainly associated with physical distribution of software, and are thus of demising importance due to the demise of physical software distribution. However, the principles laid down regarding shrink-wrap license agreements are still important. Courts have sometimes

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1150 It should be noted that there have been situations when a transferee has been bound by the terms of a software license agreement without personal assent, if the software has been obtained from a party that has assented to the terms. See, e.g., Microsoft Corp. v. Harmony Computers & Elecs., 846 F.Supp. 208, 213 (E.D.N.Y. 1994); Adobe Systems Inc. v. One Stop Micro, Inc., 84 F.Supp.2d 1086, 1092 (N.D. Cal. 2000) (Even if One Stop was not a party to the agreement with Adobe, it became bound by the restrictions imposed by the agreement, since One Stop had acquired the software from a party to the agreement.). But cf. Softman Prod. v. Adobe, 171 F.Supp.2d 1075, 1078–1088 (C.D. Cal. 2001).

1151 See Lemley, supra note 1148, at 460, 466–467.


1154 See ProCD v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996).
cited and relied on shrink-wrap license agreement principles when assessing other methods of software license agreement formation. Additionally, shrink-wrap principles sometimes set the minimum requirements for binding agreements, so the principles can be used for prediction of other methods, even when there is no direct reference to shrink-wrap license agreements.

United States

Under American law, there are two opposing groups of cases regarding shrink-wrap license agreement validity. The majority has upheld shrink-wrap license agreements, and this group includes the perhaps most well-known of all cases concerning software license agreements: ProCD v. Zeidenberg. Courts have upheld shrink-wrap license agreements based on the so-called “master of the offer”-theory. According to this theory, the transferor is considered the master of the offer, and may choose what constitutes acceptance. The minority of cases that have not upheld shrink-wrap license agreements have not adhered to the “master of the offer”-theory. The minority has considered such shrink-wrap license agreements to be unilateral modifications to the initial agreements, not expressly accepted by transferees. Some of the minority cases predate ProCD, but some minority cases also postdate ProCD.

Even under the majority view, valid shrink-wrap license agreements must


1157 ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).

1158 Id. at 1452.


1162 See Klocek v. Gateway, Inc., 104 F.Supp.2d 1332, 1340–1341 (D. Kan. 2000); Novell v. Network Trade Ctr., Inc., 25 F.Supp.2d 1218, 1230–1231 (D. Utah 1997) (Noting that the transfer was a sale and not a license, and the software license agreement was invalid against an owner.).
still meet certain requirements: (1) The shrink-wrap license agreement must give the transferee adequate notice of the software license agreement before transferring the software; (2) it must give the transferee adequate time to review the terms and conditions of the software license agreement to decide whether to accept the software license agreement; and (3) a transferee that cannot accept the provisions must be allowed to return the software and receive a full refund.1163

Germany
The validity of shrink-wrap license agreements (Schutzhüllenverträge) under German law is at least doubtful.1164 In comparison with American law, there is no authoritative case law,1165 and assessing validity of such agreements is more difficult. A contract can be accepted without declaration to the transferor,1166 but tearing the shrink-wrap is a necessary act in order to use the software, and transferees are often not aware of the legal relevance of this action. It is therefore argued that such software license agreements are surprising,1167 which would make them invalid and unenforceable.1168

There are many variants of shrink-wrap license agreements: Some include terms on the cover; other only contain a reference. If a transferor would print the terms on the box, they are more likely to become incorporated,1169 and thus valid. It is uncertain whether a sufficiently big warning on the software package could be sufficient to bring awareness to the transferee. If there is only a reference and no printed provisions on the package, and the provisions are only available when opening the box, the transferee has no opportunity to accept the terms before the contract is concluded, which means that the incorporation would probably fail.1170

1163 See DeFontes v. Dell, Inc., 984 A.2d 1061, 1072–1073 (R.I. 2009) (The conditions and method for rejection was too confusing.); Ravicher, supra note 1153, at 52. Shrink-wrap license agreements have attracted some criticism, since the performance for indicating assent is stipulated in the license agreement, the license terms are not always available to the transferee at the time of the purchase, and the performance for indicating assent is often a conduct that the transferee is likely to perform without being aware of the license agreement. See, e.g., Lemley, supra note 1148, at 467–468; Lemley, supra note 1153, at 1248–1249.
1164 Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 133.
1165 See Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 135.
1166 BGB § 151 (Ger.).
1167 See Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 133.
1168 BGB § 305(c) (Ger.) (This provision takes special regard to the outward appearance of the contract.).
1169 See Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 135.
1170 See Id. at Teil 1. B. V. 2(b), recital 133.
Other have argued that shrink-wrap license agreements do not become valid on the basis that such software license agreements unilaterally add provisions after the contract has been concluded,\textsuperscript{1171} which is not valid under German law.\textsuperscript{1172} Regardless of ground for invalidity, validity is unlikely against consumers.

The requirement of a clear reference and an opportunity to take notice of the contract content formally only applies to consumers and not between business actors.\textsuperscript{1173} However, shrink-wrap license agreements are almost exclusively used in a consumer context, so a different legal evaluation for business actors would not matter.

However, even though traditional shrink-wrap license agreements are probably not valid, it should be noted that one lower German court has accepted a method that has some similarities with shrink-wrap.\textsuperscript{1174} In "Half-Life 2," the court examined the sale of a computer game on physical media. The box had a notice that the user had to register online and agree to the terms and conditions. But unlike a traditional shrink-wrap license agreement, the software license agreement was available on the Internet and not only inside the box. Also, the notice did not say that the transferee became bound by the agreement by tearing the plastic, only that it was necessary to later enter into a contract. The court accepted this, and the court noted that an average consumer should take notice of the agreement when reading the general information on the box, for example the system requirements.\textsuperscript{1175} Thus, while this is only one opinion by a lower court, it does open the possibility for methods of assent that are similar to shrink-wrap license agreements. However, the software license agreement was available on the Internet, and the tearing of the plastic did not bind the transferee at that point. This ruling is therefore not a support for shrink-wrap license agreements per se, but could give a direction for how shrink-wrap license agreements can be adapted to become valid under German law, and thus become cross-nationally valid.

\textsuperscript{1172} See BGB §§ 305(2), 311(1) (Ger.).
\textsuperscript{1173} BGB §§ 310(1), 305(2) (Ger.). See also Maxeiner, supra note 1105, at 152.
\textsuperscript{1174} See LG Hamburg Sep. 28, 2007, 324 O 871/06 ("Half-Life 2") (Ger.).
\textsuperscript{1175} LG Hamburg Sep. 28, 2007, 324 O 871/06 ("Half-Life 2") (Ger.); Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 134.
4.2.2 Click-Wrap License Agreements

Two very common methods for indicating assent to software license agreement for digitally distributed software are click-wrap and web-wrap agreements. That is, on-screen electronic agreements that the transferee has to accept in order to install, download, or use the software. Acceptance of the terms is indicated by clicking on a button labeled “I accept” or similar in a dialog box or pop-up window. Rejection of the terms is indicated by clicking on a similar button labeled “I do not accept” or similar.

Click-wrap license agreements can be divided into different categories: “CD click-wrap” or “Online click-wrap.” “CD click-wrap” is a click-wrap license agreement that must be accepted before software contained on physical media can be installed. “Online click-wrap license agreements” are found on web pages, and must be accepted before downloading or accessing the software. The latter is sometimes also known as “web-wrap” or “net-wrap license agreements,” and is more important than the former for digitally transferred software.

United States

The click-wrap method has generally been considered legally valid and enforceable under American law. Early cases regarding click-wrap license agreements upheld click-wrap license agreements on the basis that the transferee had to accept the terms and had therefore entered into an agreement.

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1176 Click-wrap, web-wrap, and browse-wrap all derive from the term shrink-wrap.
1179 Dickens, supra note 1152, at 381.
1180 Id. at 385.
1181 See Madison, supra note 1177, at 1062.
1182 See Dickens, supra note 1152, at 381–382 (But the method has caused a debate in courts and academia about click-wrap validity and enforceability.).
and later cases have built on these principles. Click-wrap license agreements have generally been upheld if the transferee is: (1) Required to click “I Accept” to continue the process; and (2) the transferor can present sufficient evidence that the transferee did click on the button, or could not have proceeded without clicking on the button.\footnote{See, e.g., I. Lan Sys., Inc. v. Netscout Serv. Level Corp., 183 F.Supp.2d 328, 338–339 (D. Mass. 2002); Forrest v. Verizon Communications, Inc. 805 A.2d 1007, 1010 (D.C. 2002); Caspi v. Microsoft Network, L.L.C, 732 A.2d 528, 532 (N.J. App. Div. 1999); DeJohn v. TV Corporation International, 245 F.Supp.2d 913 (C.D. Ill. 2003); Feldman v. Google, Inc., 513 F.Supp.2d 229, 238 (E.D. Pa. 2007); In re RealNetworks, Inc., Privacy Litigation, 2000 WL 631341, *1, 5–6 (N.D. Ill. May 8, 2000). See also Nathan J. Davis, Presumed Assent: The Judicial Acceptance of Clickwrap, 22 Berkeley Tech. L.J. 577, 582, fn. 36 (2007). But see Moringiello, supra note 1066, at 1323–1326 (Questioning whether clicking “Accept” should be comparable to paper signatures.).} Conversely, click-wrap license agreements have not been upheld if: (1) An alleged software license agreement breach occurred before the transferee installed the software and assented to the software license agreement;\footnote{Softman Prod. v. Adobe, 171 F.Supp.2d 1075, 1087 (C.D. Cal. 2001).} (2) an “offer did not make clear to the consumer that clicking on the download button would signify assent to those terms”;\footnote{Specht v. Netscape Communications Corp., 306 F.3d 17, 29 (2d Cir. 2002).} or (3) if there is insufficient evidence that a transferee actually accepted to the license agreement by clicking on “I Accept.”\footnote{Martin v. Snapple Beverage Corp., No. B174847, 2005 WL 1580398 (Cal. Ct. App. July 27, 2005).} This applies both to consumers and business actors.

Thus, the requirements for online click-wrap can be summarized as: (1) Constructive notice of the terms; (2) requiring the transferee to click “I Accept”; (3) not allowing the transferee to bypass the terms; and (4) allowing the transferee to reject the terms.\footnote{See Dickens, supra note 1152, at 385–391.}

For CD click-wrap, the assessment is different,\footnote{See Id. at 385–401.} since a CD click-wrap is more similar to a shrink-wrap license agreement,\footnote{See supra section 4.2.1.} because the transferee accepts the software license agreement after the software transfer. Thus, for CD click-wrap, the ProCD requirements apply.\footnote{ProCD v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996) (“Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable.”).}
Germany

Since the provisions must be available at the time the agreement is concluded, online click-wrap is likely to be better than CD click-wrap and shrink-wrap, since prior disclosure is more likely for online click-wrap. If there is prior disclosure, there is generally nothing problematic with click-wrap license agreements as long as it is reasonable that the transferee can take notice of the software license agreement. Unlike American law, the act of clicking a button should not be considered required in order to conclude the agreement. Thus, conduct is arguably less important than availability of provisions.

It is probably not necessary to display the provisions “inline.” A clear reference to the software license agreement, if it is easily available on the Internet, is probably also sufficient. If presenting the provisions “inline,” it should generally not matter whether the provisions are displayed in the main window or in a new window. An exception is when web-wrap license agreements are used, and there is a danger that pop-up blockers prevent opening of new windows.

However, based on the requirement of notice, there might be problems if the agreement is presented on a small screen. This can be a problem since many software license agreements are relatively long. A related potential problem might arise if the transferee has to scroll down repeatedly to find the

1192 See BGB § 305(2) (Ger.).
1193 See Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(b), recital 130; Schack, supra note 1171, at 329.
1194 See LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).
1196 See Peter Rott, Germany, in DIGITAL CONTENT SERVICES FOR CONSUMERS; REPORT 1: COUNTRY REPORTS 85, 94 (University of Amsterdam: Centre for the Study of European Contract Law (CSECL): Institute for Information Law (IViR) 2010) (“[I]ncorporation of standard terms requires traders to give the other party the reasonable opportunity to take note of the standard terms.” … “Whilst this is not problematic on internet, it can become an issue when mobile phones are used since in that case space is extremely limited.”).
1197 See Joseph Turow, Chris Jay Hoofnagle, Deirdre K. Mulligan, Nathaniel Good & Jens Grossklags, The Federal Trade Commission and Consumer Privacy in the Coming Decade, 3 J/S: J.L. & POL’Y FOR INFO. SOC’Y 724, 739 (2007) (Regarding data privacy notices in software license agreements: “The average EULA was over 2500 words long and would require approximately thirteen minutes for a consumer of average reading skill to parse, according to accepted reading metrics. Font sizes were often too small to be read easily and notices were displayed in comparatively small windows, for example, showing only one percent of the complete notice text at a time.”).
provisions. Especially if there is no indication of terms on the top of the page, or if the transferee also has to scroll horizontally to read the text, due to the text width being too narrow.\textsuperscript{1198} Neither problems are difficult to overcome for desktop software, but this might be more challenging for software that is installed, used, or accessed from mobile devices. This problem is not isolated to Germany, but is a potential growing problem for transferors developing software for “post-PC” devices.\textsuperscript{1199}

\subsection*{4.2.3 Browse-Wrap License Agreements}

Cloud software as a service (SaaS) is becoming increasingly common.\textsuperscript{1200} For such services, and other online services,\textsuperscript{1201} browse-wrap license agreements might be used as an alternative to web-wrap license agreements.\textsuperscript{1202} Browse-wrap is a method of binding a visitor to a web page by its terms of use. Browse-wrap license agreements are commonly accessed through a hyperlink on the page. Accessing the web page commonly indicates assent to the terms of use. Thus, unlike a click-wrap/web-wrap license agreement, the user: (1) is not presented with the provisions before entering into the agreement; (2) is not required to view the agreement to use the site; and (3) might not be aware that a contract has been formed.\textsuperscript{1203} Browse-wrap license agreements are therefore discernible from click-wrap license agreements,\textsuperscript{1204} where the transferee actively has to accept the provisions in advance.\textsuperscript{1205}

If/when reading the software license agreement, it becomes clear how the browse-wrap license agreement becomes effective:

\begin{center}
ACCESSING, BROWSING OR OTHERWISE USING THE SITE INDICATES YOUR AGREEMENT TO ALL THE TERMS AND CONDI-
\end{center}

\begin{footnotes}
\footnotetext[1198]{Spindler & Schuster, supra note 1195, at Dritter Teil, Buch 2, Abschnitt 3, 1.2 § 312 c, III., 1(e)(bb), recital 53–54.}
\footnotetext[1199]{See supra section 2.1.5 (Regarding mobile computing.).}
\footnotetext[1200]{See supra section 2.1.3.}
\footnotetext[1201]{For example Google’s services. See Brendon Beheshti, Cross-Jurisdictional Variation in Internet Contract Regulation: Is There a Viable Path to Globally Uniform Internet Contracting Laws?, 8 J. INT’L COM. L. & TECH. 49, 50–51 (2013).}
\footnotetext[1202]{Granted, browse-wrap license agreements are perhaps most common on various websites, for example, <http://www.nytimes.com>, where such browse-wrap license agreements are known as “Terms of Service” or “Terms of Use.”.}
\footnotetext[1203]{Kaustuv M. Das, Forum-Selection Clauses in Consumer Clickwrap and Browsewrap Agreements and the ‘Reasonably Communicated’ Test, 77 Wash. L. Rev. 481, 499–500 (2002). Not unexpectedly, this method of indicating assent is quite controversial. See Lemley, supra note 1148, at 460.}
\footnotetext[1204]{See supra section 4.2.2.}
\footnotetext[1205]{See Casamiquela, supra note 1155, at 475.}
\end{footnotes}
United States

American courts have been more reluctant against browse-wrap license agreements than click-wrap license agreements. Few browse-wrap license agreements have been upheld in court, primarily against business actors. When determining validity, one important element is “whether a website user has actual or constructive knowledge of a site’s terms and conditions prior to using the site.” When browse-wrap license agreements have been upheld, often against competing undertakings, the user/transferee have visited the sites and seen the provisions often, sometimes daily, thus having admitted or constructed knowledge of the terms. Conversely, when browse-wrap license agreements have not been upheld, often against consumers, the transferees had not received reasonable notice of the terms. In Specht v. Netscape Communications Corp., transfers had visited a site to download software, but only once. The transferees would not have seen the provisions without scrolling down, and the court said that they had no reason to do so. Thus, the court did not enforce the software license agreement.


| 1207 | Lemley, supra note 1148, at 474–475. |
| 1209 | See Register.com v. Verio, 356 F.3d 393, 402–404 (2d Cir. 2004) (The court likened this to a situation where a visitor takes an apple from a fruit stand, with knowledge of its price, and bites into the apple: “[T]he visitor, who sees apples offered for 50 cents apiece and takes an apple, owes 50 cents, regardless whether he did or did not say, ‘I agree.’”); Cairo, Inc. v. CrossMedia Services, Inc., 2005 WL 756610 (N.D. Cal. Apr. 1, 2005). See also Lemley, supra note 1148, at 472–477. |
| 1210 | 306 F.3d 17 (2d Cir. 2002). |
| 1211 | Cf. Register.com v. Verio, 356 F.3d 393, 402 (2d Cir. 2004) (Where there had been multiple visits.). |
4 Software License Agreement Formation

In re Zappos.com Inc., Customer Data Security Breach Litigation, a link to the software license agreement was available on every page, visible “between the middle and bottom of each page” (on page 3 of 4 when the page was printed). The link was “the same size, font, and color as most other non-significant links.” The transferee was not directed to the software license agreement “when creating an account, logging in to an existing account, or making a purchase.” The court said that the transferee did not assent to the agreement, since it could not have constructive knowledge — the inconspicuous link did not provide notice — and thus the browse-wrap license agreement was unenforceable.

However, browse-wrap license agreements have been upheld when transferors have put an “immediately visible notice of the existence of license terms” on their websites.

HARTZOG studied 56 cases regarding online agreements and found certain factors to be important for browse-wrap license agreement validity, including whether: (1) The transferee was a consumer or a business actor — business actors were more likely to be bound by browse-wrap license agreements than the former; (2) the transferee had been given notice; (3) the transferee had interacted with the content; (4) the provisions were presented before the transferee was allowed to use the content; and (5) the scope of the terms.

Thus, when courts have upheld browse-wrap license agreements, it has primarily been browse-wrap license agreements that arguably could have been characterized as web-wrap license agreements.

Germany
The term browse-wrap license agreement is diverse. Some variants of browse-wrap license agreements are close to web-wrap license agreements. If there is a clear reference to the software license agreement, and the agreement is easily

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1218 Woodrow Hartzog, The New Price to Play: Are Passive Online Media Users Bound by Terms of Use?, 15 Comm. L. & Pol’y 405, 419–429 (2010). See also Fteja v. Facebook, Inc., 841 F.Supp.2d 829, 836 (S.D.N.Y. 2012) (Noting that browse-wrap has primarily been upheld against business actors. When courts have accepted browse-wrap, the transferee must generally have had actual or constructive notice, and have given assent. Shrink-wrap license agreements that have not required the transferee to click on a link, or read or assent have not always been upheld.).
available on the Internet, the requirement of sufficient notice and opportunity to review can probably be met. There might be problems if reading the agreement is likely to be prevented by pop-up blockers. And similar to click-wrap license agreements, there might be problems if the transferee has to scroll down repeatedly to find the provisions, and if there is no indication of terms on the top of the page.

However, not all browse-wrap license agreements have clear indications of provisions, and there is not always an opportunity for transferees to read the provisions before using the software or service. Online agreements that have clear indications of provisions are arguably web-wrap license agreements, and agreements that lack indications are “pure” browse-wrap license agreements. “Pure” browse-wrap might: (1) Have no notice of terms; (2) a link to the software license agreement might be buried somewhere deep in the site; and (3) the software license agreement becomes effective by entering a site or web service. In that situation, the requirement of notice and opportunity to review cannot be met. Such agreements are close to shrink-wrap license agreements, and are sometimes even less conspicuous. Such agreements are very unlikely to meet the requirements of notice and opportunity to review provisions, and are thus very unlikely to be valid.

4.2.4 Other Forms of Assent

Not all software is distributed with one of the above assent mechanisms. Especially for non-commercial software, there might be very diverse methods of distribution and ways of establishing contractual assent. Software license agreement can still be formed and provisions incorporated into the agreement, as long as the minimum requirements for contract formation and incorporation are met.

1219 See LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).
1220 See BGB § 305(2) (Ger.).
1221 Spindler & Schuster, supra note 1195, at Dritter Teil, Buch 2, Abschnitt 3, 1.2 § 312 c, III., 1(e)(bb), recital 53–54.
1222 Id. at Dritter Teil, Buch 2, Abschnitt 3, 1.2 § 312 c, III., 1(e)(bb), recital 53–54.
1223 See BGB § 305(2) (Ger.).
1224 Raymond T. Nimmer, Law of Computer Technology § 10:15 (Westlaw through November 2013) (Noting that there is “diversity of how this software finds its way into the hands of [transferees]. There is an incredible variety of uses here, ranging from highly informal [Joe gives his friend a copy] to very structured. In addition, some [open source software license agreements] are not structured to establish contractual assent, while others are uncertain in terms of whether a contract is the transactional goal or not.”).
1225 See supra section 4.1.
Under German law, a contract can be accepted by a declaration or by conduct, but in order for provisions to become incorporated into an agreement, the provisions must be available at the time the agreement is concluded. However, the provisions do not need to be part of the main agreement, but can also be incorporated by a reference, if the provisions are easily available, for example on the Internet. A visible link, available prior to the conclusion of the agreement may be sufficient.

Under American law, a contract can also be accepted by a declaration or by conduct. A software license agreement can be formed, and its provisions incorporated, if the minimum requirements set forth by ProCD, and subsequent cases. These requirements can also be applied to software offered without monetary compensation: (1) Notice before transfer; and (2) time to review, to decide whether to accept the software license agreement or return the software. Such software would not require return and refund policies.

Still, if no assent mechanism is used, there will be questions regarding the timing of notice and consent, which could be difficult to prove in practice. An assent mechanism, such as click-wrap or web-wrap, solves many such problems. Assent mechanisms are perhaps not always possible, but if possible, they can arguably reduce some unnecessary uncertainty.

The following provision from the commonly used software license agreement GNU General Public License (GPL) version 2 could illustrate the possible uncertainty regarding consent caused by lack of assent mechanisms:

1226 See Kötz & Flessner, supra note 1060, at 25.
1227 BGB § 305(2) (Ger).
1228 Id. at § 305(1).
1229 See LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger).
1230 See, e.g., UCC § 2-204 (Westlaw through September 2013); Restatement (Second) of Contracts § 54 (1981).
1231 See ProCD v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996) (“Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable.”).
1233 Ravicher, supra note 1153, at 52, 82.
1234 For example, ongoing public software projects not aimed at end users that must be compiled before used. Still, web-wrap license agreements that must be accepted before given source code access could be possible.
You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.\textsuperscript{1235}

This provision could clearly cause problems, at least evidential problems. However, a number of German lower courts have considered this software license agreement to be valid.\textsuperscript{1236} In \textit{CR 2006, 729},\textsuperscript{1237} the court said that the software licensed under the GNU GPL had been offered to a limited group, and the software license agreement had been accepted through a consent-based action. The provisions were incorporated into the agreement since they were easily available on the Internet.\textsuperscript{1238} From an American perspective, it is possible that software distributed without any assent mechanism is able to meet the American “shrink-wrap requirements” set forth by ProCD, “[n]otice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable.”\textsuperscript{1239} However, in this situation, these principles are not likely to be necessary, since the GNU GPL is easily available on the Internet. The transferee can easily examine the software license agreement as long as there is sufficient notice about the software license agreement when the software is downloaded, or in the source code. In other situations, there might be problems if the transferee is not given any notice of the provisions, nor an opportunity to review the provisions.

Other forms of assent are often variations of the three major categories of assent. For example, \textit{Register.com v. Verio} is sometimes categorized as a case concerning browse-wrap license agreement.\textsuperscript{1240} But it can be discussed whether this is the best categorization. Unlike traditional browse-wrap license agreements, there was no hyperlink to the software license agreement.\textsuperscript{1241} The

\textsuperscript{1236} \textit{See, e.g.,} LG München 1 May 19, 2004, GRUR-RR 2004, 350 (Ger.); LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).
\textsuperscript{1237} LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).
\textsuperscript{1238} \textit{Id.} at *8 (The asterisk refers to the internal page number of the PDF version.).
\textsuperscript{1239} ProCD v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996).
\textsuperscript{1240} \textit{See Lemley, supra} note 1148, at 460, fn. 4. In this thesis, that case is treated as an example of a browse-wrap license agreement, since, like a browse-wrap license agreement, it was not available when the parties entered into the agreement. \textit{See supra} section 4.2.3.
\textsuperscript{1241} \textit{See Register.com, Inc. v. Verio, Inc.}, 356 F.3d 393, 396, 401–403 (2d Cir. 2004) (The
software license agreement became available to the user/transferee only after the query had been processed. The defendant could not be bound after the first query, but after repeated queries, the defendant became aware of the provisions, and became bound by the agreement. The result would likely have been the same under German law. The provisions would not have been incorporated after the first query. However, after repeated queries it is likely that a transferee would have been bound by the software license agreement under German law as well, since it can be assumed that the user/transferee had actual knowledge of the software license agreement when processing subsequent queries.

4.2.5 Are Certain Software License Agreements Unilateral Contracts?

It has been argued that certain software license agreements could be unilateral contracts. As seen, a unilateral contract would not require acceptance under American law, and is only enforceable to the extent being performed, but a unilateral contract would generally require acceptance under German law.

But the doctrinal support for software license agreements as unilateral contracts is limited. According to Lemley, unilateral contracts are accepted when an offeree is “engaging in conduct that unmistakably indicates assent,” for example painting the house of the offeror. Based on this, Lemley argues that shrink-wrap license agreements should not be considered as unilateral contracts, since the acceptance of a shrink-wrap license agreement is more ambiguous. Using this line of arguing, browse-wrap license agreements should be even more unlike to be unilateral contracts, since the required conduct — browsing — is even more ambiguous. Under the GNU GPL,

agreement stated: “By submitting a WHOIS query, you agree that you will use this data only for lawful purposes and that under no circumstances will you use this data to … support the transmission of mass unsolicited, commercial advertising or solicitation via email.”.

1242 See the discussion in the draft opinion: Register.com v. Verio, 356 F.3d 393, 429–430 (2d Cir. 2004).


1244 See Gomulkiewicz, supra note 1092, at 346 (Stating that some open source software license agreements “may be unilateral contracts.”).

1245 Tiersma, supra note 1138, at 25–27 (In fact, acceptance would not matter, since only full performance can bind the transferor.).


1247 See PRINCIPLES OF EUROPEAN CONTRACT LAW, supra note 1085, at Article 2:101, 139, n. 2.

1248 Lemley, supra note 1148, at 468.
modifying or distributing the software indicates assent.\textsuperscript{1249} Modifying or distributing software is arguably somewhere between shrink-wrap/browse-wrap assent and painting the house of the transferor on an ambiguousness scale. Thus, the GNU GPL is arguably more likely to be a unilateral agreement than a shrink-wrap/browse-wrap license agreement. Hayes argues that Microsoft's Game Content Usage Rules and Blizzard Entertainment's Letter to the Machinists of the World are examples of unilateral agreements, but only since they do not limit transferees' legal rights.\textsuperscript{1250} Thus, the theoretical application of this categorization is limited. And most importantly, the idea of unilateral contracts has not been proven to be important for software license agreements. Thus, most transferors should arguably not need to think about this categorization.

4.2.6 Comparison of Software License Agreement Formation

As seen, software license agreement formation can be simple or quite problematic from a cross-national perspective. Not unexpectedly, a more unorthodox formation process increases the risk for invalidity or asymmetrical validity.

Software license agreements must mostly meet the same requirements under German and American law in order to form a contract; that is, offer and acceptance must be found.\textsuperscript{1251} Under American law, the parties must also bargain for consideration.\textsuperscript{1252} The threshold for consideration is low,\textsuperscript{1253} and even software offered without monetary compensation can constitute sufficient consideration.\textsuperscript{1254} In order to be effective, the standard terms must be

\textsuperscript{1249} Free Software Foundation, \textit{GNU General Public License (GPL): Version 2}, Section 5 (1991) (“You are not required to accept this License, since you have not signed it. … Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.”).

\textsuperscript{1250} See Christina J. Hayes, \textit{Changing the Rules of the Game: How Video Game Publishers are Embracing User-Generated Derivative Works}, 21 HARV. J.L. & TECH. 567, 570, fn. 24, 576, fn. 73 (2008) (“A unilateral permissive license like the Microsoft Rules or the Blizzard Letter could not, as a contractual matter, limit users’ preexisting rights under the Copyright Act, such as fair use. Since these licenses were posted by the publishers on their websites, without notice, and with no requirement that users agree to them, there can be no consideration or acceptance, which would limit users’ legal rights.”).

\textsuperscript{1251} See, e.g., \textit{RESTATEMENT (SECOND) OF CONTRACTS} § 17(1) (1981); Kötz & Flessner, \textit{supra} note 1060, at 16–18.

\textsuperscript{1252} \textit{RESTATEMENT (SECOND) OF CONTRACTS} § 17(1) (1981).


\textsuperscript{1254} See Jacobsen v. Katzer, 535 F.3d 1373, 1379 (Fed. Cir. 2008); Planetary Motion, Inc. v. Techsplosion, Inc., 261 F.3d 1188, 1200 (11th Cir. 2001).
incorporated into the agreement. Both German and American law requires
the transferor to give consumer transferees notice of the provisions.

However, when it comes to software license agreement formation, there
seems to be some differences in practice between German and American law.
Software license agreements must meet the strictest requirements among Ger-
man and American law. Online click-wrap license agreements should be able
to do this: That is, a “meeting of the minds,” bargaining for consideration, and
and a sufficiently clear offer that incorporates the terms into the agreement — at
the time of the agreement — in a way that gives the transferee a reasonable
notice of the terms, and is accepted by a clear declaration in the form of a
click of a button. American courts have upheld click-wrap agreements, and
click-wrap license agreements should also generally meet German legal
requirements. Potential problems with notice may arise if the software
license agreement is presented on a small screen. This is primarily a prob-
lem for “post-PC” devices, but the increasing ubiquity of such devices could
make this into a serious problem.

Browse-wrap license agreements, as well as shrink-wrap license agreements,
are, on the other hand, probably at best asymmetrically cross-nationally valid.
And sometimes completely cross-nationally invalid. The result may differ
whether the transferee is a consumer or business actor, but since transferors
do not always know whether a transferee is a consumer or business actor, it
might be difficult to use these mechanisms if a transferor targets both groups of

1255 BGB § 305(2) (Ger.); RESTATEMENT (SECOND) OF CONTRACTS § 211 (1981).
1256 BGB § 305(2)(1) (Ger.); Specht v. Netscape Communications Corp., 306 F.3d 17,
28–30, 35 (2d. Cir. 2002).
Mass. 2002); Forrest v. Verizon Communications, Inc., 805 A.2d 1007, 1010 (D.C. 2002);
Google, Inc., 513 F.Supp.2d 229, 238 (E.D. Pa. 2007); In re RealNetworks, Inc., Privacy
(Validity of online click-wrap license agreements commonly require: (1) Constructive notice
of the terms; (2) requiring the transferee to click “I Accept”; (3) not allowing the transferee to
bypass the terms; and (4) allowing the transferee to reject the terms.).
1258 See LEUPOLD & GLOSSNER, supra note 1105, at Teil 1. B. V. 2(b), recital 130; See Schack,
supra note 1171, at 329.
1259 See Rott, supra note 1196, at 94 (“[I]ncorporation of standard terms requires traders
to give the other party the reasonable opportunity to take note of the standard terms.” …
“Whilst this is not problematic on internet, it can become an issue when mobile phones are
used since in that case space is extremely limited.”).
1260 See Finocchiaro, supra note 1125, at 118.
transferees. Shrink-wrap license agreements are probably asymmetrically valid; they are commonly valid under American law, but are unlikely to be valid under German law.\textsuperscript{1261} Browse-wrap license agreements can either be asymmetrically cross-nationally valid or completely cross-nationally invalid.\textsuperscript{1262} Browse-wrap license agreements have sometimes been upheld under American law, but primarily against competing business actors that had factual or constructive notice of the software license agreements. Courts have declined to uphold browse-wrap license agreements against consumers. Browse-wrap license agreements should not be able to meet the German requirements of notice and opportunity to review, and should therefore probably not be considered valid and enforceable. Thus, browse-wrap license agreements should be considered to be completely cross-nationally invalid against consumers, and perhaps asymmetrically valid against business actors.

Even if software is distributed without any assent mechanism, for example, click-wrap, the agreement might still be formed, and provisions incorporated, if the minimum requirements for contract formation under German and American law are met.\textsuperscript{1263}

To summarize, there are clear similarities between German and American law regarding formal requirements for contract formation, but in practice, software license agreement formation shows that there are clear differences between German and American law. Especially regarding shrink-wrap and browse-wrap license agreements. However, such differences can be overcome by avoiding assent mechanisms that are likely to be asymmetrically valid. In practice, timing of disclosure is likely to be a problem for transferors under German law. Thus, transferors should focus on giving disclosure prior to the conclusion of the transfer.

### 4.3 Software License Agreement Modification

A transferor might sometimes wish to modify the software license agreement after the assent to the initial agreement. Different kinds of modifications might become relevant to different agreements. Some agreements include

\textsuperscript{1261} It should be noted that there are many different variations on shrink-wrap, but this applies if the terms are not found on the box and only inside the box.

\textsuperscript{1262} There are also many variations on browse-wrap license agreements. Some variations are quite similar to web-wrap license agreements and can be upheld. However, “pure” browse-wrap license agreements often lack an accept button, a clear link to the software license agreement, and becomes effective before the transferee reads the software license agreement.

\textsuperscript{1263} BGB § 305(2) (Ger.); see Ravicher, supra note 1153, at 52, 82.
open price terms, which allow the price to be settled after the conclusion of the agreements. Such provisions are likely to be acceptable under both German and American law.\footnote{1264} For software license agreements, modifications to negative, positive, procedural, or liability provisions are more likely.

Modification might raise different issues and questions. For example if: (a) The transferee is shown two contracts during the software transaction process, and the latter, final confirmation includes more provisions than the first version; or (b) the transferor sends the transferee a confirmation e-mail that contains additional provisions.\footnote{1265} Such practices should be avoided since the result is likely a failure to meet the requirements for notice and time to review the provisions.

To simplify modification, some transferors want an opportunity to unilaterally modify software license agreements and thus include this kind of provision:

We reserve the right to change this Site and these terms and conditions at any time.\footnote{1266}

Such provisions, sometimes known as unilateral amendment clauses, are not uncommon in web services, web applications, or services that are adjacent to local client software.\footnote{1267} Such provisions raise the question of when transferees will become bound by modified software license agreements.\footnote{1268} That is, may a transferor unilaterally change its terms, or is a bilateral act required?

United States

Nimmer argues that provisions that allow one party to modify an agreement without the consent of the other party are enforceable under § 2-311 of the UCC.\footnote{1269} However, this statutory right is arguably meant to allow gap fill-


\footnote{1267}{This kind of provision can also be found in agreements for online communities, consumer agreements for credit cards and utilities, and bank account agreements for consumers and business actors. See Peter A. Alces & Michael M. Greenfield, \textit{They Can Do What!? Limitations on the Use of Change-Of-Terms Clauses}, 26 Ga. St. U. L. Rev. 1099, 1001–1006 (2010).}


\footnote{1269}{See Nimmer, \textit{supra} note 1224, at § 13:61.}
The UCC contains additional possibilities to gap filling and modification, but § 2-209, which allows modification without independent consideration, requires modifications “to be sought in good faith.” Thus, not all modifications are likely to be valid. Additionally, there is the question of UCC’s applicability. Some scholars have analyzed modification clauses through the UCC, based on the argument that the UCC is applicable to other situations by analogy. As seen, the UCC should probably not generally be applicable to software transfers post Vernor, if the Vernor requirements are met, but it might be possible that a court would apply the UCC by analogy. If common law contract law is applied, modifications must not: (1) Relate to a entirely unrelated subject matter than the main contract; (2) have an objective to punish a breacher; (3) be unconscionable; and (4) fail to observe the requirement of good faith.

According to Nimmer, most of these modifications clauses have been upheld when fair notice have been given. However, there are several examples when such provisions have not been enforced.

In *Douglas v. US Dist. Court for Cent. Dist. Cal.*, the Ninth Circuit examined whether posting a revised agreement on a website was sufficient to change the terms between the parties. The revised contract included *inter alia* a class action waiver and an arbitration clause. The court said that the consumer had no reason to look for modifications to the agreement, and was not bound by the revised contract. Existing parties are not obliged to periodically look for changes to an agreement. A party cannot change a contract unilaterally; consent to the revised terms is necessary. Even if the consumer had continued to use the service, it would not be considered a binding assent, since no notice had been received. The arbitration clause would not have been

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1271 *See* UCC §§ 2-207, 2-209, 2-305–306 (Westlaw through September 2013).
1273 *Id.* at 1109–1110.
1274 *See supra* section 3.1.2.
1278 495 F.3d 1062 (9th Cir. 2007), *cert. denied*, 128 S.Ct. 1472 (2008).
binding even if the consumer received notice by mail. Other courts have also refused to enforce unilateral amendments to arbitration clauses.

In *Mattingly v. Hughes Electronics Corp.*, the court examined a revised agreement containing an arbitration clause that had been mailed to the plaintiff. The original agreement had stated that “if any changes are made, [DIRECTV] will send [the customer] a written notice describing the change and its effective date.” The court said that “[m]erely sending [the consumer] a new customer agreement, without identifying in any manner the subject matter, substance, or location of that change, cannot reasonably be characterized as ‘sending a written notice describing the change.’” The original agreement created a higher notice threshold, which the defendant failed to meet. The plaintiff was therefore not bound by the agreement. The court concluded that, in order to bind the plaintiff, the defendant should have sent “a notice clearly telling its customers that the new customer agreement featured a new arbitration clause.”

However, in *Boomer v. AT&T Corp.*, the Seventh Circuit found that a consumer was bound by a revised contract. The revised contract included an arbitration clause and a class action waiver. The consumer did “not contend that he did not receive the mailing-just that he [did] not remember receiving it.” The court said that “[w]here a letter is properly addressed and mailed, there is ‘a presumption that it reached its destination in usual time and was actually received by the person to whom it was addressed.’” The court presumed that the consumer received the notice, and had assented to the terms since the continued to pay for the service.

If this kind of unilateral modification provision is not enforceable, ordinary rules for contract formation applies. Thus, it would then be necessary to find consideration in the modified agreement. It is possible that consider-

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1280 Douglas v. US Dist. Court for Cent. Dist. Cal., 495 F.3d 1062, 1066–1068 (9th Cir. 2007); Badie v. Bank of America, 79 Cal.Rptr.2d 273, 289–291 (Cal. Ct. App. 1998). See also Ting v. AT&T, 342 F.3d 191, 1149, 1152 (9th Cir. 2003); Wilson, supra note 1268, at 500–503 (Regarding differences between new and existing customers and sufficient notice.).


1284 309 F.3d 404 (7th Cir. 2002).

1285 *Boomer v. AT&T Corp.*, 309 F.3d 404, 415, fn. 5 (7th Cir. 2002).

ation can be found if the party modifying a contract will thereby promise to continue perform under a contract that the party otherwise could terminate.\textsuperscript{1287} And arguably also if the transferor delivers a software update with an improved version of the software in return for a new software license agreement. Otherwise, if consideration cannot be found, enforcing modifications might cause difficulties.

Germany

For the kind of modifications relevant to software license agreements, this question is less complicated under German law. Open price terms may be acceptable, but this kind of substantive modification requires the consent of both parties.\textsuperscript{1288} Thus, it is not possible for transferors to enforce this kind of modification clause against consumers and unilaterally modify software license agreements. This should also apply under other European Union Member States’ laws.\textsuperscript{1289} This means that the offer and acceptance process must be repeated.\textsuperscript{1290} In practice, this can be solved with a software update that requires the acceptance of a new software license agreement.

Comparison

Certain forms of contract modifications might be acceptable under German and American law, such as open price terms. But for modifications relevant to software license agreements, this might be more problematic. Granted, it is sometimes possible to enforce a modification clause under American law. But if such clauses are not enforceable, there will be problems with consideration, and the contract becomes illusory. And as we have seen, there are many examples where such clauses have been unenforceable. Thus, it is far from likely that such provisions will be enforceable under American law. Additionally, they will not be valid from a German and European Union perspective.

\textsuperscript{1287} Boomer v. AT & T Corp., 309 F.3d 404 (7th Cir. 2002); Nimmer, supra note 1224, at § 13:61, fn. 6.
\textsuperscript{1288} BGB § 311 (Ger.). See also Youngs, supra note 1072, at 537.
\textsuperscript{1289} See Council Directive 93/13 on unfair terms in consumer contracts, 1993 O.J. (L 95) 29 (EC), Annex, at letter 1(j) (Unilateral modifications of consumer contracts are considered unfair under the European Union Unfair Terms Directive. But for contracts of indeterminate duration, a seller may reserve the right to unilaterally change the contract if: (1) The seller must “inform the consumer with reasonable notice”; and (2) “the consumer is free to dissolve the contract.” See Id, at Annex, at letter 2(b).).
\textsuperscript{1290} Alternatively, the transferor must give the transferee reasonable notice and the option to terminate the agreement. See Id. at Annex, at letter 2(b).)
4 Software License Agreement Formation

either, since alteration requires consent of both parties. Thus, modification clauses, or unilateral amendment clauses, should be avoided.

Modification clauses are arguably also unnecessary in the online world of software. The rationale for modification clauses is different in the offline world, for example, regarding credit card and telephone contracts, where undertakings wish to change provisions for many customers without sending out new paper contracts. In the online world, it is relatively simple to repeat the whole contract formation process with a new web-wrap that the transferee has to accept in order to continue using a service, or a new click-wrap license agreement when the software is updated. Thus, it is arguably unnecessary to use modification clauses in this context.

If no web-wrap or browse-wrap mechanism is used, changes can become effective if there is sufficient notice and an act that constitutes acceptance, but an assent mechanism is preferable, since it will remove uncertainty regarding notice.

4.4 Some Potential Problems

4.4.1 Software License Agreements and Language Barriers

Most major transferors are found in English-speaking countries, and transferors in English-speaking countries commonly want to use their agreements in English cross-nationally. This raises question when transferees are not native English speakers, such as in Germany.

From a German perspective, the question is whether provisions in English meet the requirement of giving the transferee a reasonable opportunity to review the provisions, so that provisions become incorporated into the agreement. If the transferor is a commercial software company, this is not a

1291 Cf. Blizzard, StarCraft II End User License Agreement: European Union Version, Section 15 (last updated Feb. 11, 2013) (“Blizzard will post notification of any such changes to this Agreement on the website located at www.battle.net and will post any revised version of this Agreement in this location, and may provide other notice which may include by email, postal mail or pop-up screen. If any future changes to this Agreement are unacceptable to you or cause you to no longer be in compliance with this Agreement, you may cease to use the Game and terminate this Agreement … With the notification, Blizzard will remind you that your continued use after the expiration of one (1) month following the notification means that you accept any and all changes.”).

1292 See supra section 1.4.3 (Regarding data on transferors.).

1293 See Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(v), recital 137.

1294 BGB § 305(2)(2) (Ger.); Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(v),
problem: Provisions in English will become incorporated. But according to doctrine, it cannot be assumed that a German consumer can understand a longer text in English. And even if a transferee in a particular case can understand the text, the provisions do not form part of the agreement. Thus, it is probably not sufficient with provisions only written in English for German consumers. Doctrine therefore recommends software license agreements written in German for consumer transferees.

From an American perspective, language barriers could also raise issues against native Spanish speakers. However, American courts have said that being unable to read an agreement does not void the agreement. Contracts have been upheld against blind or illiterates and against people ignorant of the English language as a result of the objective contract theory. Thus, language barriers should not create any problems under American law.

Thus, transferors must translate their software license agreements to German in order to ensure incorporation, at least against consumers. This is something that at least larger undertakings do, but it might be a burden to minor undertakings. If the translation requirement would also apply in other countries, this could be a major problem for realizing the single software market. At least certain legal systems, such as Mexico and Poland,
will require agreements written in the language of the legal system for agreements performed or concluded in the legal system. Few transferors have the resources to translate their software license agreements into more than a few key languages and markets. Thus, if this requirement would be common, it would impede the realization of a completely global single software market, and transferors would likely focus on key markets.

4.4.2 Software License Agreement Length

There might be issues with incorporation if screen size is limited. However, the German consumer association Verbraucherzentrale Bundesverband (vzbv) argues that software license agreements for software distribution channels are already too long, and has sent warning letters to platform owners. The vzbv highlighted the iTunes software license agreement as an example. It was 21 A4-pages long, almost without numbering, and written in 9 pt. size. The potential consequences of this complaint are uncertain, but it is clear that consumer associations and other associations are increasingly eyeing transferors. The current explosion of mobile applications and software distribution channels is probably an important reason behind this surging interest from consumer associations.

4.4.3 Invalid Provisions and Severability

Assume that a software license agreement is formed, and its provisions are incorporated. If one provision fails to become incorporated, or becomes invalid, a court generally has three options: (1) Rewrite a provision; (2) declare the entire contract unenforceable; or (3) apply the contract without the provision (sever the provision). The last option is generally the least problematic.
Both American and German law follow this approach.\textsuperscript{1307} Courts generally try to sever a provision when it is the best option.\textsuperscript{1308}

Under American law, a provision can only be severed as long as the unenforceable provision is not “an essential part of the agreed exchange.”\textsuperscript{1309} Whether a provision is essential depends on the parties’ intent, that is to say: Whether the parties would have made the contract without the provision.\textsuperscript{1310} California contract law states that “[w]here a contract has several distinct objects, of which one at least is lawful, and one at least is unlawful, in whole or in part, the contract is void as to the latter and valid as to the rest.”\textsuperscript{1311} However, if “a contract has but a single object, and such object is unlawful, whether in whole or in part, or wholly impossible of performance, or so vaguely expressed as to be wholly unascertainable, the entire contract is void.”\textsuperscript{1312} The examination of the purpose, or purposes, of the contract, and whether the illegality is central to the main purpose thus becomes important.\textsuperscript{1313} In Armendariz v. Foundation Health Psychcare Services, Inc.,\textsuperscript{1314} the court said that “courts will generally sever illegal provisions and enforce a contract when nonenforcement will lead to an undeserved benefit or detriment to one of the parties that would not further the interests of justice.” But the agreement contained multiple unlawful provisions, and striking or restricting a specific provision could not remove “the unconscionable taint”; the agreement had in effect to be reformed with additional terms. Thus, the court could not enforce the contract.\textsuperscript{1315}

\textsuperscript{1307} See Restatement (Second) of Contracts § 184 (1981); BGB § 306 (Ger.). See also Säcker & Rixecker, supra note 1114, at Buch 2. Abschnitt 2. § 306. II, recital 7–9.
\textsuperscript{1308} See Armendariz v. Foundation Health Psychcare Services, Inc., 99 Cal.Rptr.2d 745, 774 (Cal. 2000); MKB Management, Inc. v. Melikian, 184 Cal.App.4th 796, 803–804 (2010) (The two major reasons to enforce the remainder of a contract is to “prevent parties from gaining undeserved benefit or suffering undeserved detriment as a result of voiding the entire agreement—particularly when there has been full or partial performance of the contract,” and to conserve a contractual relationship. Courts try to examine whether “the interests of justice … would be furthered” if a provision is severed.).
\textsuperscript{1309} Restatement (Second) of Contracts § 184(1) (1981).
\textsuperscript{1310} See Movsesian, supra note 1306, at 48.
\textsuperscript{1311} Cal. Civ. Code § 1599 (West, Westlaw through 2013).
\textsuperscript{1312} Id. at § 1598.
\textsuperscript{1314} 99 Cal.Rptr.2d 745 (Cal. 2000).
\textsuperscript{1315} Armendariz v. Foundation Health Psychcare Services, Inc., 99 Cal.Rptr.2d 745, 774–777 (Cal. 2000).
If unenforceability of a provision leads to gaps, German law allows statutory provisions to fill the gaps.\textsuperscript{1316} This means that law will fill the gaps of invalid contractual provisions. Not new contractual provisions that falls just below the unfairness threshold, not even between business actors.\textsuperscript{1317} However, unenforceability of a provision does not automatically lead to gaps,\textsuperscript{1318} and this exception is seldom likely to become applicable to software license agreements. But if enforcing the contract would create unreasonable hardships for one party, even if default statutory rules were inserted, the agreement will become unenforceable.\textsuperscript{1319} For example, in *GRUR-RR* 2004, 350, the court noted that if Section 4 or 3 of the GNU GPL version 2 would be invalid, the open development of the software, which is a fundamental principle of open source, would be at risk. In that situation, the entire contract would become invalid.\textsuperscript{1320} In *CR* 2006, 729,\textsuperscript{1321} the court came to the same conclusion regarding Section 2 of the GNU GPL version 2.\textsuperscript{1322} If a German court finds that a contract violates public policy, it is void.\textsuperscript{1323} A contract will also be void if it exploits a transferee’s “predicament, inexperience, lack of sound judgement or considerable weakness of will,” and the transferor is therefore promised or granted clearly disproportionate economic advantages.\textsuperscript{1324} Thus, a software license agreement will often continue to be enforceable, even if a provision becomes unenforceable, unless that provision is an integral part of the agreement.

\textsuperscript{1316} BGB § 306(2) (Ger.). *See also* Markesinis, Unberath & Johnston, supra note 1063, at 179–180.

\textsuperscript{1317} *See* BGH May 17, 1982, NJW 1982, 2309 (Ger.); BGH Nov. 3, 1999, NJW 2000, 1110 (Ger.). *See also* Markesinis, Unberath & Johnston, supra note 1063, at 179–180.

\textsuperscript{1318} *See also* Säcker & Rixecker, supra note 1114, at Buch 2. Abschnitt 2. § 306. III. 2, recital 11 (For example, if a provision in a standard-form agreement for sale of a coffee machine stipulated that the customer must also buy coffee or coffee filters, and that provision is unenforceable, there is no gap in the agreement.).

\textsuperscript{1319} BGB § 306(3) (Ger.).

\textsuperscript{1320} LG München I May 19, 2004, GRUR-RR 2004, 350 (Ger.).

\textsuperscript{1321} LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).

\textsuperscript{1322} *Id.* at para. 95.

\textsuperscript{1323} BGB § 138(1) (Ger.).

\textsuperscript{1324} *Id.* at § 138(2) (Translation by the Langenscheidt Translation Service.). *See also* Qi Zhou, *An Economic Perspective on Legal Remedies for Unconscionable Contracts*, 6 Eur. Rev. Cont. L. 25, 26 (2010).
Severability and Non-Severability Clauses

Even though the principle of severability applies to both German and American law, transferors sometimes want to hedge themselves by including severability clauses, to ensure that the remainder to the contract stays in force. Transferors are sometimes advised to use such clauses.\textsuperscript{1325}

Some severability clauses work as backup to other contractual provisions, and make references to default statutory rules. Such provisions often state that a specific provision or all provisions apply “except and only to the extent any foregoing restriction is prohibited by applicable law,”\textsuperscript{1326} or that liability is excluded to the extent permitted by law.\textsuperscript{1327}

Both German and American law will generally enforce the remainder of a contract if a provision becomes unenforceable. Thus, the above severability clauses are arguably only interesting if they can make an otherwise unenforceable contract enforceable. However, severability clauses can be problematic under German law. Severability clauses working as a backup to other contractual provisions may affect the incorporation of the “main” contractual provision. Severability clauses (\textit{Salvatorische Klauseln}) stating that provisions only apply to the extent permitted by law under German law. Such clauses fail to meet the requirements of BGB § 305(2), and are thus not incorporated, since they violate the principle of transparency \textit{[Das Transparenzgebot]}. A transferee cannot be expected to find the relevant provisions, or if the relevant legal provisions are found, to assess the clause, due to the legal technical nature of the legal provisions. A transferor cannot expect that carelessly worded provisions are going to be clarified by courts.\textsuperscript{1328} This should also apply to clauses that state that they do not apply if such restrictions are not permitted by law. However, there is arguably a small practical difference between incorporation failure and substantial invalidity due to conflict with mandatory law.

Some severability clauses state that the hardship exemption for severability does not apply. For example:

\textsuperscript{1325} See Rebecca K. Lively, \textit{Microsoft Windows Vista: The Beginning or the End of End-User License Agreements as We Know Them?}, 39 St. Mary’s L.J. 339, 368 (2007) (“While it is possible that the absence of a severability clause is not a death knell for an entire contract when one term is found to be unconscionable, choosing not to include a severability clause is certainly a risky proposition when a company wishes to preserve the individual terms of the contract.”).

\textsuperscript{1326} See Apple, \textit{Software License Agreement for OS X Mavericks [10.9]}, Section 2(L) (2013).

\textsuperscript{1327} See SÄCKER & RIXECKER, supra note 1114, at Buch 2. Abschnitt 2. § 305. VI. 3(f), recital 75.

\textsuperscript{1328} See \textit{Id.} at Buch 2. Abschnitt 2. § 305. VI. 3(f), recital 73–75; Buch 2. Abschnitt 2. § 306. III. 6, recital 30.
4. Software License Agreement Formation

If any part of this agreement is found void and unenforceable, it will not affect the validity of the balance of this agreement, which will remain valid and enforceable according to its terms.\(^{1329}\)

Generally, it is more likely that unenforceability of a provision causes hardship for a transferor\(^{1330}\) than for a transferee. In fact, it is likely that unenforceability of a provision is advantageous for a transferee, unless the failure of several clauses causes uncertainty about rights and obligations between the parties.\(^{1331}\) Thus, it is unlikely that a transferee would like to challenge this kind of clause under German law. But generally, removing the hardship exemption creates an unreasonable disadvantage to the transferee,\(^{1332}\) and could be ineffective.

A related kind of clause causes the opposite of severability, namely that the entire agreement should be ineffective if one provision would be ineffective. Like severability clauses, non-severability clauses are not valid under German law. The principle of severability in BGB § 306(1) is mandatory. The parties cannot decide with standard-term provisions that the entire contract or certain other provisions should be ineffective in the event of one provision being ineffective.\(^{1333}\) Thus, to summarize, severability or non-severability clauses are not especially useful under German law, and should be avoided in order to achieve cross-national validity.

4.5 Summary and Conclusions

We have already discovered some potential cross-national validity issues. Basic issues, such as the existence of sufficiently definite offers should not be a problem. The requirement for consideration under American law has caused a lot of concern for certain software license agreements. The problem is software transfers when transferees do not compensate transferors with money. However, the requirement of consideration should be met if a transferee gives a transferor something of value in exchange. Software that collects personal data from a transferee should meet this requirement. This requirement should also be met if the software license agreement requires the transferee to grant back source code of modifications. The bar is almost on the ground. Transferors have been argued to benefit by generating market share or improving their

\(^{1331}\) See *Id.* at Buch 2. Abschnitt 2. § 306. IV. 2, recital 33.
\(^{1332}\) BGB § 307 (Ger.).
reputation by providing software free of charge.\textsuperscript{1334} Transferors have also been argued to benefit from providing software free of charge, since transferors may receive suggestions for improvements from transferees, leading to improvements in the software.\textsuperscript{1335} Thus, consideration should not be an issue for software license agreement validity.\textsuperscript{1336}

Much of the scholarly and judicial discussion has focused on assent mechanisms and the existence of assent. This is quite understandable, since these assent mechanisms distinguish software license agreements from other standard-terms agreements. However, as seen there are other potential issues for cross-national validity as well. These include: (1) Notice of provisions; (2) time of disclosure; (3) language in software license agreements used against consumers; (4) length of software license agreements; (5) issues related to modification of software license agreements; and (6) issues related to severability of software license agreements.

If we begin with assent mechanisms, we have seen that most software license agreements use some sort of assent mechanism for acceptance. The most common methods are shrink-wrap, click-wrap (web-wrap), and browse-wrap license agreements. The shrink-wrap model is arguably outdated to digital software, but the minimum requirements set forth by \textit{ProCD} is applicable to different methods of assent under American law.\textsuperscript{1337} From a cross-national perspective, click-wrap and web-wrap mechanisms are preferable. Shrink-wrap and browse-wrap models are not likely to meet German requirements for contract formation. But a modified version of shrink-wrap might be valid if: (1) There is a notice stating that the transferee has to register online and agree to a software license agreement, not that the transferee becomes bound by tearing the plastic; and (2) the software license agreement is also available online and not only inside the box.\textsuperscript{1338} Browse-wrap may sometimes be valid against American transferees, but browse-wrap is unlikely to be valid against consumers. Shrink-wrap as a model is becoming increasingly irrelevant when software is distributed digitally,\textsuperscript{1339} but legal evaluation of shrink-wrap might

\textsuperscript{1334} \textit{See} Jacobsen v. Katzer, 535 F.3d 1373, 1379 (Fed. Cir. 2008).
\textsuperscript{1335} \textit{Planetary Motion, Inc. v. Techsplosion, Inc.}, 261 F.3d 1188, 1200 (11th Cir. 2001).
\textsuperscript{1336} \textit{See supra} section 4.1.1.
\textsuperscript{1337} \textit{See ProCD v. Zeidenberg}, 86 F.3d 1447, 1451 (7th Cir. 1996) ("Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable.").
\textsuperscript{1338} \textit{See} LG Hamburg Sep. 28, 2007, 324 O 871/06 ("Half-Life 2") (Ger.).
\textsuperscript{1339} However, a model where physically distributed software merely acts as a “ticket” for an online service might still be relevant. \textit{Cf.} BGH Feb. 11, 2010, NJW 2010, 2661 ("Steam") (Ger.) (On the validity of this model.).
still be relevant if no assent mechanism is used, since shrink-wrap creates minimum requirements for acceptance under American law. However, in order to be cross-nationally valid, the modified shrink-wrap model described above must be used.\textsuperscript{1340}

Notice of standard-term provisions might be an issue in certain situations. For example: (1) If a transferee has to scroll repeatedly vertically or horizontally to read the software license agreement; (2) if there is a risk that a web-wrap is blocked by a pop-up blocker;\textsuperscript{1341} or (3) if links to software license agreements are not sufficiently clear. A potentially growing problem for software license agreement formation is the increased usage of “post-PC” devices. When transferees enter into software license agreements on such devices, there might be problems associated with insufficient notice.\textsuperscript{1342}

Timing of disclosure might also be a problem.\textsuperscript{1343} To be cross-nationally valid, the software license agreements must be available prior to the conclusion of the agreement. When using payment forms, the software license agreement should be disclosed before the final acceptance.

If the transferee is a consumer, it is probably necessary to translate software license agreements into German in order to incorporate provisions into the agreement under German law.\textsuperscript{1344} If this requirement would apply in other countries as well,\textsuperscript{1345} this could be a major issue for realizing the single software market.

For consumers, the length of software license agreements could be a potential issue. The German consumer association vzbv argues that software license agreements for software distribution channels are too long. The iTunes software license agreement was highlighted as an example of this. It was 21 A4-pages long, almost without numbering, and written in 9 pt. size.\textsuperscript{1346} Whether this example will have any legal consequence is currently uncer-

\textsuperscript{1340} And since that model has only been accepted by one German district court, it is difficult to rely on that ruling.
\textsuperscript{1341} Spindler & Schuster, supra note 1195, at Dritter Teil, Buch 2, Abschnitt 3, 1.2 § 312 c. III., 1(e)(bb), recital 53–54.
\textsuperscript{1342} See Rott, supra note 1196, at 94.
\textsuperscript{1343} Since: (1) It is not legally valid under German law (or under the ALI Principles). See BGB § 305(2)(1) (Ger.); Principles of the Law of Software Contracts § 2.02(c) cmt. c (2009). And (2) delayed disclosure is likely to be a common practice. See Braucher, supra note 1132, at 1806–1807, 1860–1862 (Regarding the incidence of delayed disclosure at the time.).
\textsuperscript{1344} Cf. Schwenzer et al., supra note 1303, at 154 (Regarding language requirements in Mexican and Polish law for agreements performed or concluded in these legal systems.).
\textsuperscript{1345} Verbraucherzentrale Bundesverband (vzbv), supra note 1305.
tain. However, transferors have eyes on them regarding this, and software license agreement length might thus be something that must be taken into account.\textsuperscript{1347}

Another problem concerns modification of software license agreements.\textsuperscript{1348} Some transferors attempt to use modification clauses, which allow unilateral modifications. This might seem as a simple solution to avoid repeating the contract formation process. However, this solution is likely to be problematic against consumers under both German and American law. The preferable solution is instead to issue a new click-wrap or web-wrap license agreement, for example in conjunction with a software update, or for services when the transferee logs in the next time.

If one provision is invalid, it is usually severed, and the remainder of the software license agreement is enforced. Only in exceptional situations will the entire software license agreement become unenforceable.\textsuperscript{1349} Some argue that transferors should include severability clauses.\textsuperscript{1350} However, this might not always be a good option on a cross-national level. First, the main rule of severability is mandatory and will be applied even without severability clauses. Thus, they might be unnecessary, but could help bury more important provisions. Second, certain severability clauses can affect the validity of other provisions under German law. Severability clauses in software license agreement that states that contractual provisions extend “to the extent permitted by law” means that the entire contractual provision fails to meet the requirement of transparency under German law, and does not therefore become incorporated.\textsuperscript{1351} Thus, severability clauses can be problematic from a cross-national perspective.

Finally, the requirements for consumers and business actors are clearly different. Many of the above problems do not apply to business actors, only to consumers. However, many programs, and thus also software license agreements, are aimed at both consumers and business actors. Consumer technology and software is increasingly being used in business settings. Policies such as “Bring your own device” (BYOD) increase such tendencies. In many situations, the distinction between consumer and professional software is becoming increasingly unclear. This might give consumer requirements a certain

\textsuperscript{1347} See supra section 4.4.2.
\textsuperscript{1348} See supra section 4.3.
\textsuperscript{1349} See supra section 4.4.3.
\textsuperscript{1350} See Lively, supra note 1325, at 368.
\textsuperscript{1351} See Säcker & Rixecker, supra note 1114, at Buch 2. Abschnitt 2. § 305. VI. 3(f), recital 73–75; Buch 2. Abschnitt 2. § 306. III. 6, recital 30.
viral effect. If a program is aimed at both consumers and business actors, it is difficult for a transferor to know whether a particular transferee is a consumer or business actor.\textsuperscript{1352} Such transferors must likely use a uniform set of provisions for all transferees. Those provisions must meet requirements for consumers. However, for software that is solely aimed at commercial software companies, it might not be necessary to translate software license agreements into German.\textsuperscript{1353}

\textsuperscript{1352} See Finocchiaro, supra note 1125, at 118.
\textsuperscript{1353} LG München I May 19, 2004, GRUR-RR 2004, 350 (Ger.). See also Leupold & Glossner, supra note 1105, at Teil 1. B. V. 2(v), recital 138.
5 Mandatory Private Law

Software license agreements are highly dependent on copyright and contract law.\textsuperscript{1354} It is natural to begin with these areas, since individual provisions must first be examined against these two areas of mandatory private law.\textsuperscript{1355} The main difference between German and American law in this respect is the relevant level of law that will be applied.\textsuperscript{1356} Under German law, this will exclusively be federal law. Under American law, both federal law and state law will be applied.

5.1 Mandatory Copyright Law

As seen, copyright law grants transferors certain exclusive rights. Copyright law also contains certain limitations to those exclusive rights, which allow transferees to use the transferred copy in certain ways, without violating the transferor’s exclusive rights.\textsuperscript{1357} These exclusive rights and exceptions form the foundation for software transfers. Software license agreements extend beyond copyright law,\textsuperscript{1358} but software license agreements also frequently modify the exclusive rights and exceptions given by copyright law.\textsuperscript{1359} The latter raises questions regarding contractual freedom over exclusive rights.

5.1.1 Statutory Limitations

Sometimes copyright law includes explicit statutory limitations on contractual freedom, especially regarding use restrictions through contracts.


\textsuperscript{1356} See supra section 1.5.2.

\textsuperscript{1357} See supra section 3.3 (Regarding exclusive rights and exceptions for software.).

\textsuperscript{1358} See supra section 3.3.2.

German copyright law includes a number of such statutory rights that are specific to software, which are transposed from European Union law through the Software Directive. Some of these statutory rights cannot be removed by contracts. These rights include the right to make a backup copy, to study the program and identify underlying ideas by loading, displaying, running, transmitting, or storing the program, or to decompile the software to achieve interoperability. The scope of such limitations will be examined below when examining use restrictions in software license agreements.

American law copyright law also include a number of statutory rights, for example the creation of a backup copy for archival purposes, and reverse engineering for interoperability purposes. Some provisions of the Copyright Act are nonwaivable, for example, Section 203 granting the transferor the right to terminate a transfer. However, such nonwaivable or mandatory rights are exceptions. Unlike German law, there are few clear statutory limitations against contractual freedom and use restrictions. As we will see, American copyright law relies more on copyright doctrines against copyright overuse than German law. These copyright doctrines include: (1) Copyright preemption; (2) copyright misuse; and (3) fair use.

5.1.2 Copyright Preemption

A federal structure might lead to conflicts between laws. In a conflict, the doctrine of preemption will apply. This might affect software license agreements in two ways: (1) If a software license agreement relies on a law that becomes preempted; or (2) if the software license agreement itself can be preempted when replacing copyright law.

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1360 See UrhG § 69 et seq. (Ger.).
1363 UrhG § 69(d)(2) (Ger.).
1364 Id. at § 69(d)(3).
1365 Id. at § 69(e).
1366 17 USC § 117(a).
1367 Id. at § 1201(f)(1).
1369 See supra section 1.5.2 (Introduction to the doctrine.).
United States

In the United States, laws can be preempted both on constitutional and statutory grounds. The doctrine of constitutional preemption, sometimes known as “delicate balance preemption,” is based on the Supremacy Clause, which states that federal law prevails in a conflict with state law. Statutory preemption, or “direct conflict preemption, occurs when a state statute or “state-governed contract” conflict with a federal statute. Different statutes have different rules for statutory preemption. Copyright preemption covers different categories of preemption, both statutory and constitutional, and both are arguably relevant to software license agreements.

Under statutory preemption, federal copyright law will preempt state law, “[w]hen state law touches upon the area of copyright.” Conversely, state laws that protects works outside the subject of copyright, and laws that grants “legal or equitable rights that are not equivalent” to copyright, are not preempted. Constitutional preemption might become applicable.

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1371 U.S. Const. Art. VI.
1372 Kwong, *supra* note 1370, at 359.
1374 See *Lemley, supra* note 1368, at 139–141.
1376 See 17 USC § 301. That is, field preemption.
1378 However, if a work fits “within the subject of copyright,” any state rights claim will be preempted, even if the works fails to meet the requirements for copyright protection. See Baltimore Orioles v. Major League Baseball Players, 805 F.2d 663, 674–677 (7th Cir. 1986). See also Olson, *supra* note 1375, at 93.
1379 17 USC § 301(b)(3). See also Lemley, *supra* note 1368, at 139–141.
if a cause of action “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.” \(^{1381}\)

A relevant question is whether enforcement, under state contract law, of a software license agreement containing provisions conflicting with copyright law could be preempted by federal copyright law under Section 301 of the Copyright Act. \(^{1382}\) Section 301’s legislative history is complicated, \(^{1383}\) but most courts have said that copyright law does not preempt contractual limitations on copyrighted material. \(^{1384}\) Some courts have said that the doctrine of preemption only applies to rights established by law and not to contracts, since law creates rights and obligations against all, but a contract only creates rights and obligations between contracting parties. These courts have therefore said that copyright law should not generally preempt software license agreements. \(^{1385}\) Some courts have specified this principle by stating that a contract, that is, a state law right, will prevail if it adds an extra element beyond reproducing the exclusive rights found in Section 106 of the Copyright Act. \(^{1386}\) This requirement should be met in most situations, since most software license agreements add extra elements beyond the Copyright Act,

\(^{1382}\) See Morris, supra note 1375, at 258; Rice, supra note 1375, at 604; Olson, supra note 1375, at 84–86.  
\(^{1384}\) See, e.g., Bowers v. Baystate Tech., 302 F.3d 1334, 1342 (Fed. Cir. 2002) (“[M]ost courts to examine this issue have found that the Copyright Act does not preempt contractual constraints on copyrighted articles”); Lowry’s Reports, Inc. v. Legg Mason, Inc., 186 F.Supp.2d 592, 594–595 (D. Md. 2002) (“As to the contract claim, the unique terms of the parties' express contract here essentially establishes a private law governing fair use of the copyrighted works inter partes, which makes the claim qualitatively different from a simple copyright case, in which there is no ‘private law’ defining what is and is not fair use of the work. Thus, the nature of the contractual right here asserted is qualitatively different from the bare restrictions imposed by the Copyright Act, and are not therefore preempted by that Act.”). See also Lemley, supra note 1368, at 140 (Stating that it is “generally accepted” that copyright law “does not automatically preempt” contract law. It has to be evaluated on a case-by-case basis whether rights “equivalent” to copyright are created.).  
\(^{1385}\) See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454–1454 (7th Cir. 1996).  
\(^{1386}\) See, e.g., Nat’l Car Rental Sys., Inc. v. Computer Assocs. Intern., Inc., 991 F.2d 426, 431 (8th Cir. 1993); Harper & Row, Publishers, Inc. v. Nation Enters., 723 F.2d 195, 200 (2d Cir. 1983); Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 457–459 (6th Cir. 2001); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630, 638 (8th Cir. 2005). See also Lemley, supra note 1368, at 140.
for example by adding different use restrictions. Contractual preemption of copyright law is mostly theoretical, and federal copyright law should not preempt most software license agreements. However, if contractual provisions conflict with nonwaivable statute provisions, such contractual provisions will be preempted.

It has been argued that use restrictions might give rise to preemption under the Supremacy Clause. The argument is that copyright is a balanced system between authors and the public, and contractual use restrictions would disrupt this balance, thus interfering with federal policy. Constitutional preemption has, for example, been argued to be applicable to provisions in software license agreements circumventing fair use. However, this might also be a theoretical limitation. The room for constitutional preemption is generally limited. And courts have avoided the question in the context

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1387 See SOS, Inc v. Payday, Inc, 886 F.2d 1081, 1092 (9th Cir 1989) (The court said that contract law will only be applied to the “extent such rules do not interfere with federal copyright law or policy.”); Fantastic Fakes, Inc. v. Pickwick Int’l, Inc., 661 F.2d 479, 482–483 (5th Cir. 1981) (“It is possible to hypothesize situations where application of particular state rules of construction would so alter rights granted by the copyright statutes as to invade the scope of copyright law or violate its policies.”).

1388 Even though some scholars disagree. See Morris, supra note 1375, at 258–269 (Arguing that statutory or constitutional preemption should limit contractual deviations from copyright law.).

1389 See Lemley, supra note 1368, at 141.

1390 See Olson, supra note 1375, at 111–132 (Arguing that Supremacy Clause preemption should be applied to software license agreements.); Karjala, supra note 1375, at 533–534; Founds, supra note 1375, at 115–116 (Arguing that Constitutional preemption is much more likely for mass-market adhesion contracts, than for bargained contracts between two parties.).

But cf. Daniel B. Ravicher, Facilitating Collaborative Software Development: The Enforceability of Mass-Market Public Software Licenses, 5 Va. J.L. & Tech 11, at *56 (2000) (Stating that “whether mass-market licenses should be subject to Supremacy Clause preemption independent of § 301(a) preemption is a highly debated issue.”).


1393 Founds, supra note 1375, at 115.

1394 See Goldstein v. California, 412 U.S. 546, 561, 569–570 (1973) (The Court found that when Congress “has left the area unattended, and no reason exists why the State should not be free to act.”). Cf. Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 230–233 (1964); Compco Co. v. Day-Brite Lighting, Inc., 376 U.S. 234, 238–239 (1964) (Unfair competition law was preempted when giving “the equivalent of a monopoly” on unpatentable products.).
of software license agreements. For example, in *ProCD v. Zeidenberg*, the court examined statutory preemption, but not constitutional preemption.

A less theoretical application of constitutional preemption is when a software license agreement relies on a state law that “touches upon the area of copyright.” If the state law becomes preempted, the software license agreement may become invalid. In *Vault Corp. v Quad Software*, the software license agreement included a choice-of-law clause, adopting Louisiana law. The Louisiana Software License Enforcement Act was very favorable for transferors. The software license agreement was far-reaching and the court found that it would only be enforceable if the Louisiana Act were a valid and enforceable statute. However, the Louisiana Act conflicted with the (federal) Copyright Act on several instances and became preempted since it infringed on federal copyright law. Thus, the software license agreement became unenforceable. However, this situation is probably very exceptional.

Thus, preemption might be more difficult to apply to software license agreements than to other intellectual property situations.

Germany

While Germany is also a federation, the Länder has weak substantive lawmaking power compared to the States of the United States. While constitutional copyright preemption is theoretically possible under German law,
and the German Constitution may limit copyright exceptions, any practical application of preemption, such as in *Vault Corp. v Quad Software*, is unrealistic. Granted, if the German implementation of the European Union copyright directives would not be interpreted in the "light of the directives," the CJEU could strike down that interpretation. However, that situation cannot be compared to American copyright preemption. Provisions that deviate from mandatory statutes will be unenforceable, but not through a preemption analysis.

Comparison

Much has been written about software license agreements and copyright preemption. Granted, there is a theoretical possibility of copyright preemption, but in practice, it will only be relevant to two situations: (1) When a software license agreement merely reproduces the exclusive rights found in § 106 of the American Copyright Act, and (2) if a software license agreement relies on a statute that becomes preempted. Both problems can be avoided if a software license agreement adds an extra element, and if transferors avoid the mistake in *Vault*, if a comparable situation would ever arise again.

5.1.3 Copyright Misuse

Some software license agreements extend transferors’ exclusive rights beyond the scope of copyright law. In *Lasercomb America Inc. v. Reynolds*, the court examined a non-compete clause that can illustrate this practice:

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1408 847 F.2d 255 (5th Cir. 1988).

1409 See supra section 1.5.2 (Regarding the relationship between German and European Union law.).

1410 See supra section 5.1.1.


1412 See Vault Corp. v Quaid Software Ltd., 847 F.2d 255, 268–270 (5th Cir. 1988).

1413 911 F.2d 970 (4th Cir. 1990).
Licensee agrees during the term of this agreement that it will not permit or suffer its directors, officers and employees, directly or indirectly, to write, develop, produce or sell computer assisted die making software.1414

Another example is if a software license agreement restricts the use of data available in the public domain, that is, unprotected data.1415 If such contractual provisions or practices fall within the scope of competition law, competition law can catch them.1416 But even if such provisions or practices would fall outside the scope of competition law, it is still possible that they can become invalid under the American copyright misuse doctrine1417 or corresponding German rules.

United States

The copyright misuse doctrine states that copyright owners may not extend their rights beyond the Copyright Act.1418 This applies both to license agreements and other means of “casting the shadow of its virtual monopoly onto other unprotected works,” for example, various forms of tying.1419 The doctrine has been developed by federal courts, based on federal principles, but is only practiced and recognized by certain federal appellate courts in certain jurisdictions.1420 Thus, it is a federal, but not nationwide doctrine. The states of Washington and California are covered by the doctrine,1421 while the State of New York is currently not covered by the doctrine.1422

1414 Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 973 (4th Cir. 1990).
1415 See Assessment Technologies of Wi Llc v. Wiredata Inc., 350 F.3d 640, 646–647 (7th Cir. 2003) (“To try by contract or otherwise to prevent the municipalities from revealing their own data, especially when, as we have seen, the complete data are unavailable anywhere else, might constitute copyright misuse.”).
1416 See infra section 6.
1418 Id. at 978.
1420 See Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990); DSC Communications Corp. v. DGI Technologies, Inc., 81 F.3d 597, 601–602 (5th Cir. 1996); Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 792–795 (5th Cir. 1999); Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 521 (9th Cir. 1997).
1421 Being subjects to the Ninth Circuit’s jurisdiction. See Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 521 (9th Cir. 1997) (The Court upheld the defense in this case.).
1422 Being subject to the Second Circuit’s jurisdiction.
All forms of intellectual property misuse\textsuperscript{1423} derive from the equitable doctrine of “unclean hands,” stating that “any party seeking equitable relief must come to the court with ‘clean hands’.”\textsuperscript{1424} If a plaintiff with “unclean hands” litigates for copyright infringement, the defendant can use the doctrine as a defense.\textsuperscript{1425} Copyright misuse is not recognized by the Copyright Act, and has not been expressly recognized by the Supreme Court either,\textsuperscript{1426} although other courts and commentators have interpreted certain Supreme Court cases as containing traces of copyright misuse,\textsuperscript{1427} such as \textit{United States v. Loew's, Inc.},\textsuperscript{1428} and \textit{United States v. Paramount Pictures, Inc.}\textsuperscript{1429} However, the lack of unambiguous recognition is perhaps a good indication of the Supreme Court’s lack of interest in recognizing the doctrine.\textsuperscript{1430} Three federal appellate courts have adopted and applied the doctrine.\textsuperscript{1431} Other courts have recognized the

\begin{itemize}
\item [\textsuperscript{1425}] If a court has established copyright misuse, the defendant is cleared from the copyright infringement allegations. A defendant that wishes to raise the defense of copyright misuse does not need to be a party to a software license agreement in order to apply the defense. See Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990). However, if the defendant’s hands are also “unclean,” the defendant may be barred from raising the defense of copyright misuse. This applies in the Ninth Circuit’s jurisdiction. See Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 846 (Fed. Cir. 1992). Other jurisdictions, for example the Fifth Circuit, accepts the copyright misuse defense regardless of whether the defendant has clean hands. See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 777 (5th Cir. 1999).
\item [\textsuperscript{1427}] See Judge, supra note 1426, at 910–911; Frischmann & Moylan, supra note 1424, at 882–888.
\item [\textsuperscript{1430}] See Judge, supra note 1426, at 911–912.
\item [\textsuperscript{1431}] See Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 520 (9th Cir. 1997), amended by 133 F.3d 1140 (9th Cir. 1998); Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005); Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 777 (5th Cir. 1999).
\end{itemize}
Mandatory Private Law

doctrine, or adopted the doctrine without applying it. A number of district courts have also addressed copyright misuse in various situations. The patchy jurisdictional scope of the doctrine makes it somewhat unclear and confusing.

Courts have recognized two main approaches to copyright misuse: The first requires a competition law violation, while the second does not. The latter is known as public policy copyright misuse. This approach focuses on whether the copyright holder has used its exclusive right “in a manner violative of the public policy embodied in the grant of a copyright.”

The public policy copyright misuse doctrine has been applied in a number of cases. The non-compete clause from the software license agreement at stake in Lasercomb America Inc. v. Reynolds, described in the introduction of this chapter belongs to this category. In that case, the court found that the language in the relevant section was extremely broad: It withdrew creative abilities from the public, and the duration of the agreement (99 years) could be longer than the copyright protection itself. The level of misuse was considered comparable to earlier recognized examples of patent misuse, and the court extended the patent misuse doctrine to copyright. Although the appellant was not a party to the license agreement, and therefore not injured by the misuse, the copyright misuse doctrine was still an available defense,

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1434 See Ramsey Hanna, Misusing Antitrust: The Search for Functional Copyright Misuse Standards, 46 Stan. L. Rev. 401, 406 (1994). (However, some of these holdings have been reversed on appeal.)
1435 See Frischmann & Moylan, supra note 1424, at 868; Judge, supra note 1426, at 903.
1437 Saturday Evening Post v. Rumbleseat Press, Inc., 816 F.2d 1191, 1200 (7th Cir. 1987).
1438 Practice Mgmt. Info. Corp. v. American Med. Assoc., 121 F.3d 516, 520–521 (9th Cir. 1997); Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 978 (4th Cir. 1990). Cf. Rosemont Enterprises, Inc. v. Random House, Inc., 366 F.2d 303, 311 (2d Cir. 1966) (“It would be contrary to the public interest to permit any man to buy up the copyright to anything written about himself and to use his copyright ownership to restrain others from publishing biographical material concerning him.”).
1439 911 F.2d 970 (4th Cir. 1990).
1440 Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 973 (4th Cir. 1990).
1441 Id. at 979.
1443 Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990).
since the use of copyright was contrary to public policy.\textsuperscript{1444} It is important to notice that the agreement in Lasercomb restrained development of competing products;\textsuperscript{1445} this requirement for copyright misuse has also been transferred to other jurisdictions.\textsuperscript{1446}

In Alcatel USA, Inc. v. DGI Techs,\textsuperscript{1447} the situation was similar to Lasercomb; the software license agreement only allowed the software to be used with certain hardware. The court found this to be copyright misuse, since Alcatel used its copyright to gain intellectual property-like protection over its hardware.\textsuperscript{1448} In Practice Mgmt. Info. Corp. v. Am. Med. Ass'n,\textsuperscript{1449} the software license agreement prohibited transferees from using any competing products, and transferees had to require their agents to use the transferor’s product.\textsuperscript{1450} The Ninth Circuit found that this term gave the transferor a “substantial and unfair advantage over its competitors” and therefore considered it to be copyright misuse.\textsuperscript{1451} In QAD, Inc. v. ALN Associates, Inc.,\textsuperscript{1452} the district court found copyright misuse when the plaintiff tried to enforce rights beyond the scope of its copyright.\textsuperscript{1453} The QAD software was derived from another copyright holder’s software. Thus, QAD did not hold copyright to the original software, and when the company tried to enforce copyright over the derivative software the court found it to be copyright misuse.\textsuperscript{1454} In Assessment Technologies of Wi, Llc v. Wiredata, Inc.,\textsuperscript{1455} the plaintiff-appellee went even further in its protection attempts. The Seventh Circuit described it as an “attempt of a copyright owner to use copyright law to block access to data that not only

\textsuperscript{1444} Id. at 979. See also Morton Salt Co. v. G.S. Suppiger, 314 U.S. 488, 62 S.Ct. 402, 86 L.Ed. 363 (1942); Compton v. Metal Products, Inc., 453 F.2d 38, 44 (4th Cir. 1971); Hensley Equipment Company v. Esco Corporation, 383 F.2d 252, 261 (5th Cir. 1967); Berlenbach v. Anderson and Thompson Ski Co., 329 F.2d 782, 784–785 (9th Cir. 1964).

\textsuperscript{1445} Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 978–979 (4th Cir. 1990).

\textsuperscript{1446} See Triad Sys. Corp. v. Se. Express Co., 64 F.3d 1330, 1337 (9th Cir. 1995); Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1158–1159 (9th Cir. 2011) (“[C]opyright misuse involves restraining development of competing products.”).

\textsuperscript{1447} 166 F.3d 772 (5th Cir. 1999).

\textsuperscript{1448} 121 F.3d 516 (9th Cir. 1997).

\textsuperscript{1449} Id. at 517–518.

\textsuperscript{1450} Id. at 521.


\textsuperscript{1453} Id. at 1270.

\textsuperscript{1454} 350 F.3d 640 (7th Cir. 2003).
are neither copyrightable nor copyrighted, but were not created or obtained by the copyright owner.”

A related doctrine is known as the “merger doctrine,” which can be illustrated by the following case: In *Lexmark International, Inc. v. Static Control Components, Inc.*, two software programs for printers and different toner cartridges developed and sold by the appellant were at stake. The appellant sold two different kinds of cartridges: Normal cartridges, and special discounted cartridges. The snag with the latter category was that only the appellant was able to refill the cartridges. Both cartridges included chips that communicated with the Lexmark software, and the software prevented third-party cartridges or discounted Lexmark cartridges refilled by third parties from being used in the machine. The cartridges were shipped along with a shrink-wrap license agreement. The defendant manufactured cartridges with chips that were able to circumvent the authorization mechanism, thus allowing transferees to use the defendant's cartridges as an alternative. The appellant filed suit and claimed copyright infringement of their Toner Loading Program. However, the court did not consider the appellant software to be copyrightable, based on the merger doctrine, since there were few available meaningful alternatives to the expression of the relevant software.

Under the merger doctrine, the division between non-copyrightable ideas and expressions become “merged,” if an “expression is essential to the statement of [an] idea,” or if “there is only one way or very few ways of expressing the idea.” A closely related doctrine is the “scènes à faire” (“that must be done”)

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1456 Assessment Technologies of Wi, LLC v. Wiredata, Inc., 350 F.3d 640, 641–642, 647 (7th Cir. 2003) (Judge Posner said that the argument for applying the public policy copyright misuse doctrine was to avoid abuse of process. Copyright holders could otherwise use a copyright infringement lawsuit to obtain protection beyond copyright, either through settlement or through outright victory, over parties lacking “resources or legal sophistication to resist effectively.”).

1457 387 F.3d 522 (6th Cir. 2004).

1458 See *Lexmark International, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 563, fn. 10 (6th Cir. 2004) (“This all-new cartridge is sold at a special price subject to a restriction that it may be used only once. Following this initial use, you agree to return the empty cartridge only to Lexmark for remanufacturing and recycling. If you don’t accept these terms, return the unopened package to your point of purchase. A regular price cartridge without these terms is available.”).

1459 *Id.* at 528–529, 537.

1460 *Id.* at 537–545.


doctrines. Under that doctrine, “elements of a program dictated by practical realities” does not obtain copyright protection. Under the merger and “scènes à faire” doctrines, lock-out codes are generally not copyrightable. In *Lexmark*, both parties agreed that it would be “computationally impossible” to modify the software while preserving compatibility. The court did not find the Toner Loading Program to be copyrightable, and the difficulties of independence justified copying of the software.

**Germany**

German competition law can catch copyright misuse that relies on competition law violations. It has been argued that what is known as public policy copyright misuse and the merger doctrine are not caught by copyright law in Europe. However, this ignores the idea of functionalism. The function of the public policy copyright misuse doctrine is to prevent extending exclusive rights beyond the scope of copyright law. The function of the merger doctrine is to avoid granting copyright protection for works that are dictated by practical matters and not by originality. These functions are regulated in different ways in Germany. For the public policy copyright misuse function, German law relies more on statutory limitations, content control under

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1463 Lexmark International, Inc. v. Static Control Components, Inc., 387 F.3d 522, 535 (6th Cir. 2004) (This includes “hardware standards and mechanical specifications, software standards and compatibility requirements, computer manufacturer design standards, target industry practices, and standard computer programming practices.”).

1464 *Id.* at 536.

1465 *See* Simon M. H. Collin, *Dictionary of Computing* 73 (5th ed., Bloomsbury Publishing: London 2004) (Compatibility of software or hardware, by adhering to a standard, allows software and hardware from different manufacturers to work together without modifications.).


1468 *See* Practice Mgmt. Info. Corp. v. American Med. Assoc., 121 F.3d 516, 520–521 (9th Cir. 1997); Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 978 (4th Cir. 1990).

1469 Apostolopoulos, *supra* note 1467, at 604.

1470 *See* *infra* section 1.4.2.

1471 *See* *infra* section 5.1.1.
contract law, general principles, and the fact that German law considers software to be sold and not licensed, which limits transferors’ ability to enforce post-sale restrictions on transferred software. The merger doctrine function is solved by the German copyright protection requirements; software is only presupposed to be copyrightable if it is complex.

Comparison

There is a certain level of overlap between copyright misuse and competition law. Copyright misuse independent from competition law, that is, public policy copyright misuse, can be struck down in certain American jurisdictions. Many courts have interpreted the public policy copyright misuse in Lasercomb narrowly, and primarily focused on copyright misuse from a competition perspective. For example, the Ninth Circuit, with federal appellate jurisdiction over, inter alia, California and Washington, has only upheld the copyright misuse defense once. In order to be applicable, the software license agreement must restrain development of competing products. Thus, the doctrine might have a limited subject matter scope, as well as a limited jurisdictional scope. German law does not have a public policy copyright misuse doctrine, but fulfills the same functions through statutory limitations in copyright law, but also through elements outside copyright law, for example, contract law. Thus, the main difference is between the States of the United States.

1472 See infra section 5.2 (Regarding invalidity under mandatory contract law.).
1473 See supra section 3.1.1. See Martinek, Semler, Habermeier & Flohr, supra note 1355, at 12. § 47. II. 4(b), recital 30.
1475 See Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990); Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 777 (5th Cir. 1999); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516 (9th Cir. 1997). Some other courts have recognized the doctrine. See Assessment Technologies of Wi, LLC v. Wiredata, Inc., 350 F.3d 640, 647 (7th Cir. 2003); Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 846 (Fed. Cir. 1992). One court has adopted the doctrine without applying it. See Video Pipeline, Inc. v. Buena Vista Home Entertainment, Inc., 342 F.3d 191, 203–206 (3d Cir. 2003).
1477 Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1157–1158 (9th Cir. 2011) (“We have thus applied the doctrine sparingly.”). The court upheld the defense in Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 520–521 (9th Cir. 1997).
1478 See Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 978–979 (4th Cir. 1990); Triad Sys. Corp. v. Sc. Express Co., 64 F.3d 1330, 1337 (9th Cir. 1995); Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1158–1159 (9th Cir. 2011).
5.1.4 Fair/Free Use

United States

The fair use doctrine has a long history, but was codified in the 1976 Copyright Act. However, the Supreme Court did not deal with the doctrine until Sony Corp. of America v. Universal City Studios, Inc. in 1984 — in a divided opinion. Later in Campbell v. Acuff-Rose Music, Inc., the Supreme Court consensually dealt with the doctrine, and said that the doctrine “permits [and requires] courts to avoid rigid application of the copyright statute when, on occasion, it would stifle the very creativity which that law is designed to foster.” Similar to the copyright misuse doctrine, the fair use doctrine is “an affirmative defense,” meaning that a defendant can use it as a shield, but not as a sword. According to the doctrine, productive and transformative use is not considered to be copyright infringement. Courts have four enumerated factors to consider: (1) "[T]he purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the
copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.”¹⁴⁹¹ However, this is not “a formula for decision,” but rather “a checklist of things to be considered.”¹⁴⁹²

The first factor requires courts to consider “the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes.”¹⁴⁹³ In *Sony Corp. of America v. Universal City Studios, Inc.*,¹⁴⁹⁴ the Court said that “every commercial use of copyrighted material is presumptively an unfair exploitation of the monopoly privilege that belongs to the owner of the copyright.”¹⁴⁹⁵ In *Harper & Row, Publishers, Inc. v. Nation Enterprises*,¹⁴⁹⁶ the Court said that “[t]he crux of the profit/nonprofit distinction is not whether the sole motive of the use is monetary gain but whether the user stands to profit from exploitation of the copyrighted material without paying the customary price.”¹⁴⁹⁷ In *Campbell v. Acuff-Rose Music, Inc.*,¹⁴⁹⁸ the Supreme Court seemed to have left the presumption in *Sony*, and said, “the commercial or nonprofit educational purpose of a work is only one element of the first factor enquiry.” Thus, non-profit use does not exclude infringement, and commercial use does not exclude fairness.¹⁴⁹⁹ The more transformative a new work is, “the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use.”¹⁵⁰⁰

The second factor requires courts to consider “the nature of the copyrighted work.”¹⁵⁰¹ In *Stewart v. Abend*,¹⁵⁰² the Court said, “[i]n general, fair use is more likely to be found in factual works than in fictional works.”¹⁵⁰³ In *Campbell v. Acuff-Rose Music, Inc.*,¹⁵⁰⁴ the Supreme Court said that the “some works are closer to the core of intended copyright protection than others.”¹⁵⁰⁵ For example, fictional works are considered closer to the core of copyright than

¹⁴⁹¹ 17 USC § 107(1–4); Sega Enterprises, Ltd. v. Accolade, Inc., 977 F.2d 1510, 1521–1522 (9th Cir. 1992) *See also* Halpern et al., *supra* note 1482, at 126–132.
¹⁴⁹² Ty, Inc. v. Publications Intern. Ltd., 292 F.3d 512, 522 (7th Cir. 2002).
¹⁴⁹³ 17 USC § 107(1). *See also* Halpern et al., *supra* note 1482, at 127–129.
¹⁵⁰⁰ *Id.* at 579.
¹⁵⁰¹ 17 USC § 107(2). *See also* Halpern et al., *supra* note 1482, at 129.
factual works,\textsuperscript{1506} as are published works rather than soon-to-be-published works.\textsuperscript{1507}

The third factor requires courts to consider “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.”\textsuperscript{1508} In \textit{Campbell v. Acuff-Rose Music, Inc.},\textsuperscript{1509} the Supreme Court said, “this factor calls for thought not only about the quantity of the materials used, but about their quality and importance, too.”\textsuperscript{1510}

The fourth and final factor requires courts to consider “the effect of the use upon the potential market for or value of the copyrighted work.”\textsuperscript{1511} In \textit{Campbell v. Acuff-Rose Music, Inc.},\textsuperscript{1512} the Supreme Court said that this requires courts to consider not only market harm caused by an action, but also “whether unrestricted and widespread conduct of the sort engaged in by the defendant … would result in a substantially adverse impact on the potential market.”\textsuperscript{1513}

If a software license agreement provision contradicts the fair use doctrine, that provision could become invalid and unenforceable. In \textit{Sega Enterprises, Ltd. v. Accolade, Inc.},\textsuperscript{1514} the Ninth Circuit considered disassembly to be fair use in situations when it was legitimate to seek access to the underlying ideas of functions of a computer program.\textsuperscript{1515} In \textit{Atari Games Corp. v. Nintendo of America Inc.},\textsuperscript{1516} the Federal Circuit considered reverse engineering to be fair use.\textsuperscript{1517} In \textit{DSC Communications Corp. v. Pulse Communications},\textsuperscript{1518} the plaintiff challenged a provision prohibiting reverse engineering with the fair use doctrine. However, the plaintiff in this case had made copies of the software after the plaintiff had understood the underlying ideas and principles of the

\textsuperscript{1508} 17 USC § 107(3). See also Halpern et al., supra note 1482, at 129–130.
\textsuperscript{1509} 510 U.S. 569 (1994).
\textsuperscript{1511} 17 USC § 107(4). See also Halpern et al., supra note 1482, at 130–132.
\textsuperscript{1512} 510 U.S. 569 (1994).
\textsuperscript{1514} 977 F.2d 1510 (9th Cir. 1992).
\textsuperscript{1515} Sega Enterprises, Ltd. v. Accolade, Inc., 977 F.2d 1510, 1520–1528 (9th Cir. 1992).
\textsuperscript{1516} 975 F.2d 832 (Fed. Cir. 1992).
\textsuperscript{1517} Atari Games Corp. v. Nintendo of America Inc., 975 F.2d 832, 844 (Fed. Cir. 1992). However, since 1998, reverse engineering for interoperability purposes is a statutory right. See 17 USC § 1201(f)(1).
\textsuperscript{1518} 170 F.3d 1354 (Fed. Cir. 1999).
software. The court therefore rejected the fair use defense.\textsuperscript{1519} In \textit{Wall Data Inc. v. Los Angeles County Sheriff's Dept.,}\textsuperscript{1520} the Ninth Circuit examined a situation where the Sheriff's Department had copied the software copies onto a network environment and installed the software on more computers than the software license agreement allowed.\textsuperscript{1521} The network environment limited the number of simultaneous users to the number that the software license agreement allowed. Yet, the Ninth Circuit did not consider this to be fair use, even if the defendant was the owner of the software copies, since the method of copying the software to a network environment "was not an essential step, but a matter of convenience."\textsuperscript{1522}

The ALI Principles notes that if a provision in a software license agreement would limit fair (or free) use, that provision could become unenforceable.\textsuperscript{1523}

\textbf{Germany}

As with the copyright misuse doctrine, German law solves the same function with other, and arguably less complex, means. Both German and American law attempts to create a balance between rights holders and the public, and allow the latter to use copyrighted material in a "reasonable manner."\textsuperscript{1524} To achieve this, German copyright law includes a number of limitations that allow a certain degree of "free use."\textsuperscript{1525} Many of these "free uses" are regulated in the statute,\textsuperscript{1526} and is less dependent on flexible, but complex, evaluations found in American copyright law. These German "free uses," or limitations of the copyright holder's exclusive rights, can be divided into a number of general limitations on exclusive rights, such as making copies for private or

\begin{itemize}
  \item \textsuperscript{1519} DSC Communications Corp. v. Pulse Communications, Inc., 170 F.3d 1354, 1363 (Fed. Cir. 1999). \textit{See also infra} section 8.1.1 (Regarding provisions prohibiting reverse engineering).
  \item \textsuperscript{1520} 447 F.3d 769 (9th Cir. 2006).
  \item \textsuperscript{1521} The Sheriff's Department had created hard drive images with the plaintiff's software and other software, for example, operating system, and installed this hard drive image to every computer in the network environment.
  \item \textsuperscript{1522} Wall Data Inc. v. Los Angeles County Sheriff's Dept., 447 F.3d 769, 773–774, 785–786 (9th Cir. 2006) (The transferee was not considered to be an owner to the copies either, due to the software license agreement.). \textit{See also} Christopher B. Yeb, \textit{Wall Data Inc. v. Los Angeles County Sheriff's Department: License versus Sale at the Crossroads of Contract and Copyright}, 22 Berkeley Tech. L.J. 355, 368–372 (2007).
  \item \textsuperscript{1523} \textit{See Principles of the Law of Software Contracts} § 1.10 cmt. d. (2009).
  \item \textsuperscript{1525} \textit{See supra} section 3.3.1; \textit{See Postel, supra note} 1524, at 143.
  \item \textsuperscript{1526} \textit{See supra} section 5.1.1.
\end{itemize}
personal use,\textsuperscript{1527} and a number of specialized limitations for software, which creates a number of inviolable “free use” rights.\textsuperscript{1528} Thus, German copyright law fulfills many of the same functions with slightly different means.

Comparison

The fair use doctrine has a long history, but it has not always been well received, and it has even been called “the most troublesome in the whole law of copyright.”\textsuperscript{1529} As seen, it has a very open-ended nature, which could make it applicable to a number of different situations. However, the open-ended nature with four factors makes it less predictable than the German statutory “free use.” Also, since the fair use doctrine is an affirmative defense, it is not possible to know in advance if a practice constitutes fair use.\textsuperscript{1530} Thus, the doctrine is arguably more flexible but less predictable than the German counterpart.

5.1.5 **Comparison of Limitations to Copyright Overuse**

There are at least three major differences between the United States and Germany in regard to limitations to copyright overuse: (1) Whether these limitations can be used as a shield or a sword; (2) flexibility vs. predictability; and (3) scope of limitations.

The first may be of major practical importance. The three American copyright doctrines are defenses to copyright infringements.\textsuperscript{1531} Thus, they can be used as a shield, but not as a sword against copyright overuse. This might be important, since these doctrines cannot be used to directly challenge a software license agreement. A software license agreement can only become invalidated under these doctrines if the transferee is sued for copyright infringement by the transferor and the transferee manages to use either of these doctrines as a defense against the alleged copyright infringement. This procedure will arguably make it more difficult to challenge a software license agreement, if challenging a software license agreement would be the primary aim of the liti-
Statutory limitations, on the other hand, have no such limitations on when they can be invoked, and can be used as a sword.

The other obvious difference is flexibility vs. predictability. These copyright doctrines are flexible, while statutory limitations are not. While flexibility has many advantages, the price is a lower level of predictability. It is more difficult to know what courts will accept when relying on a flexible doctrine compared to statutory limitations. As noted by Tadlock about the fair use doctrine, such doctrines “are inappropriate as blanket protections against infringement suits” due to their open ended nature. Statutory limitations are less flexible, but more predictable, and thus easier to rely on.

A third difference is the scope of these limitations. Statutory limitations do not have a very wide scope, but they are clearly defined. The copyright doctrines above have a limited scope in practice. Copyright preemption is mostly theoretical, copyright misuse has a limited subject matter and jurisdictional scope in practice, and the fair use doctrine might also be difficult to apply in practice.

Copyright law is considered to be fairly harmonized. But international copyright law only sets minimum standards, and as seen, there are differences between legal systems. Germany and the United States traditionally also belong to different copyright cultures. As seen, copyright law is not always

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1532 See id. at 639–640 (“Like fair use or copyright misuse, collateral estoppel requires legal pleading and answering infringement charges. Such affirmative defenses do not directly redress the copyright imbalance between large media copyright holders and consumers. After all, the assurance of a successful legal strategy does not necessarily make a user less apprehensive about making questionable use of protected material. The time and expense involved in defending a copyright case could still be a powerful incentive to not risk stepping over the infringement line. For this reason, a bright-line agency or statutory solution remains optimal.”).

1533 See William F. Patry & Richard A. Posner, Fair Use and Statutory Reform in the Wake of Eldred, 92 Cal. L. Rev. 1639, 1645 (2004) (Patry & Posner notes that the fair use doctrine “like most judge-made doctrines, … is flexible. Judges made it and judges can adapt it to changed conditions.” This flexibility applies to other copyright doctrines as well.).

1534 Tadlock, supra note 1488, at 638.

1535 See supra section 3.3.


1537 Copyright in the United States is considered to fulfill a utilitarian function, while copyright in continental Europe, to which Germany belongs, is seen as a natural right. See U.S. Const. art. 1 § 8 cl. 8. See also Neil Weinstock Netanel, Alienability Restrictions and the Enhancement of Author Autonomy in United States and Continental Copyright Law, 12 Cardozo Arts & Ent. L.J. 1, 7–23 (1994) (Regarding the social utility purpose of American copyright law versus the continental focus of putting copyright within or in relation to classical Roman
harmonized within legal systems. The public policy copyright misuse doctrine is limited to certain jurisdictions within the United States.\(^{1538}\) This means that limitations to software license agreements may not only vary between countries, but sometimes also within countries.

It should be noted that lack of copyright protection does not rule out software license agreement enforcement. As seen, some of the above doctrines, for example the merger doctrine and the "\textit{scènes à faire}\" doctrine may render the software unprotected by copyright. This precludes copyright infringement, but it does not necessarily mean that the software license agreement will be invalid and unenforceable. For example, the dissenting judge in the \textit{Lexmark} case argued that Lexmark could likely demonstrate that the software license agreement was valid and enforceable against transferees,\(^{1539}\) but this question was not at stake in this case. Also, in \textit{Quanta Computer v. LG Electronics},\(^{1540}\) the Supreme Court, which applied the patent exhaustion doctrine and did not allow LGE to assert its patent rights, did not preclude that LGE could have sued for breach of contract.\(^{1541}\) Another example would be if acting out-law personality rights, real rights, and personal rights, based on natural rights doctrine and German idealism.); Thomas F. Cotter, \textit{Intellectual Property and the Essential Facilities Doctrine}, 44 \textit{Antitrust Bull.} 211, 217–220 (1999); Edward W. Ploman & L. Clark Hamilton, \textit{Copyright: Intellectual Property in the Information Age} 13 (Routledge & Kegan Paul Books: Boston 1980); Bernt Hugenholtz, \textit{Copyright, Contract and Code: What Will Remain of the Public Domain?}, 26 Brook. J. Int'l L. 77, 81–82 (2000). Cf. Andreas Leupold & Silke Glossner, Münchener Anwaltshandbuch IT-Recht Teil 5. B. I. 1(a) recital 22 (2nd ed., Beck Juristischer Verlag: München 2011) (Noting that copyright in the Anglo-American world has a strong economic approach.). Copyright terminology also show differences. While the German term \textit{Urheberrecht} is commonly translated as "copyright," the two are not completely identical. The German term belongs to the same tradition as the French and Continental "\textit{droit d'auteur}\", the term signals a focus on the rights of the author (\textit{Urheber or Autheur}); especially personality rights and the moral rights of the author, not only the economic rights of the author. See Braegelmann, supra note 1407, at 124. American copyright law did previously not recognize moral rights. See Gilliam v. American Broadcasting Companies, 538 F.2d 14, 24 (2d Cir. 1976) ("American copyright law, as presently written, does not recognize moral rights or provide a cause of action for their violation, since the law seeks to vindicate the economic, rather than the personal, rights of authors.").

\(^{1538}\) See Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990); Alcatel USA, Inc. v. DGI Techs., Inc., 166 F.3d 772, 777 (5th Cir. 1999); Practice Mgmt. Info. Corp. v. Am. Med. Ass'n, 121 F.3d 516 (9th Cir. 1997).


\(^{1541}\) See Quanta Computer v. LG Electronics, 553 U.S. 617, 128 S.Ct. 2109, 2122, fn. 7 (2008) (However, LGE's complaint did not include any such claim.). This possibility of contract law claims was also expressed by a Kentucky district court, See Static Control Components, Inc. v. Lexmark Int'l, Inc., 615 F.Supp.2d 575, 586–587 (E.D. Ky. 2009).
side the scope of a software license agreement would be considered “fair use,” and not constitute copyright infringement. This act could still be a breach of contract.\textsuperscript{1542} In this situation, the distinction between conditions and covenants might become important.\textsuperscript{1543} Conditions are limitations to a license, while covenants concern all other provisions in a software license agreement. If a program is found to be unprotectable by copyright, the license and any conditions will fall. But unless the entire contract becomes invalid because of this,\textsuperscript{1544} it is possible that covenants may still be valid and enforceable under contract law. However, while a software license agreement can be partly enforced without copyright protection, the enforcement is much stronger with copyright protection, since: (1) It gives the opportunity to injunctive relief; and (2) potential damages are likely to be higher for copyright violations than for breach of contract.

5.2 Mandatory Contract Law

Certain contract law questions related to software license agreement formation have already been examined.\textsuperscript{1545} The next question relates to validity of incorporated provisions. That is, limitations to freedom of contract. Software license agreement validity is very dependent on freedom of contract.\textsuperscript{1546} But gone are the “the heydays of freedom of contract,”\textsuperscript{1547} when courts almost always refused to strike down freely bargained but unfair contracts.\textsuperscript{1548} Free-
Mandatory Private Law

Freedom of contract is still essential: To our market economy, and for our individual freedom. But in modern times, especially in consumer relations, traditional ideas about expressions of the individual will and the integrity of contractual freedom have been contrasted against a new market reality.

And contracts as expression of the will can arguably be further questioned in this context, due to the nature of electronic standard-form contracting. As we will see, freedom of contract is not unrestricted, and neither is the flip side of this freedom, \textit{pacta sunt servanda}, especially for consumer contracts. This chapter will therefore examine limitations to freedom of contract. These include: (1) Categorization as “adhesion contracts” and the doctrine of unconscionability; (2) limitations against unfair contract terms; and (3) public policy limitations on contractual freedom.

Under American law, contract law lies within the competence of the States. While restatements may describe common elements, and model laws have created some level of unity, this chapter will attempt to apply California, Washington, and New York State Law when possible.

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1549 Content control of contractual fairness is controversial. If law is too aggressive in correcting contract fairness, it “may, on some accounts, damage commercial confidence in the reliability of the law and thus hamper the operation of a market economy.” See Stephen Weatherill, EU Consumer Law and Policy 114 (2nd ed., Edward Elgar Publishing: Cheltenham 2005).

1550 Weatherill, supra note 1549, at 114.

1551 This shift in the view on contractual freedom can be summarized by the following quotes by Weatherill. See Weatherill, supra note 1549, at 114–115 (“[I]n the consumer sphere in particular, it has been recognized in recent decades that notions of the purity of contractual freedom are not necessarily consistent with the reality of modern market conditions.” “The bargain has lost its sanctity as an expression of individual will.” “[T]here is a general acceptance that contractual freedom cannot be viewed in the same light today as it was 50 or more years ago.”).

1552 Most famously the Restatement (Second) of Contracts created by the ALI.

1553 For example, the Uniform Commercial Code (UCC) drafted by the National Conference of Law Commissioners on the Uniform State Law (NCCUSL). However, it is uncertain to what extent it is applicable to software license agreements. See supra section 3.1.2.

1554 See supra section 1.4.3 (Regarding choice of comparandum.).
5 Mandatory Private Law

5.2.1 Adhesion Contracts

The contractual categorization of software license agreements might be important. For example, if a contract is deemed to be an “adhesion contract,” it implies that the contract was not freely bargained, which may affect its validity. However, it is a misconception that contracts deemed adhesive are per se invalid. Adhesive contracts must be unfair to be invalid. Under American law, determining whether a contract is adhesive “is simply the first step in deciding whether it should be enforced.”

“Adhesion contracts” is a subcategory of standard-form agreements. An adhesion contract is a “standardized contract, imposed and drafted by the party of superior bargaining strength, relegates to the subscribing party only the opportunity to adhere to the contract or reject it.” Some categories of contract are commonly considered as adhesion contracts, for example insurance contracts. However, whether a contract in fact is an adhesion contract must be determined on an individual basis, “based upon appropriate facts concerning specific parties under specific circumstances.” A contract that would normally qualify as an adhesion contract would not do so “between corporations with equal bargaining power.”


1556 Compare with the French term contrat d’adhésion.


example, be invalid and unenforceable because of unfairness, undue oppression, unconscionability, or because it is contrary to public policy, but adhesion contract characterization does not imply invalidity, it is merely a first step towards invalidity.

Different American jurisdictions define and assess adhesion contracts differently. While California courts consider adhesion contracts to be a finding of procedural unconscionability, Washington courts do not. Generally, the question is whether: (1) Disparity of bargaining power existed; and (2) whether the agreement was presented on a “take it or leave it” basis.


Under N.Y. law, courts requires “high pressure tactics” or “deceptive language” or that the contract was the product of a gross inequality of bargaining power,” in order to find adhesion. See Aviall, Inc. v. Ryder Sys., Inc., 913 F.Supp. 826, 831 (S.D.N.Y. 1996). Washington law requires that “there was no true equality of bargaining power” between the parties. See Yakima County (West Valley) Fire Protection Dist. No. 12 v. City of Yakima, 858 P.2d 245, 122 Wn.2d 371, 393 (Wash. 1993) Quoting Standard Oil Co. v. Perkins, 347 F.2d 379, 383 fn. 5 (9th Cir. 1965).

The term adhesion contract is not found explicitly in German contract law, but the colloquial term used to denote unbalanced agreements is “knebelvertrag” or “knebelungsvertrag” (roughly “gag contract”). However, this term is not often used by courts, but sometimes in doctrine. While courts may use another terminology, they still address contracts that excessively restricts commercial and personal freedom, which are often presented to weaker parties on a “take it or leave basis.”

Software license agreements aimed at, or used against, consumers can often be described as adhesion contracts. This could affect the risk of invalidity.


However, the term “adhesion contract” is of European French origin. See Steven v. Fidelity & Casualty Co., 58 Cal.2d 862, 882 fn. 10 (Cal. 1962) (“This term was first used in French legal analysis in 1901.”). It became part of American legal thought through Patterson’s article. See Patterson, supra note 1558, at 222, fn. 106 (“This expressive term [contracts of “adhesion”] seems worthy of a place in our legal vocabulary.”).

It has been mentioned sometimes, but has been placed within quotation marks. See BAG Nov. 17, 2005, NJW 2006, 1837 (Ls.), para. 21 (Ger.) (“Soweit die Revision…dem Hinweis auf einen ‘Knebelvertrag’…” [As far as the revision…the reference to an ‘adhesion contract’…]). Other courts have used it more freely. See AG Köln Feb. 8, 2011, 118 C 606/10 (Ger.) (“Weder handelt es sich um einen Knebelungsvertrag, da er nur über 12 Monate läuft.” [“Neither is it a gagging agreement since it only runs for twelve months.”]).


See Rebecca K. Lively, Microsoft Windows Vista: The Beginning or the End of End-User License Agreements as We Know Them?, 39 ST. MARY’S L.J., 339, 363 (2007); Robert Lee Dickens, Finding Common Ground in the World of Electronic Contracts: the Consistency of Legal Reasoning in Clickwrap Cases, 11 MARQ. INT’L PRO. L. REV. 379, 401 (2007) (Considering click-wrap license agreements to be adhesion contracts.); Stephen T. Keohane, Mass Market Licensing, 652 PLI/PAT 437, 443–444 (2001) (Noting that mass-market software license agreements “are pure adhesion contracts, in the sense that their terms are absolutely fixed by the licensor and there is not even a theoretical possibility for negotiation or modification. They are also completely anonymous, in that the licensor does not care and, indeed, frequently does not even know, who its licensees are.”).
Software license agreements used between business actors will, on the other hand, not necessarily be considered adhesion contract, since there is not necessarily inequality of bargaining power.

5.2.2 The Doctrine of Unconscionability

United States

Central to the treatment of standard terms in all American jurisdictions is the doctrine of “unconscionability,” since it makes “it possible for the courts to police explicitly” against agreements or provisions found unconscionable.\textsuperscript{1573} The doctrine originates from the UCC, but is applicable beyond sale of goods.\textsuperscript{1574} “This might be important from a software license agreement perspective, since it is far from certain that the UCC should apply to software license agreements.”\textsuperscript{1575} Under the doctrine, a court may refuse to enforce a contract, refuse to enforce certain terms of the contract, or “limit the application of unconscionable terms to avoid unconscionable results” if a contract has been formed on abusive procedural grounds, or the terms unreasonably favor one party, or the other party is not given a meaningful choice.\textsuperscript{1576}

Unconscionability has no precise definition, neither in the UCC nor in case law,\textsuperscript{1577} and since contract law varies between states, application of the concept is not uniform. However, to meet the traditional standard of unconscionability, “the inequality amounting to fraud must be so strong and manifest as to shock the conscience and confound the judgment of any man of common sense.”\textsuperscript{1578} The agreement should be something that “no man in his senses and not under delusion would make on the one hand, and as no hon-
est and fair man would accept on the other."\footnote{Hume v. United States, 132 U.S. 406, 409–411 (1889); Restatement (Second) of Contracts § 208 cmt. b (1981).} The doctrine can be applied when there is “gross disparity in the values exchanged” or “gross inequality of bargaining power, together with terms unreasonably favorable to the stronger party.”\footnote{Restatement (Second) of Contracts § 208 cmt. a, d (1981).}

Unconscionability is commonly divided into two elements; procedural and substantive unconscionability,\footnote{See, e.g., Sitogum Holdings, Inc. v. Ropes, 800 A.2d 915, 921 (N.J. Sup. Ct. 2002); Williams v. Walker-Thomas Furniture Co., 350 F.2d 445, 449 (D.C. Cir. 1965); Armendariz v. Foundation Health Psychcare Services, Inc., 99 Cal.Rptr.2d 745, 756, 766–767 (Cal. 2000); Schroeder v. Fageol Motors, Inc., 86 Wash.2d 256, 260, 544 P.2d 20 (Wash. 1975); Maxwell v. Fid. Fin. Servs., Inc., 907 P.2d 51, 184 Ariz. 82, 88–89 (Ariz. 1995). See also Arthur Allen Leff, Unconscionability and the Code—The Emperor’s New Clause, 115 U. Pa. L. Rev. 485, 487 (1967).} and many courts hold that “some quantum of both” is required “to establish a claim.”\footnote{Maxwell v. Fid. Fin. Servs., Inc., 907 P.2d 51, 184 Ariz. 82, 89 (Ariz. 1995).} Procedural unconscionability is sometimes known as “bargaining naughtiness,” and can be found when there have been improprieties in the contract formation process. This can be assessed by the relative bargaining power of parties: “[W]ether the terms were explained to the weaker party” or whether there were alternative choices.\footnote{See, e.g., Johnson v. Mobil Oil Corp., 415 F.Supp. 264, 268 (E.D. Mich. 1976); Wille v. Southwestern Bell Tel. Co., 219 Kan. 755, 758–759 (Kan. 1976); Leff, supra note 1581, at 487; Black’s Law Dictionary, supra note 1576, at 1664; Lively, supra note 1572, at 360; Das, supra note 1557, at 485.} Substantive unconscionability is sometimes known as “evils in the resulting contract.” It can be found when the terms have been unduly harsh or unfair.\footnote{Sitogum Holdings, Inc. v. Ropes, 800 A.2d 915, 921 (N.J. Sup. Ct. 2002); Williams v. Walker-Thomas Furniture Co., 350 F.2d 445, 449 (D.C. Cir. 1965); Armendariz v. Foundation Health Psychcare Services, Inc., 99 Cal.Rptr.2d 745, 756, 766–767 (Cal. 2000); Schroeder v. Fageol Motors, Inc., 86 Wash.2d 256, 260, 544 P.2d 20 (Wash. 1975); Maxwell v. Fid. Fin. Servs., Inc., 907 P.2d 51, 184 Ariz. 82, 88–89 (Ariz. 1995). See also Arthur Allen Leff, Unconscionability and the Code—The Emperor’s New Clause, 115 U. Pa. L. Rev. 485, 487 (1967).}

Generally, “[t]he doctrine of unconscionability is to be used as a shield, not a sword, and may not be used as a basis for affirmative recovery.”\footnote{See supra section 5.1.3.} Thus, in this respect unconscionability is similar to the copyright misuse doctrine\footnote{See supra section 5.1.4.} and the fair use doctrine.\footnote{See supra section 5.1.4.} This limits how unconscionability
can be invoked to challenge provisions in software license agreements. As an exception, California law allows the doctrine to be used as a sword in certain situations, but only if the consumer suffers damage, such as increased costs. Thus, it is not possible to use as a sword for all situations under California law either.

Different states set out different doctrinal standards. The first question is whether both the procedural and substantive side has to be present. The main rule in California and N.Y. is that both elements have to be present. Washington law does not require the presence of both elements. Under N.Y. law, "there have been exceptional cases where a provision of the contract has been so outrageous as to warrant holding it unenforceable on the ground of substantive unconscionability alone." Washington law has found that substantial unconscionability alone can be sufficient to declare a contract or term invalid. California does not require the two elements to be present in the same degree. A strong indication of unconscionability in one element requires less of the other element. Still, some level of both is required.

The second question is what constitutes procedural and substantive unconscionability. Procedural unconscionability focuses on meaningful choice and the way the contract was concluded. "Oppression’ or ‘surprise’ due to unequal bargaining power” is a relevant element of this analysis. This may be found due to lack of meaningful choice, inability to understand,
experience, or hidden provisions. \footnote{California: A & M Produce Co. v. FMC Corp., 135 Cal.App.3d 473, 486 (1982); Discover Bank v. Superior Court, 30 Cal.Rptr.3d 76, 85 (Cal. 2005); Baker v. Osborne Development Corp., 71 Cal.Rptr.3d 854, 862 (Cal. Ct. App. 2008) (An agreement or provision can be oppressive if there is a lack of meaningful choice, or if there has been no real negotiation between the parties. A provision can be considered surprising if it is “hidden in a prolix printed form drafted by the party seeking to enforce the disputed term.”). Washington: Nelson v. McGoldrick, 896 P.2d 1258, 1262 (Wash. 1995) (To determine whether the requirement of procedural unconscionability is met all circumstances of the transaction is evaluated, including “[t]he manner in which the contract was entered,’ whether each party had ‘a reasonable opportunity to understand the terms of the contract,’ and whether ‘the important terms [were] hidden in a maze of fine print…’.”). New York: Gillman v. Chase Manhattan, 73 N.Y.2d 1, 10, 12 (N.Y. 1988) (The element of procedural unconscionability focuses on “such matters as the size and commercial setting of the transaction”[…] “whether deceptive or high-pressured tactics were employed, the use of fine print in the contract, the experience and education of the party claiming unconscionability, and whether there was disparity in bargaining power.).} Substantive unconscionability focuses on unreasonableness of substantive provisions. \footnote{State v. Avco Fin. Serv., 50 N.Y.2d 383, 389 (N.Y. 1980); Gillman v. Chase Manhattan, 73 N.Y.2d 1, 10, 12 (N.Y. 1988) (Substantive unconscionability focuses on whether provisions were “unreasonably favorable to the other party.”).} Generally, to meet the requirement of substantive unconscionability, a provision “must shock the conscience.” \footnote{See Ponte, supra note 1590, at 131 (Regarding the varying results between courts.).}

Thus, the application of the doctrine might vary between states. \footnote{See Lively, supra note 1572, at 344, 362 (“In light of Washington’s rather lenient standards of unconscionability, it appears that the Windows Vista EULA may not withstand a legal challenge.”) The Microsoft Windows Vista EULA stated that the contract would be subject to Washington state law. This provision has since been removed. See Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro, Section 3 (2013) (“The laws of the state or country where you live govern all claims and disputes concerning the software (including its price) or this agreement.”).} The primary difference is that Washington, and sometimes also New York, might find a contract unconscionable based on substantive unconscionability alone. Based on this, it has been suggested that this could affect transferees that are likely to be subject to Washington law. \footnote{See Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro, Section 3 (2013) (“The laws of the state or country where you live govern all claims and disputes concerning the software (including its price) or this agreement.”).} Under those standards, the substantive content itself could make provisions invalid, without the need for bargaining impurities. However, in practice, it is not certain that there are major differences between Washington and California. California courts
generally consider adhesion contract characterization as a finding of procedural unconscionability.\textsuperscript{1601} And as seen above, it is likely that certain software license agreements in certain software transfers might be adhesion contracts. Thus, the major question will be if there is substantive unconscionability. Since this generally requires a provision that “shock[s] the conscience,”\textsuperscript{1602} only very specific provisions are likely to become caught by the doctrine.

However, if the parties are considered to have equal bargaining power, if they are both business actors, it is less likely that the software license agreement will be deemed as an adhesion contract.\textsuperscript{1603} In \textit{Denlinger, Inc. v. Dendler},\textsuperscript{1604} the court examined a personal guarantee clause in a credit card application. Both parties were commercial enterprises. The court said that credit application were often considered adhesion contract, due to unequal bargaining power. However, the parties were considered to have equal bargaining power, the contract was not considered an adhesion contract, and was neither considered unconscionable.\textsuperscript{1605} Thus, characterization as adhesion contracts and unconscionability is more unlikely against business actors.

\textbf{Germany}

The function of the American doctrine of unconscionability corresponds with Section 138(2) of the BGB, prohibiting contracts that take undue advantage of a party.\textsuperscript{1606} The first subsection states that a legal transaction that is contrary to public policy (good morals) is void.\textsuperscript{1607} The second subsection, focusing on undue advantage, clarifies that particularly transactions that exploits a party’s “predicament, inexperience, lack of sound judgement or considerable

\textsuperscript{1604} 608 A.2d 1061 (1992).
\textsuperscript{1607} BGB § 138(1) (Ger.) (“Ein Rechtsgeschäft, das gegen die guten Sitten verstößt, ist nichtig.” [A transaction that violates good morals is void.]).
weakness of will,” and the other party is therefore promised or granted clearly disproportionate economic advantages are void.1608

The first subsection has been applied against unfair standard-form provisions.1609 While additional regulation on standard-form agreements have been introduced,1610 it is still possible to apply the second subsection against standard-form agreements as well.1611 For example, if a contract is an adhesion contract (”Knebelvertrag”), the contract can be unconscionable if it, for example, runs for excessive duration, includes excessively restrictive non-compete clauses, or include clauses where low-income spouses or children with emotional bonds sign an agreement as a guarantee or co-debtor in favor of the other spouse, which is currently the guarantee.1612 However, BGB § 138(2) is seldom applied against standard-form agreements today, since BGB § 305 et seq. — regulation against unfair contract terms in standard-form agreements — can be used instead.1613

Comparison
Both the doctrine of unconscionability and the German counterparts originate from Roman law, prohibiting immoral contracts.1614 The doctrine of unconscionability is central to the treatment of standard terms under American law, but it is generally a shield and not a sword. The German counterpart to the doctrine of unconscionability, BGB § 138(2), is not limited as a shield, but is seldom used against standard-form agreements today, since the German legislator introduced special rules regarding standard-form agreements in the 1970s.1615 So while the doctrine of unconscionability can be compared with BGB § 138(2), it is important to remember that they are of very different practical importance. Still, it is interesting to compare the two. The doctrine of unconscionability is the main tool under American contract against far-
reaching contract provisions. German contract law, on the other hand, has two tools at hand, and the German counterpart to unconscionability is considered the secondary tool, of little practical importance, since BGB § 305 et seq. (the regulation against unfair terms) is simpler to use, with a lower threshold.

5.2.3 Unfair Contract Terms in Germany
In the 1970s, BGB § 138 was complemented with special regulation against unfair contract terms in standard-form agreements. With the influence of European Union law, this regulation has been further developed. Under this regulation, the question of whether the transferee is a consumer or a business actor is of major importance.

The European Union Unfair Terms Directive sets out minimum standards to consumer agreements. According to the Directive, “[a] contractual term which has not been individually negotiated […] shall be regarded as unfair if, contrary to the requirement of good faith, it causes a significant imbalance in the parties’ rights and obligations arising under the contract, to the detriment of the consumer.” To clarify this, the Directive’s Annex contains a list of contractual provisions considered unfair. Although this list is only “indicative,” meaning that a term on this list is not automatically unfair, and a term not found on this list is not automatically “not-unfair,” the Member States are obliged to transpose it. Data from the CLAB Database, containing contractual provisions considered unfair, both under the Directive and under existing national legislation and traditional contract law principles show that most cases concerned point 1(b) from the Annex list. Point 1(b) prohibits contractual provisions that excludes or limits consumers’ legal rights in the event of non-performance or inadequate performance.

1617 Id. at Article 3(1–2) (Pre-formulated terms in standard-terms agreement are "always regarded as not individually negotiated.").
1618 Id. at Annex.
1620 European Union CLAB Database of Unfair Contract Terms.
Germany has transposed the Unfair Terms Directive into the BGB. The German provisions concerning standard terms can be divided into: (1) Incorporation control; and (2) content control. The former is concerned with whether the contractual provisions form part of the agreement (the process), and the latter with whether the incorporated contractual provisions are enforceable (the substantive content).

Content control is conducted by following a certain scheme: Contractual provisions are first examined against Section 309, followed by Section 308, and last against Section 307 of the BGB. Section 309 contains a list of prohibited clauses, without possibility for evaluation. Section 308 contains a list of suspected clauses, with possibility for evaluation. Section 307, the general clause, is the general test of reasonableness. The more specific Sections 308 and 309 can be considered applications of the general clause. Sections 307 and 308 thus resemble the layout of the Unfair Terms Directive, with a general clause and a list of prohibited contractual provisions.

The text of the BGB regarding content control against business actors can give rise to misunderstandings. The first sentence of Section 310(1) states that Sections 308 and 309 do not apply between business actors, only Section 307. However, the second sentence of Section 310(1) states that terms listed in Section 308 or 309 can be considered invalid under the general clause, if it is appropriate in a business context. Courts have interpreted this exception broadly. Contractual provisions found violating Sections 308 or 309 are indications of unfairness against business actors. Courts have generally not upheld contractual provisions that fall within these sections against business actors, and the formal inapplicability of Section 309 is arguably largely

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1623 BGB §§ 305, 310 (Ger.).
1624 Id. at §§ 307–310.
1625 See supra section 4.
1626 See Maxeiner, supra note 1574, at 153, 167.
1627 Markesinis, Unberath & Johnston, supra note 1547, at 229.
1628 See Id. at 176.
1629 BGB § 310(1) (Ger.).
1630 Markesinis, Unberath & Johnston, supra note 1547, at 177. See also Maxeiner, supra note 1574, at 153–154, 167 (Courts commonly apply Section 308 and Section 309 to contracts between business actors by analogy.).
1631 Markesinis, Unberath & Johnston, supra note 1547, at 177.
1633 Markesinis, Unberath & Johnston, supra note 1547, at 177.
irrelevant. Thus, this is arguably a good example of differences between law in books and law in action. In *NJW* 1995, 2553, the BGH said that a guarantee made by a company, a guarantee that extended beyond the loan and which the bank requested for this reason solely, could be considered surprising and an unreasonable deviation compared to default rules in the BGB. Thus, it is possible that the outcome of content control would be the same against consumers and business actors, but it cannot always be guaranteed.

The general clause states that provisions that creates unreasonable disadvantages for the other party, contrary to the requirement of good faith, are ineffective. This is assumed if a provision is incompatible with the essential principles of a statutory provision, or limits essential rights and duties that are inherent in the contract, to an extent that the purpose of the contract becomes jeopardized. When examining whether the contract creates an unreasonable disadvantage under the general clause, it becomes necessary to examine the entire contract and not only one specific provision. Advantages in one area might compensate for disadvantages in other areas. The general clause only becomes applicable when contractual provisions have passed a two-pronged test: First, it must be determined whether the contractual provision in question derogates from any legal provision. If not, it must only conform to the requirement of being clear and comprehensive. Second, “descriptions of the performance and the determination of the price” are exempted from the fairness test. These limitations should not pose any substantial problems

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1634 See Jauernig, supra note 1569, at Buch 2. Abschnitt 2. § 310, recital 2 (“Der Ausschluss von § 309 ist weitgehend irrelevant, da die Klauselverbote isz § 309 idR ein Indiz für unangemessene Benachteiligung (§ 307 I, II) auch unter Unternehmern sein sollen.” [Roughly: “The exclusion of Section 309 is largely irrelevant, since the prohibited clauses defined in Section 309 are usually indicative of unreasonable disadvantage (§ 307 I, II), even among business actors.”]).

1635 BGH May 18, 1995, *NJW* 1995, 2553 (Ger.).

1636 See BGB § 305(c) (Ger.).

1637 See BGH May 18, 1995, *NJW* 1995, 2553 (Ger.). See also Markesinis, Unberath & Johnston, supra note 1547, at 177.

1638 BGB § 307(1) (Ger.).

1639 Id. at § 307(2).


1641 BGB § 307(3) (Ger.) See also Markesinis, Unberath & Johnston, supra note 1547, at 175.

1642 Markesinis, Unberath & Johnston, supra note 1547, at 175. See also Council Directive 93/13 on unfair terms in consumer contracts, 1993 O.J. (L 95) 29 (EC), Article 4(2) (“Assessment of the unfair nature of the terms shall relate neither to the definition of the main subject matter of the contract nor to the adequacy of the price and remuneration,
for software license agreements. In this context, the first step is seldom difficult to meet, since provisions in software license agreements often deviate from statutory provisions. Questions of price and remuneration are seldom relevant for standard software — especially consumer-grade software. Questions regarding performance are not especially relevant for software license agreements either. Thus, there should not be any substantial obstacles from applying the general clause to software license agreements.

There are a number of different situations when a contract may create unreasonable disadvantages. For example: (1) Inadequacy in relation to the requirement of good faith, which is often present when a party attempts to, unilaterally and improperly, impose their own interests at the loss of the other party, without granting the other party a reasonable balance;\(^ {1643}\) (2) if failing to explain key terms under the principle of transparency [Das Transparenzgebot];\(^ {1644}\) for example, by failing to specify the conditions and limits of ambiguous or vague clauses;\(^ {1645}\) and (3) a provision might be considered to limit essential rights if one party disclaims cardinal obligations or substantially restricts its liability. Whether this aspect of the general clause will catch a specific contract depends on the nature of the contract, but this aspect opens up the application of the general clause. Granted, BGB §§ 308–309 often provide stronger protection, but with stricter requirements than BGB § 307. However, it might be possible to apply the general clause to similar situations as where BGB §§ 308–309 are applicable, if a contractual provision affects cardinal obligations.\(^ {1646}\)

5.2.4 Contracts and Public Policy

United States

Under American contract law, it is possible that contractual provisions can be considered invalid and unenforceable if they are contrary to public policy.\(^ {1647}\) That is, “a court will [sometimes] decide that the interest in freedom of con-

\(^ {1643}\) See BGH Nov. 3, 1999, NJW 2000, 1110, 1112 (Ger.) See also JAUERNIG, supra note 1569, at Buch 2. Abschnitt 2. § 307. I. 2(b), recital 5.

\(^ {1644}\) See BGH Nov. 22, 1995, NJW 1996, 456 (Ger.) (The contract made references to several vague terms. The court did not think that even a business actor lessee was able to produce necessary transparency on its own.).


\(^ {1646}\) See Id. at Buch 2. Abschnitt 2. § 307. I. 5, recital 12.

The public policy exception can theoretically be applied to many different public policies, for example, copyright public policy. Software license agreements can be used to enforce copyright protection, and upholding copyright protection is a public policy in the public interest, meaning that software license agreements are not per se suspicious. Overreaching contractual provisions that extend protection could on the other hand violate public policy. However, applying the public policy doctrine requires a “crystal clear” statutory public policy, which can be problematic since copyright public policies are seldom “crystal clear.” Thus, the doctrine’s use could be limited.

Additionally, the requirements for applying the doctrine are rigorous. According to California law, the doctrine of public policies should be used against contracts only in special circumstances.

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Note 1576, at 1351 (Public policy is defined as “principles and standards regarded by the legislature or by the courts as being of fundamental concern to the state and the whole of society.”).

1648 Restatement (Second) of Contracts 8 IN NT (1981).

1649 Black’s Law Dictionary, supra note 1576, at 1351.

1650 Richardson v. Mellish, Court of Common Pleas (1824) 130 Eng.Rep. 294 at 303 (Eng.) (“[Public Policy] is a very unruly horse, and when once you get astride it you never know where it will carry you. It may lead you from the sound law. It is never argued at all but when other points fail.”).

1651 See Lexmark Int’l, Inc. v. Static Control Components, Inc., 253 F.Supp.2d 943 (E.D. Ky. 2003) (“It is virtually axiomatic that the public interest can only be served by upholding copyright protections and, correspondingly, preventing the misappropriation of the skills, creative energies, and resources which are invested in the protected work.”) citing Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1254 (3d Cir. 1983).


1654 VL Systems, Inc. v. Unisen, Inc., 61 Cal.Rptr.3d 818, 822 (Cal. Cr. App. 2007) (“Freedom of contract is an important principle, and courts should not blithely apply public policy reasons to void contract provisions.”); City of Santa Barbara v. Superior Court, 62 Cal. Rptr.3d 527, 560 (Cal. 2007) (“The power of the courts to declare a contract void for being in contravention of sound public policy is a very delicate and undefined power, and … should
Thus, the doctrine’s applicable sphere is limited. Still, the ALI Principles argues that state public policy could be used to strike down different kinds of contractual provisions in software license agreement. At the same time, the ALI Principles notes that, “[t]o date, few courts have struck a term or terms in a software agreement on state public-policy grounds.” Thus, public policy is more likely a theoretical than practical problem for transferors.

Germany

According to German law, legal transactions contrary to public policy are void. As was said above, that rule has been applied against unfair standard-form provisions. However, it is probably more likely that a contract will be declared unenforceable according to BGB § 305 et seq. than BGB §§ 138(1) and 138(2), even if the transferee is a business actor.

Comparison

In theory, both German and American law can invalidate a contract that is contrary to public policy. However, it is not very likely that either German or American public policy exceptions will become applicable to software license agreements. The American public policy exception is in practice very limited, and courts have been reluctant to apply it. German courts have applied the German public policy exception, but BGB § 305 et seq. have become the dominant ground for challenging different forms of far-reaching contractual provisions. Thus, public policy is not a very likely limitation in practice.

5.2.5 Comparison of Contractual Freedom Limitations

As seen, there are several limitations of contractual freedom that might be relevant to software license agreements. However, the two most important limitations are the doctrine of unconscionability under American law and the regulation against unfair contract terms under German law. They do not strictly fulfill the same function, but since the two are the common stan-
dards of contractual unfairness in respective jurisdiction they must be compared.\textsuperscript{1660}

The requirement for unconscionability varies between the States, but the bar is very high.\textsuperscript{1661} Empirical studies on unconscionability claims in courts show that such claims are difficult to win, and the success rate has not increased significantly over time either.\textsuperscript{1662} It is difficult to quantify differences in requirements between unconscionability and unfair contract terms, and their respective success rate. However, it would probably not be an exaggeration to claim that the requirements are lower and the success rate is higher for the German regulation.

A transferee will have limited chance under American law to attack a provision ex post if the transferee was given a strong ex ante protection. That is, an opportunity to read is a decisive factor.\textsuperscript{1663} In \textit{Riensche v. Cingular Wireless LLC},\textsuperscript{1664} a consumer was given unlimited time to review an arbitration clause in an agreement. The consumer was also considered to have reasonable opportunity to understand the provisions, and was considered to have a meaningful choice, since the consumer could terminate the agreement without fees. The court found no procedural unconscionability and the court rejected the claim for unconscionability.\textsuperscript{1665} The opportunity to read is less important under German law, since a contractual provision can be invalid even if the transferee was given an opportunity to read. If the transferee was not given an opportunity to read, and the clause was surprising, the clause will not be

\textsuperscript{1660} Other studies of software license agreements have compared the two for similar reasons. See Michael L. Rustad & Maria Vittoria Onufri, \textit{The Exportability of the Principles of Software: Lost in Translation?}, 2 Hastings Sci. & Tech. L.J. 25 (2010); Maxeiner, \textit{supra} note 1574, at 131; Ponte, \textit{supra} note 1590, at 132 (“The idea of unconscionability is also recognized throughout the European Union where an emphasis is placed on consumer protection from ‘unfair’ terms.”).

\textsuperscript{1661} \textit{See supra} section 5.2.2. \textit{Cf.} Carlson v. Hamilton, 332 P.2d 989, 989 (Utah 1958) (“It is only where it turns out that one side or the other is to be penalized by the enforcement of the terms of a contract so unconscionable that no decent, fairminded person would view the ensuing result without being possessed of a profound sense of injustice, that equity will deny the use of its good offices in the enforcement of such unconscionability.”).


\textsuperscript{1664} 2006 WL 3827477 (W.D. Wash. Dec. 27, 2006).

incorporated and therefore not enforceable.\textsuperscript{1666} Thus, a German consumer is given protection both ex ante and ex post. This is arguably a major difference between American and German contract law.

Like the American copyright doctrines above, the doctrine of unconscionability is generally a shield, not a sword.\textsuperscript{1667} Thus, it cannot be invoked without an alleged misconduct by the transferee, which limits the doctrine’s applicability. The German regulation against unfair contract terms does not have such limitations, which increases its scope of applicability.

\textsuperscript{1666} See supra section 4.1.2 (Regarding when provisions are incorporated).

6 Competition Law

Use restrictions in software license agreements are also subject to competition law evaluation.\textsuperscript{1668} Competition law has a slightly different focus than contract law and copyright law. Abuse is related to whether the transferor is a dominant undertaking/monopolist, or if the transferor and transferee are undertakings in different vertical levels in the supply chain. Different competition law questions will become relevant to: (1) Different software; and (2) different transferees, that is, if the transferee is (a) an end user, or (b) another undertaking at the same or different vertical level in the supply chain as the transferor. For standard software, questions relating to abuse of a dominant position/monopolization become more relevant than conspiracies between undertakings that prevent competition.\textsuperscript{1669} This chapter will only focus on questions that might relate to software license agreements. Other competition law problems may also arise through cross-national software transfers, for example, through economic and technical practices.\textsuperscript{1670} Such practices are only relevant for this thesis when also governed through software license agreements.\textsuperscript{1671}

In this context, the relationship between competition law and intellectual property becomes interesting. This relationship has created some discussion, for example, whether their goals differ or overlap.\textsuperscript{1672} The relationship might


\textsuperscript{1669} For specialized software, slightly different questions could become relevant if the software license agreement would include geographical restrictions, no-challenge clauses, and similar provisions.


\textsuperscript{1671} For one such example, see Dickson v. Microsoft Corp., 309 F.3d 193, 199 (4th Cir. 2002).

\textsuperscript{1672} The goals of American competition and copyright law can be described as wealth maximization and to foster innovation. Thus, there might be alignment in goals. Competition
create conflicts, but efforts have been put forward to reduce potential conflicts.\textsuperscript{1673} Still, exercising intellectual property rights might in certain situations lead to conflicts with competition law,\textsuperscript{1674} but only leading to abuse in exceptional situations.\textsuperscript{1675}

6.1 Formal Requirements of Competition Law Offenses

 Basically, both German and American competition law recognize two competition law offenses: (1) Collusion/conscious parallelism; and (2) abuse of dominant position/monopolization. However, the terminology and the elements of the offenses vary between the two legal systems. This first part will focus on the formal requirements of competition law offenses. From a German perspective, both Union level and national level can become applicable,\textsuperscript{1676} but from an American perspective there is only federal law.\textsuperscript{1677}

6.1.1 United States

 Relevant aspects of American competition law from this perspective are regulated in the \emph{Sherman Antitrust Act},\textsuperscript{1678} Sections 1 and 2. Monopolization is regulated in Section 2 of the Sherman Act. The section describes three offenses: (1) Monopolization; (2) attempted monopolization; and (3) conspiracy to monopolize.\textsuperscript{1679} In \emph{United States v. Grinnell Corp.,}\textsuperscript{1680} the Court

\footnotesize{law emphasize competition to promote wealth maximization, copyright promotes wealth maximization through short-term competition limitations. However, their goals may differ slightly: American copyright law wants a specific result, innovation from the market, while competition law only wants a freely operating market. See Thomas F. Cotter, \emph{Intellectual Property and the Essential Facilities Doctrine}, 44 Antitrust Bull. 211, 217–220, 227–228 (1999). German copyright culture approaches copyright from a natural rights perspective. In this culture, innovation is arguably a byproduct and not the main purpose.\textsuperscript{1673} See Olubunmi Adedayo Fesobi, \emph{A Comparison of the New Technology Transfer Block Exemption Regulation and Its Accompanying Guidelines with the US Guidelines to Intellectual Property Licensing on the Way They Regulate Technology Markets as Well as Product Markets}, 4 Convergence 217, 217–218 (2008).\textsuperscript{1674} Ian J. Lloyd, \emph{Information Technology Law} 430 (6th ed., Oxford University Press: Oxford 2011).\textsuperscript{1675} See Case T-201/04, Microsoft v. Commission, 2004 E.C.R. II-4463, paras. 6, 331–332.\textsuperscript{1676} See supra section 1.5.2.\textsuperscript{1677} See \emph{U.S. Const.} Article 1, Section 8.\textsuperscript{1678} The Sherman Antitrust Act, 26 Stat. 209, enacted on July 2, 1890, codified at 15 USC § 1 et seq. (a.k.a. the Sherman Act).\textsuperscript{1679} See Alison Jones & Brenda Sufrin, \emph{EC Competition Law — Text, Cases, and Materials} 345 (3rd ed., Oxford University Press: Oxford 2008).\textsuperscript{1680} 384 U.S. 563 (1966).}
said that the offense of monopolization has two elements: “(1) [T]he possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth of development as a consequence of a superior product, business acumen, or historic accident.”

The relevant market consists of products or services that directly compete with each other, that is, are reasonably substitutable “if there is a slight increase in the price of the main product.” The relevant market can be divided into a product market and a geographical market. The size of the relevant product market is an important indicator for monopoly power: A narrow relevant product market increases the risk of monopoly power, while a broad relevant product market decreases that risk.

Some scholars have questioned the relevancy of applying a traditional competition law analysis to technology markets. Technology markets may also raise complicated questions. For example, it can sometimes be difficult to determine whether online markets belong to the same market as the “bricks-and-mortar” market. Generally, for businesses that sell tangible goods online, the online market is probably the same product market as for bricks-and-mortar businesses.

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1684 Spencer Weber Waller, Antitrust and Social Networking, 90 N.C. L. Rev 1771, 1776 (2012). Thus, transferors are interested in defining broad relevant markets.

1685 See David S. Evans, Antitrust and the New Economy, in 2 Microsoft, Antitrust and the New Economy: Selected Essays 253, 254 (David S. Evans ed., Kluwer Academic Publishers: Norwell 2002) (“Can century-old antitrust laws, created in the days when the public was concerned about robber barons controlling entire industries, serve economic policy in an era in which the Next Big Thing regularly wipes out fortunes made from the Last Big Thing?”); Lande & Sobin, supra note 1682, at 254–256 (Due to discrepancies in focus. Technology and innovation markets focus more on intellectual property rights and licensing practices, less on finished products and services compared to traditional markets.). Some have pointed out differences between technology markets and traditional markets, and potential issues in technology markets. See Waller, supra note 1684, at 1776–1786 (For example, issues regarding defining the relevant product market and calculating market share.);

1686 See Waller, supra note 1684, at 1776–1786.
and-mortar stores. In contrast, social networking sites have no substitute in the bricks-and-mortar world.1687

The question of geographic scope of a relevant market is probably less problematic for software than for traditional products and services.1688 The geographic scope is generally global.1689 If a product or service is only available online, the Internet becomes the relevant geographical market.1690 However, this wide definition can be problematic since courts require a geographical market to be a geographic location, and the Internet is not a geographic location.1691 In America Online, Inc. v. Greatdeals.Net,1692 the district court found that the Internet could not be defined as a place or location.1693 Thus, even if no substitutes exist in bricks-and-mortar stores, the geographic market must still be a geographic location; for example, “Internet-based social networking in the geographic region of the United States.”1694

Based on the relevant product and geographical market, monopoly power1695 in that relevant market must be examined. Monopoly power is defined as “the power to control prices or exclude competition.”1696 One indi-

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1687 See Jared Kagan, Bricks, Mortar, and Google: Defining the Relevant Antitrust Market for Internet-Based Companies 55 N.Y. L. SCH. L. REV. 271, 284, 290 (2010–2011) (“Unlike online advertising and online marketplaces, social networking sites do not have readily identifiable substitutes that exist in brick-and-mortar businesses.”).
1688 Waller, supra note 1684, at 1779–1780.
1689 It should be noted that, in certain situations, the geographic market can be limited to national markets, for example, through national software distribution channels.
1691 Kagan, supra note 1687, at 282–284 (Another problem is when substitutes exist in bricks-and-mortar stores.).
1693 America Online, Inc. v. Greatdeals.Net, 49 F.Supp.2d 851, 857–858 (E.D. Va. 1999) (“With respect to the relevant geographic market in which competition takes place, the Court finds that the Internet cannot be defined with outer boundaries. It is not a place or location; it is infinite. The Internet is a ‘giant network which interconnects innumerable smaller groups of linked computer networks.’”). Quoting Cyber Promotions, Inc. v. America Online, Inc., 948 F.Supp. 456, 459 (E.D. Pa. 1996).
1695 The Supreme Court’s use of the terms “market power” and “monopoly power” is often inconsistent, even though some argue that they are basically the same. See Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, Monopoly Power and Market Power in Antitrust Law, 76 GEO. L.J. 241, 245–247 (1987).
1696 United States v. E. I. du Pont de Nemours & Co., 353 U.S. 586, 391 (1957). See also Krattenmaker, Lande & Salop, supra note 1695, at 241 (Regarding monopoly power.). Compare with market power, which is defined as “the ability to raise prices above those that
cator of monopoly power is market share. In *United States v. Aluminum Co. of America*, Judge Hand said that 90 percent market share “is enough to constitute a monopoly; it is doubtful whether sixty or sixty-four percent would be enough; and certainly thirty-three per cent is not.” Courts often still apply this formula. Other factors beyond market share can be examined, such as “technological superiority resulting in cost advantages, economies of scale, the relative size of competitors, competitors’ performance, pricing trends and practices, homogeneity of products, potential competition, and the stability of market shares over time.” In *US v. Microsoft Corp.*, the D.C. Circuit “focused not only on … present market share, but also on the structural barrier that protects the company’s future position.” This barrier gives a transferor “power to stave off even superior new rivals.”

Finally, a party with monopoly power must conclude some form of “impermissible ‘exclusionary’ practices with the design or effects of protecting or enhancing its monopoly position.” In *Spectrum Sports, Inc. v. McQuillan*, the Court established that it is necessary to prove three elements: “(1) The defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.” The conduct must therefore be willful, that is, it cannot be based on “growth or development as a consequence of a

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1697 148 F.2d 416 (2d Cir. 1945).
1698 United States v. Aluminum Co. of America, 148 F.2d 416, 424 (2d Cir. 1945).
1699 See Lande & Sobin, supra note 1682, at 257. See also Waller, supra note 1684, at 1776.
1701 253 F.3d 34 (D.C. Cir. 2001).
1702 United States v. Microsoft Corp., 253 F.3d 34, 55 (D.C. Cir. 2001) (“That barrier — the ‘applications barrier to entry’ — stems from two characteristics of the software market: (1) [M]ost consumers prefer operating systems for which a large number of applications have already been written; and (2) most developers prefer to write for operating systems that already have a substantial consumer base. … This ‘chicken-and-egg’ situation ensures that applications will continue to be written for the already dominant Windows, which in turn ensures that consumers will continue to prefer it over other operating systems.”). Quoting United States v. Microsoft Corp., 87 F.Supp.2d 30, 36 (D.D.C. 2000).
1704 Jones & Sufrin, supra note 1679, at 346, fn. 248 (3rd ed.).
superior product, business acumen, or historic accident.”

Thus, there is a clear opinion that the prime object of competition law is, so to say, to foster \textit{finis opus coronat}, not to punish it. In \textit{United States v. Aluminum Co. of America}, Judge Hand formulated this as: “The successful competitor, having being urged to compete, must not be turned upon when he wins.”

Courts in modern competition cases require market harm, that is, it is necessary to prove conduct that is output limiting, or maintaining artificially low output, in ways that harm consumer welfare and efficiency. Competition law violations are divided into violations per se and violations of the rule of reason. But the Court has noted that the line between the two is not always clear. A violation per se is an act or agreement that is presumed to be unreasonable without having to examine its effects.

\begin{itemize}
  \item \textsuperscript{1707} United States v. Grinnell Corp., 384 U.S. 563, 571 (1966). See also American Tobacco Co. v. United States, 328 U.S. 781, 786 (1945) (Undertakings that “merely have made a new discovery or an original entry into a new field and unexpectedly or unavoidably have found themselves enjoying a monopoly” have not been condemned by competition law.); Per Jebsen & Robert Stevens, \textit{Assumptions, Goals and Dominant Undertakings: The Regulation of Competition Under Article 86 of the European Union}, 64 Antitrust L.J. 443, 488–489 (1996).
  \item \textsuperscript{1708} “The end crowns the work.”
  \item \textsuperscript{1709} See \textit{United States v. Aluminum Co. of America}, 148 F.2d 416, 430 (2d Cir. 1945); Jebsen & Stevens, supra note 1707, at 488–489.
  \item \textsuperscript{1710} 148 F.2d 416 (2d Cir. 1945).
  \item \textsuperscript{1711} United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945). However, this view has been criticized for being too lax. See Waller, supra note 1684, at 1804 (“While Judge Learned Hand was undoubtedly correct …, it is equally important that we do not allow the current frontrunner in a race to declare permanent victory at the moment of his choosing.”). See also Tim Wu, \textit{The Master Switch: The Rise and Fall of Information Practices} 308 (Alfred A. Knopf: New York 2010) (“[Government] has stood beside concentrated power against the underdog at the expense of economic dynamism.”).
  \item \textsuperscript{1712} Eleanor M. Fox, \textit{What is Harm to Competition? Exclusionary Practices and Anticompetitive Effect}, 70 Antitrust L.J. 371, 382 (2002).
  \item \textsuperscript{1713} JONES & SUFRIN, supra note 1679, at 346 (3rd ed.).
  \item \textsuperscript{1714} See National Society of Professional Engineer v. United States, 435 U.S. 679, 692 (1978); JONES & SUFRIN, supra note 1679, at 212–213 (3rd ed.).
  \item \textsuperscript{1715} National Collegiate Athletic Assn. v. Board of Regents of Univ. of Okla., 468 U.S. 85, 104, fn. 26 (1984) (“[T]here is often no bright line separating per se from Rule of Reason analysis. Per se rules may require considerable inquiry into market conditions before the evidence justifies a presumption of anticompetitive conduct. For example, while the Court has spoken of a ‘per se’ rule against tying arrangements, it has also recognized that tying may have procompetitive justifications that make it inappropriate to condemn without considerable market analysis.”).
\end{itemize}
ditionally, examples of per se violations have included price fixing\(^\text{1717}\) and tying arrangements\(^\text{1718}\). But today, vertical price fixing is evaluated under the rule of reason\(^\text{1719}\) and tying arrangements are evaluated under a modified per se analysis or rule of reason analysis\(^\text{1720}\). A per se violation requires conduct “that would always or almost always tend to restrict competition and decrease output.”\(^\text{1721}\) Under a rule of reason analysis, acts and agreements are assessed in their contexts to see the effects of the act or agreement\(^\text{1722}\). Classifications may change over time. Acts once considered per se-violations must now be examined under a rule of reason-analysis\(^\text{1723}\).

Section 1 of the Sherman Act applies to joint activities between undertakings or entities that restraints trade\(^\text{1724}\). However, not all “restraints of


\(^{1718}\) International Salt Co. v. United States, 332 U.S. 392 (1947).


\(^{1723}\) See Frank H. Easterbrook, The Limits of Antitrust, 63 Tex. L. Rev. 1, 10 (1984) (“As time goes by, fewer and fewer things seem appropriate for per se condemnation. We see competitive benefits in practices that once were thought uniformly pernicious. Ten years ago tying arrangements, boycotts, territorial allocations, and resale price maintenance were unlawful per se. Since then the Supreme Court has removed territorial allocations from the per se category, removed tying arrangements in all but name, stood by while lower courts quietly abrogated the per se treatment of boycotts, and invited reconsideration of the rule about resale price maintenance.”); Alison Jones, The Journey Toward an Effects-Based Approach under Article 101 TFEU—The Case of Hardcore Restraints, 55 Antitrust Bull. 783, 785–787 (2010) (Describing developments in Section 1 of the Sherman Act from creating clear rules with per se illegality to an assumption that such agreements should be examined under the rule of reason.).

\(^{1724}\) See 15 USC § 1. These entities do not have to be legally distinct. See American Needle, Inc. v. National Football League, 130 S.Ct. 2201, 2209–2210 (2010); United States v. Sealy, Inc., 388 U.S. 350, 353–354 (1967) (“We seek the central substance of the situation, not its periphery; and in this pursuit, we are moved by the identity of the persons who act, rather than the label of their hats.”).
trade” are caught,1725 law is only concerned with “unreasonable restraints.”1726 Restraints that are unreasonable commonly fall within three categories.1727 A contract or restraint must at its very minimum violate the rule of reason in order to become caught.1728 To determine whether these requirements are met, a court must “ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable. The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, [and] the purpose or end sought to be attained.”1729 However, some violations are so grave that they do not require taking the reasonableness of a restraint into account — they are per se violations. Per se violations include: (1) Horizontal price fixing;1730 (2) horizontal agreements that allocate markets,1731 customers, output or similar;1732 and (3) horizontal group boycotts by undertakings that has collective market power or control over scarce facilities or resources.1733 Finally, some Section 1 violations fall between per se and per rule of reason violations. Such analysis draws from both categories, by, for example, shifting burden of proof.1734

Finally, independent, parallel behavior does not violate Section 1. A conspiracy must be the result of an agreement, or conscious parallelism.1735 To

1725 Chicago Board of Trade v. United States, 246 U.S. 231, 238 (1918) (“Every agreement concerning trade, every regulation of trade, restrains. To bind, to restrain, is of their very essence. The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition.”). See also WILLIAM HOLMES & MELISSA MANGIARACINA, HOLMES AND MANGIARACINA: ANTITRUST LAW HANDBOOK § 2:9 (Westlaw through 2013).
1727 See HOLMES & MANGIARACINA, supra note 1725, at § 2:9.
1728 See Standard Oil Co. v. United States, 221 U.S. 1 (1911).
1732 See also HOLMES & MANGIARACINA, supra note 1725, at § 2:13.
1734 See HOLMES & MANGIARACINA, supra note 1725, at § 2:9 (“These theories seem to borrow from both approaches, simplifying the initial proof requirements for the plaintiff but still allowing the defendant to defend its actions by demonstrating their competitive justification.”).
prove a conspiracy under Section 1, evidence must be presented “’that tends to exclude the possibility’ that the alleged conspirators acted independently.”1736

6.1.2 Germany

Union Level

On a Union level, Article 101 TFEU regulates anti-competitive agreements, collusion and cartels, and Article 102 TFEU regulates abuse of a dominant position.1737

Under Article 102 TFEU, it is first necessary to establish a dominant position.1738 Whether an undertaking has a dominant position must be assessed in relation to the product market, the geographical market, and whether this position is temporary (the temporal factor).1739 The relevant product market consists of all products or services that are seen as interchangeable by the consumer.1740 The relevant product market can also be determined by the SSNIP test, which is a hypothetical test that investigates the smallest range of products in which a monopolist could introduce a price increase without leading to losses.1741 But like in the United States, some scholars have questioned the relevancy of a traditional analysis to technology markets.1742 Traditional measures, such as the SSNIP test, might sometimes be difficult to use, especially for business models where the transferee does not pay a monetary price.1743 In technology markets, it might also be necessary to give special thought on how to establish the relevant product market and calculate market share.1744


1737 Thus roughly corresponding to Sherman Act Section 1 and 2.


1740 Commission Notice on the definition of relevant market for the purposes of Community competition law, 1997 O.J. (C 372) 5, para. 7.

1741 Craig & de Búrca, supra note 1739, at 1017.

1742 See Jones & Sufryn, supra note 1670, at 361–363 (5th ed.).

1743 See supra section 2.2 (Regarding such business models, for example the Facebook model.).

1744 Or how to use market shares in emerging markets. See Case T-340/03, France Télécom SA v. Commission, 2007 E.C.R. II-107, paras. 93, 99–121 (The applicant claimed that “[m]arket power cannot be assessed on the basis of market shares on an emerging market. Such a
The relevant geographical market is the area in which the conditions of competition are homogeneous, and can be distinguished from other areas.\textsuperscript{1745} The temporal factor takes into account whether market power fluctuates at certain times of a year as a result of competitors’ products being out of season.\textsuperscript{1746}

An undertaking must have market power/dominant position in the relevant market to fall under Article 102 TFEU. A dominant position “relates to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.”\textsuperscript{1747} A market share over 75 percent can in itself be evidence of a dominant position,\textsuperscript{1748} but a lower market share can also constitute a dominant position — when compared to competitors’ market share, and when other factors are taken into account.\textsuperscript{1749} The “minimum” market share where a dominant position has been found is in the range of 40–50 percent, but at those levels, other factors becomes important as well.\textsuperscript{1750} For example, in United Brands,\textsuperscript{1751} a market share of 40–45 percent was considered a dominant position, but that market share was almost the double of the nearest competitor.\textsuperscript{1752} Companies with a very large market share — sometimes labeled as “super-dominant” — are

\textsuperscript{1745} Commission Notice on the definition of relevant market for the purposes of Community competition law, 1997 O.J. (C 372) 5, para. 8.
\textsuperscript{1746} Craig & de Búrca, supra note 1739, at 1017.
\textsuperscript{1749} Jones & Sufrin, supra note 1670, at 337–340 (5th ed.).
\textsuperscript{1750} Id. at 339–340.
\textsuperscript{1752} Id. at paras. 105–112. See also Jones & Sufrin, supra note 1670, at 339 (5th ed.). There are a number of examples where market shares in the range of roughly 40–50 percent have been considered a dominant position; for example, Case 85/76, Hoffmann-La Roche & Co AG v. Commission, 1979 E.C.R. 461 (43 percent market share.); Case C-62/86, AKZO Chemie BV v. Commission, 1991 E.C.R. I-3359, para. 60 and Case T-228/97, Irish Sugar plc v. Commission, 1999 E.C.R. II-2969 (More than 50 percent market share.).
said to have a special responsibility towards the competitive process.\textsuperscript{1753} Other factors than market share, in absolute or relative numbers, can also indicate a dominant position.\textsuperscript{1754} For example, the possession of intellectual property rights. While this factor does not constitute dominance in itself, it can be a factor to indicate dominance.\textsuperscript{1755}

A dominant position does not in itself constitute abuse of dominant power. A dominant undertaking must abuse its position to be caught by Article 102 TFEU. Abusive conducts may include, for example,\textsuperscript{1756} price discrimination,\textsuperscript{1757} predatory pricing,\textsuperscript{1758} and tying arrangements.\textsuperscript{1759}

But potential offenses in technology markets might not always be examined in court. Settlements and agreements between competition authorities and potentially infringing undertakings are becoming increasingly common.\textsuperscript{1760} This makes it more difficult to predict legal outcomes.

Article 101 TFEU may become applicable when undertakings enter agreements that either have the object or the effect of affecting trade between Member States.\textsuperscript{1761} Whether an agreement is anticompetitive is assessed, inter alia, on the basis of the provisions, the objectives the agreement seeks to attain, as well as the economic and legal context of the agreement. It is also possible to examine the parties’ intention.\textsuperscript{1762} However, obvious restrictions of competition do not require an assessment of anticompetitive effect. This includes price-fixing, and market-sharing,\textsuperscript{1763} creation of exclusive sales

\textsuperscript{1753} Case 322/81 Michelin v. Commission, 1983 E.C.R. 3461, para. 57. See also Craig & de Búrca, supra note 1739, at 1019.
\textsuperscript{1754} See Jones & Sufrin, supra note 1670, at 354–359 (5th ed.) (Such factors include for example legal regulation, vertical integration and financial resources.).
\textsuperscript{1756} See generally Jones & Sufrin, supra note 1670, at 367–372 (5th ed.).
\textsuperscript{1760} See Jones & Sufrin, supra note 1670, at 363 (5th ed.) (“The recent tendency of the Commission is to deal with cases in the digital economy by way of Commitments Decisions, a strategy which leaves many questions untested, including those of the finding of a dominant position.”).
\textsuperscript{1761} Article 101(1) TFEU.
territories, unless such restrictions can be justified. Another exemption applies to agreements that have a negligent effect on competition.

National Level

The German Act Against Restraints on Competition (GWB) is to some extent an implementation of European Union competition law, but German competition law has retained some older, stricter elements without direct counterparts in European Union competition law. For example, a company is presumed to be in a dominant position if it has a market share that exceeds a third of the relevant market, which is lower than the threshold set forth by the CJEU. The GWB is more explicit than Union law on when abuse is likely to exist, for example, when an undertaking refuses

1766 That is, if the undertakings can prove that the agreement contributes “to improving the production or distribution of goods or to promoting technical or economic progress.” See Article 101(3) TFEU; Joined Cases C-501/06 P, C-513/06 P, C-515/06 P and C-519/06 P, GlaxoSmithKline Services Unlimited, formerly Glaxo Wellcome plc v. Commission, 2009 E.C.R. I-9291, paras. 82–84, 92.
1767 Commission Notice on agreements of minor importance which do not appreciably restrict competition under Article 81(1) of the Treaty establishing the European Community (de minimis), 2001 O.J. (C 368) 13, points 7 and 11 (Between competitors, this exemption applies to agreements between undertakings with a combined market share of less than 10 percent. Between non-competitors, the combined market share ceiling is 15 percent. This exemption does not apply to certain “hardcore restrictions.” Between competitors, this includes agreements that fix prices, or allocate markets or customers. Between non-competitors, this includes agreements that fix prices, or imposes certain limits on territory.).
1768 GESETZ GEGEN WETTBEVERBSBESCHRÄNKUNGEN [GWB] [Act Against Restraints on Competition] July 27, 1957, BGBl. 1 at 1081 (Ger.).
1769 Concerning the implementation of European Union competition law, see Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. (L 1) 1 (EC).
1770 Andreas M. Klees, Breaking the Habits: The German Competition Law after the 7th Amendment to the Act against Restraints of Competition (GWB), 7 GERMAN L.J. 399, 406 (2006).
1772 GWB § 19(4) (Ger.).
another undertaking access to its own network or other infrastructure against adequate remuneration.1774

GWB Sections 19 and 20(1) apply to dominant undertakings. While GWB Section 19 is potentially stricter than Article 102 TFEU, it is still in principle very similar to Article 102 TFEU.1775 The relevant product market consists of products or services that are interchangeable through demand or function. However, it is argued that the Bundeskartellamt [Federal Cartel Office] defines the product market narrowly.1776 In *GSM-Gateway,*1777 the court examined GSM converters.1778 The court said that the relevant product market concerned routing of incoming calls from landlines in the carrier’s mobile network, and that there was no available substitutes. Operators of GSM-converters were not competitors to network carriers, since the network carrier did not accept operators of GSM-converters as buyers of sim cards.1779 The geographical market “encompasses the area in which the undertaking is active and the conditions of competition are sufficiently homogeneous, and can be limited to neighbouring areas.” The BGH has been limiting the relevant geographical market to Germany, even if there has been cross-border activity. If undertakings operate on even narrower markets, for example due to transport costs or feasibility, the relevant geographical market is further narrowed.1780

Whether an undertaking has a dominant position depends on how independently it can act from its competitors.1781 GWB Section 19(3) includes two presumptions of dominance: (1) Under a monopoly evaluation, a market share that exceeds a third is considered a dominant position; and (2) under an oligopoly evaluation, if three undertakings or fewer have a market share that exceeds 50 percent, or if five undertakings or fewer have a market share

1774 *Id.* at § 19(4) No. 4. This abuse might be applicable to network industries, such as software. *See* Klee’s, *supra* note 1770, at 406.
1776 *See* Chirita, *supra* note 1775, at *10–11.
1777 OLG Düsseldorf Sep. 28, 2005, VI-U (Kart) 11/05 (“*GSM-Gateway*”) (Ger.).
1778 A GSM converter routes outgoing calls from a landline through a sim card to the receiving party. Thus, by using a GSM card that operates on the same mobile network as the receiving party, the caller can bypass connection rates. To avoid this, network carriers prohibit the use of sim cards in GSM converters.
1779 *Id.* at para. 39. *See also* Chirita, *supra* note 1775, at *10. It should be noted that the BGH later concluded that this practice was not abuse. *See* BGH Jun. 29, 2010, WIRTSCHAFT UND WETTBEWERB ENTSCHEIDUNGEN, DEUTSCHLAND RECHTSprechung [WuW/E DE-R] 2963, paras. 36–49 (Ger.).
1780 *See* Chirita, *supra* note 1775, at *11.
1781 *See* *Id.* at *11.
that exceeds two thirds, it is considered an oligopoly.\footnote{See \textit{Id.} at *11.} However, usually the Bundeskartellamt cannot rely only on these presumptions,\footnote{See \textit{Id.} at *12.} but must examine the overall market conditions.\footnote{See \textit{GWB} § 19(2)(2)\footnote{See \textit{Id.} at § 2. Similar to Article 101(3) TFEU.} (Ger.).} Still, in practice, a large market share and strong financial power are important.\footnote{See \textit{Chirita, supra note 1775, at *12–13, fn. 64.} See \textit{ supra section 4.4.3 (Regarding severability.).}}

If an undertaking has a dominant position, a number of practices can constitute abuse of a dominant position, for example, practices associated with pricing (predatory pricing, cross-subsidization, discounts and rebates, or exclusive contracts), tying and bundling, refusal to deal or supply, or discrimination.\footnote{See \textit{Id.} at *15–26.} If a contract constitutes an abuse of a dominant position, or is based on actions that constitute abuse of a dominant position, the contract becomes null and void.\footnote{\textit{BGB} § 134 (Ger.). See \textit{Chirita, supra note 1775, at *15.}} Thus, provisions resulting in abuse of a dominant position cannot be severed.\footnote{\textit{See supra section 4.4.3 (Regarding severability.).}}

Collusion is prohibited under GWB Section 1. All contracts that have the “object or effect the prevention, restriction or distortion of competition” are prohibited,\footnote{\textit{GWB} § 1 (Ger.).} unless the exceptions in Section 2 apply.\footnote{\textit{Id.} at § 2. Similar to Article 101(3) TFEU.} These may apply when consumers get a fair share of the benefits, help improving production and distribution of goods, or promotes technical or economic progress, whilst not being unproportional,\footnote{\textit{GWB} § 2(1) (Ger.).} meaning that the exemptions are unlikely to become applicable. Similar to under European Union law, small and medium-sized undertakings are exempted from Section 1.\footnote{\textit{Id.} at § 3.} Unlike abuse of dominant position, collusion under German competition law is not stricter than under European Union competition law.\footnote{This would not be allowed. See Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. (L 1) 1 (EC), Article 3(2).} Since the two bodies of regulations are so similar, there is little need in expanding the description of the German regulation.

As was said above,\footnote{\textit{See supra section 1.5.2.}} the scope of Union and national competition law can be important. National law cover situations within the national territory,
and Union law can be applied if there is a direct, indirect, actual, or potential effect on trade between the Member States.\(^\text{1795}\) Then, the two regimes might be applied concurrently,\(^\text{1796}\) and when applying national law, Union law must also be applied if the abuse falls within the scope of Union law.\(^\text{1797}\)

### 6.1.3 Comparison of Competition Regulation

American competition law has been very influential over competition law thinking,\(^\text{1798}\) but Europe arguably has a “Competition Law Story” of its own.\(^\text{1799}\) Much scholarly ink has been spilled on differences between American and European Union competition law.\(^\text{1800}\) Such actual or potential differences include: (1) The role of competition authorities, enforcement, and the development of competition law within the systems;\(^\text{1801}\) (2) different views on whether and when the market should be regulated;\(^\text{1802}\) (3) different economic schools of thought;\(^\text{1803}\) (4) different views on the subject of protection;\(^\text{1804}\)

\(^{1795}\) See Commission Notice: Guidelines on the effect on trade concept contained in Articles 81 and 82 of the Treaty, 2004 O.J. (C 101) 81, paras. 6–7.


\(^{1797}\) Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. (L 1) 1 (EC), Article 3(1); GWB § 22(1) (Ger.).

\(^{1798}\) See generally Jones & Sufrin, supra note 1670, at 19 (5th ed.).

\(^{1799}\) See David J. Gerber, Law and Competition in Twentieth Century Europe: Protecting Prometheus 6–8 (Oxford University Press: Oxford 1998); Jones & Sufrin, supra note 1670, at 34–35 (5th ed.).

\(^{1800}\) From an American perspective, see, e.g., Eleanor M. Fox, Monopolization and Dominance in the United States and the European Community: Efficiency, Opportunity, and Fairness, 61 Notre Dame L. Rev. 981 (1986); Jilsen & Stevens, supra note 1707, at 443; Reza Dibadj, Article 82: Gestalt, Myths, Questions, 23 Santa Clara Computer & High Tech. L.J. 615, 617–618 (2007). From a European Union perspective, see Jones & Sufrin, supra note 1670, at 20–21 (5th ed.).

\(^{1801}\) See Jones & Sufrin, supra note 1670, at 20–21 (5th ed.) ((a) The American competition authorities acts as prosecutors but not as decision makers, while European Union competition authorities acts as both. (b) Private litigation is common in the U.S., but not within the European Union. (c) The highest European Union competition authority has been instrumental in the development of European Union competition law, unlike in the U.S.).


\(^{1803}\) See J. Thomas Rosch, I Say "Monopoly," You Say "Dominance": The Continuing Divide on the Treatment of Dominant Firms, is it the Economics?, 153 Antitrust Counselor Article 1 (2007) (American competition law is heavily influenced by the Chicago School, while European competition law is influenced by so-called post-Chicago School theory.).

\(^{1804}\) Article 102 TFEU covers both exploitation of consumers and anti-competitive behavior against competitors, as well as the “structure of the market and thus competition as such.” See Case C-95/04, British Airways plc v. Commission, 2007 E.C.R. I-2331, Opinion of AG
(5) responsibilities of undertakings with a large market share;\textsuperscript{1805} (6) the requirement of intent or strict liability;\textsuperscript{1806} and (7) differences between subject matter input and output.\textsuperscript{1807} However, there are similarities, such as the requirement of defining the relevant market, through the relevant product and geographical market, finding market power and abuse. Also, there are similarities regarding who can challenge anticompetitive behavior.\textsuperscript{1808} Ger-

\textsuperscript{1805} Under European Union law, such companies are said to have “special responsibility towards the competition process.” See Case 85/76, Hoffmann-La Roche & Co AG v. Commission, 1979 E.C.R. 461. American competition law have no such requirement. See Jones & Sufrin, supra note 1679, at 346 (3rd ed.).

\textsuperscript{1806} It has been argued that Article 102 TFEU imposes strict liability, while Section 2 of the Sherman Act requires intent. See JebSEN & Stevens, supra note 1707, at 488–489. Compare Case 85/76, Hoffmann-La Roche & Co AG v. Commission, 1979 E.C.R. 461, para. 91 (“The concept of abuse is an objective concept relating to the behavior of an undertaking in a dominant position” (emphasis added)); United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 342 (D. Mass. 1953), aff’d per curiam, 347 U.S. 521 (1954).

\textsuperscript{1807} Section 2 of the Sherman Act can be likened to a funnel, while 102 TFEU can be likened to a funnel turned upside-down. The American regulation is theoretically applicable to many situations, but the output is narrow. The European Union regulation has a more limited input, but the output is wider than in the U.S, since more conducts can be considered abuse under European Union competition law. See Jones & Sufrin, supra note 1679, at 346 (3rd ed.).

\textsuperscript{1808} This right is given to competition law authorities, such as the European Commission, the German Bundeskartellamt, and the U.S. Department of Justice. This right also applies to private parties that have been harmed by anticompetitive agreements. See 15 USC § 26; Holmes & Mangiabacina, supra note 1725, at § 2:2; Joined Cases C-295/04 to C-298/04, Manfredi v. Lloyd Adriatico Assicurazioni SpA, 2006 E.C.R. I-06619, para. 61 (“[W]here there is a causal relationship between that harm and an agreement or practice prohibited

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man competition law has traditionally been influenced by American competition law, but added a German character to it.\textsuperscript{1809} Today, German competition law to some extent is an implementation of European Union competition law, but retains some stricter national characteristics of the earlier German regulation.\textsuperscript{1810}

From a practical perspective, the most important difference is probably the market share required to constitute market power/dominant position. As seen, this requirement is generally lower under European Union law than American law. In the range of 40–50 percent under European Union law,\textsuperscript{1811} while the commonly used Judge Hand formula require more under American law.\textsuperscript{1812} And as seen, German law considers a market share that exceeds one third to be a dominant position, even though the overall market conditions has to be examined.\textsuperscript{1813}

As seen, there might be some questions regarding how to define the relevant product market for digital products and services.\textsuperscript{1814} This problem applies to digital software distribution as well. Digitally transferred software is increasingly becoming a market on its own, since there are no physical media substitutes for mobile applications and cloud software.\textsuperscript{1815} A more compli-
cated question is whether the relevant only encompass a specific software platform, or all software platforms? Even if the answer would be the former, the relevant software market should arguably also encompass cloud software and HTML5 applications, software that is platform independent. The answer must arguably vary between different classes of software and hardware devices. If all platforms in a class are substitutable from a consumer point-of-view, for example if substitutes to third-party software exists in all platforms in the class, or if the platforms themselves are substitutable from a technical or user point-of-view, the relevant product market arguably encompasses all platforms in that class. However, if there is more limited competition between platforms in a class, with less third-party developer interest, the relevant product market is arguably only a single platform within the class.

Another potential issue is that that offenses in the digital economy do not always end up in courts. Especially the European Commission seems to increasingly seek settlements with allegedly infringing undertakings. The problem with this approach is that it becomes increasingly difficult to predict the boundaries of competition law.

6.2 Examples of Relevant Competition law Offenses

Three forms of competition law offenses that might become relevant to software license agreements will be described below: (1) Tying arrangements and software license agreements; (2) agreements that limit access to essential facilities; and (3) agreements between undertakings that limit competition.

6.2.1 Tying Arrangements and Software License Agreements

Tying means that a product or service is supplied under the condition that the customer also obtains something else. Tying can be economic, contractual or technical. The tying can be mixed, or pure. Tying has been considered an illegal practice under both American and European Union competition law. From a software license agreement perspective, contractual tying is

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1816 See supra section 2.1.3 (Regarding cloud computing.).
1817 See Jones & Sufrin, supra note 1670, at 363 (5th ed.).
1818 That is, the tying is voluntary for the customer, but advantageous.
1819 That is, the tying is involuntary for the customer.
clearly relevant.\textsuperscript{1821} Technical tying is relevant to software,\textsuperscript{1822} and also this thesis, when software license agreements prohibit transferees from breaking the tying.\textsuperscript{1823}

**United States**

The Court has long found contractual tying to be per se invalid.\textsuperscript{1824} In *Jefferson Parish Hosp. Dist. v. Hyde*,\textsuperscript{1825} the Court said that per se illegality required market power.\textsuperscript{1826} Contractual tying arrangements are per se invalid, if the following requirements are met: (1) The tied and tying products or services are separate, that is, the products or services have separate market demand; (2) the transfer of the tying product or service is conditioned on the tied product or service; (3) the supplier has market power, that is, “ability … to force a purchaser to do something that he would not do in a competitive market”; and (4) through the tying arrangement, a “not insubstantial” volume of commerce is affected.\textsuperscript{1827} Also, (5) the supplier must generally have an economic interest in the tied and tying products or services.\textsuperscript{1828} Tying arrangements can sometimes be justified with, for example, customer goodwill.\textsuperscript{1829} “The first requirement can cause some difficulties, but of main importance is that there is separate market demand.”\textsuperscript{1830} The second requirement is met if there is an


\textsuperscript{1822} See, e.g., Commission Decision C(2004)900 final of 24 March 2004 relating to a proceeding under Article 82 EC (Case COMP/C-3/37.792 Microsoft); Case T-201/04, *Microsoft v. Commission*, 2004 E.C.R. II-4463; *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001). See also *Jones & Suprin*, supra note 1679, at 514 (3rd ed.) (Technical tying is a pure form of tying where two products are integrated into each other.).

\textsuperscript{1823} See *Dickson v. Microsoft Corp.*, 309 F.3d 193, 199 (4th Cir. 2002).

\textsuperscript{1824} *International Salt Co. v. United States*, 332 U.S. 392, 396 (1947) (“[I]t is unreasonable, per se, to foreclose competitors from any substantial market.”).

\textsuperscript{1825} 466 U.S. 2 (1984).


\textsuperscript{1827} See *Id.* at 9–22 (The Court also noted that “[i]t is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable ‘per se’.”); *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 461–464 (1992). See also *Holmes & Mangiaracina*, supra note 1725, at § 2:18.

\textsuperscript{1828} See *Holmes & Mangiaracina*, supra note 1725, at § 2:18.

\textsuperscript{1829} See *Grappone, Inc. v. Subaru of New England, Inc.*, 858 F.2d 792 (1st Cir. 1988) See also *Holmes & Mangiaracina*, supra note 1725, at § 2:18, fn. 7 (For example, to protect a trademark or concern over patient care.).

express provision in an agreement that conditions tying. Intellectual property rights do not presume market power; market power in the tying product or service has to be proven to meet the third requirement, for example through the ability to raise prices and force purchaser to accept conditions. The fourth requirement, foreclosure of a “not insubstantial” volume of commerce by a tying arrangement is measured in absolute dollars; somewhere around 61,000–200,000 USD have been considered sufficient. To prove the fifth requirement, the seller is not required to sell both the tying and tied items, but an allegation that the seller receives substantial revenues from the tying is not sufficient.

Technical tying has been examined in a software context. In United States v. Microsoft Corp., browser tying was examined. Microsoft bundled its web browser Internet Explorer with its operating system Windows, which was claimed to be an illegal tying. Microsoft argued that the operating system and the browser were one product. The district court found the operating system and web browser to be two separate products, and the bundling to be a per se illegal tying under Section 1 of the Sherman Act. However, the D.C. Circuit Court reversed the district court’s ruling in part. The court found that barriers for entering into the market and attempted monopolization had not been proven. The court also found that a per se tying analysis

1831 See Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 461–464 (1992). See also Holmes & Mangiaracina, supra note 1725, at § 2:18, fn. 22 (For a list of such cases.).
1832 Illinois Tool Works Inc. v. Independent Ink Inc., 547 U.S. 28, 31–38, 45–46 (2006). See Holmes & Mangiaracina, supra note 1725, at § 2:18, fn. 29 (Tying of intellectual property with other products was long considered to presume market power.).
1833 See Holmes & Mangiaracina, supra note 1725, at § 2:18, fn. 32.
1834 See Id. at § 2:18, fn. 39.
1835 Carl Sandburg Village Condominium Ass’n No. 1 v. First Condominium Development Co., 758 F.2d 203, 208 (7th Cir. 1985). See also Holmes & Mangiaracina, supra note 1725, at § 2:18.
1837 A similar argument was unsuccessfully used by Tetra Pak in Case C-333/94 P, Tetra Pak International SA v. Commission, 1996 E.C.R. I-5951.
1838 Microsoft were also said to have attempted to monopolize the browser market under Section 2 of the Sherman Act. See United States v. Microsoft Corp., 87 F.Supp.2d 30, 45–51 (D.D.C. 2000). See also Jones & Sufrin, supra note 1670, at 495 (5th ed.).
1839 United States v. Microsoft Corp., 253 F.3d 34, 82–84 (D.C. Cir. 2001). See also Fox, supra note 1804, at 158–159.
was inappropriate, arguing that bundling software, for example a browser, with an operating system could be in the interest of consumers, since they would then not have to look around for a browser. However, while tying could enhance consumers’ welfare, the court did not consider the practice in this case to be welfare enhancing. The claim was remained to the district court for a trying under a rule of reason approach. Since the Department of Justice withdrew the claims, the alleged the alleged tying was never finally decided under a rule-of-reason approach.

Courts have not been consistent in the analysis of intellectual property licensing and tying. In *MCA Television Ltd. v. Pub. Interest Corp.*, the Eleventh Circuit applied a per se analysis to a collection of television licenses. In *United States v. Microsoft Corp.*, the D.C. Circuit applied a rule of reason analysis to browser bundling. And competition law agencies will apply a rule of reason analysis under the Department of Justice IP-Guidelines. Thus, in practice, tying arrangements are often likely to be challenged based a preliminary rule of reason analysis.

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1840 United States v. Microsoft Corp., 253 F.3d 34, 89–95 (D.C. Cir. 2001) (Arguing that the separate-products test was a “poor proxy for net efficiency from newly integrated products,” and due to “the pervasively innovative character of platform software markets” can “tying in such markets” “produce efficiencies that courts have not previously encountered and thus the Supreme Court had not factored into the per se rule as originally conceived.”).

1841 *Id.* at 95–97. See also *Jones & Sufrin*, supra note 1670, at 495 (5th ed.); *Fox*, supra note 1804, at 158–159.


1845 171 F.3d 1265 (11th Cir. 1999).


1847 253 F.3d 34 (D.C. Cir. 2001).

1848 United States v. Microsoft Corp., 253 F.3d 34, 93 (D.C. Cir. 2001) (“[B]ecause of the pervasively innovative character of platform software markets, tying in such markets may produce efficiencies that courts have not previously encountered and thus the Supreme Court had not factored into the per se rule as originally conceived.”).

1850 U.S. Dep’t of Justice & Fed. Trade Comm’n, Antitrust Guidelines for the Licensing of Intellectual Property § 5.3 (1995) (“The Agencies would be likely to challenge a tying arrangement if: (1) [T]he seller has market power in the tying product, (2) the arrangement has an adverse effect on competition in the relevant market for the tied product, and (3) efficiency justifications for the arrangement do not outweigh the anticompetitive effects. The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner.”).

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Germany

The so-called Microsoft case\textsuperscript{1851} concerned a number of questions under European Union competition law, including technical and contractual tying, as well as questions of competition law and interoperability. The alleged illegal tying was based on the fact that Microsoft bundled its operating system with its media player “Windows Media Player” (WMP). The European Commission stated that prohibited tying including the following elements: (1) “[T]ying and the goods are two separate products”; (2) “the undertaking concerned is dominant in the tying product market”; (3) “the undertaking concerned does give customers a choice to obtain the tying product without the tied product”; and (4) “tying forecloses competition in the relevant market.”\textsuperscript{1852} To these requirements, the element of failure to supply an objective proportionate justification should also be added.\textsuperscript{1853} According to the Commission, and later the General Court, it was primarily OEMs that were coerced, but this coercion was later passed on to consumers. Consumers and OEMs were not able to avoid Windows Media Player from a contractual or technical point of view.\textsuperscript{1854} The coercion was both contractual and technical.\textsuperscript{1855}

From a technical tying perspective, the lack of choice for the customer was considered an important factor.\textsuperscript{1856} The lack of customer choice was also an

\textsuperscript{1854} Case T-201/04, Microsoft v. Commission, 2004 E.C.R. II-4463, paras. 961–962 (“The Court observes that it cannot be disputed that, in consequence of the impugned conduct, consumers are unable to acquire the Windows client PC operating system without simultaneously acquiring Windows Media Player, which means … that the condition that the conclusion of contracts is made subject to acceptance of supplementary obligations must be considered to be satisfied.” “Under Microsoft’s licensing system, it is not possible to obtain a licence on the Windows operating system without Windows Media Player.”).
\textsuperscript{1855} Id. at para. 963.
\textsuperscript{1856} Id. at paras. 650–652. See also JONES & SUFRIN, supra note 1670, at 508 (5th ed.). See
important in other situations concerned with tying, such as *Hilti*. Apart from lack of customer choice, the consequence of exclusion of independent companies on the market has been considered important in other cases concerning technical tying arrangements. It should be noted that the Commission in *Microsoft* did not find technological tying to be illegal per se; it was only a violation of the rule of reason.

The Commission has since issued the Guidance Paper on the application of Article 102, which deals, *inter alia*, with tying. Not all requirements in the *Microsoft* case has found its way into the Guidance Paper. The Commission states that it “will normally take action under Article [102] where an undertaking is dominant in the tying market and where, in addition, the following conditions are fulfilled: (i) the tying and tied products are distinct products, and (ii) the tying practice is likely to lead to anti-competitive foreclosure.” The Guidance Paper does not require lack of customer choice. Finally, it should be noted that while contractual tying in aftermarkets were “virtually a per se abuse” after *Hilti* and *Tetra Pak II*, neither contractual nor technical tying are per se illegal today; both require anti-competitive foreclosure.

*also Case 85/76, Hoffmann-La Roche & Co AG v. Commission, 1979 E.C.R. 461, para. 90 (Regarding exclusionary practices.).*


*Commission decision C(2004)900 final of 24 March 2004 relating to a proceeding under Article 82 EC (Case COMP/C-3/37.792 Microsoft), recital 841–842. See also JONES & SUFRIN, supra note 1679, at 527 (3rd ed.).* 

*See Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, 2009 O.J. (C 45) 7, para. 47–74. See also JONES & SUFRIN, supra note 1670, at 506–509 (5th ed.).* 


*See Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, 2009 O.J. (C 45) 7, para. 50.*

*JONES & SUFRIN, supra note 1670, at 506 (5th ed.).*

*See Id. at 489.*

*See Id. at 478. See also Communication from the Commission — Guidance on the Com-
The result under national law is similar. Coupling goods or services is generally permitted, unless this leads to a significant impediment of competition. For example, when a dominant undertaking in one market couples products or services that do not belong together, factually or due to industry practice, as a way to expand its dominant position into a non-dominant market.  

However, tying can sometimes be justified for technical reasons, if, for example, the use of material from other sources could damage the goodwill of the supplier. Tying can sometimes also be justified for shorter periods of time as purchase incentives, especially for introduction of new products in markets with high barriers to entry. Examples of contractual tying include, for example, exclusive purchase obligations of material from the supplier, or only offering several products in a block. Or, for example, if the tying creates an economic link, where the total sum of the two items is below their value. As an example, in NJW 2004, 2375 (“Deutsche Telekom”), the BGH examined tying in the form of price combinations. Deutsche Telekom had a dominant position for landlines and a strong position for Internet access. It offered a price combination for landlines and Internet access. The BGH said that there was no functional need to tie the services together. Even if this tying did not make it impossible for customers to switch to another Internet access provider, it could impede customers from choosing another provider in the future. Deutsche Telekom was found to have abused its dominant position through tying.

Comparison

In a software context, technical and contractual tying is often related. For example, in the European Microsoft case, the Commission found that bundling the media player Windows Media Player with the operating system was contrary to the interest of consumers, since it deprived consumers of contractual

mission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, 2009 O.J. (C 45) 7, para. 50.

BGH Mar. 30, 2004, NJW 2004, 2375 (“Deutsche Telekom”), para. 17 (Ger.).


Chirita, supra note 1775, at *19–20.

Immenga & Mestmäcker, supra note 1867, at Erster Teil. Zweiter Abschnitt. § 20. A. V. 5(c)(dd)(δ), recital 205 (For example, in the press industry).


BGH Mar. 30, 2004, NJW 2004, 2375 (“Deutsche Telekom”) (Ger.).

Id. at paras. 17–22.

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and technical alternatives led to a lack of choice, and the General Court found that the contractual tying made it impossible for consumers and OEMs to license the software without Windows Media Player. The same was true in United States v. Microsoft Corp., where most OEM software license agreement restrictions violated the Sherman Act, and the technical tying might have violated the rule of reason. Thus, there will often be a nexus between contractual and technical tying, especially if a software license agreement upholds technical tying.

Contractual tying can be associated with contractual obligations to purchase additional products and services exclusively from a certain supplier. But from a software license agreement perspective, tying is arguably most relevant from an OEM software license agreement perspective. Still, the Microsoft case shows that this can also affect consumers. As seen, contractual tying can be invalid under German, European Union, and American law. A major part of a tying investigation focuses on whether the two items are separate and whether there is separate market demand. The analyses used to determine this are arguably quite similar. There are arguably greater differences when it comes to technical tying, as the cases concerning Microsoft shows. Such differences might indirectly affect software license agreement validity.

It is difficult to formulate simple standards for when software license agreements will be invalid under a tying analysis. This depends on several factors,
for example, how programs or software elements are packaged for distribution. If software is tied through technological means, the Microsoft case shows that software license agreements reproducing and governing such tying can also become a violation in itself. Still, liability under a tying analysis is an exception for transferors, and very few transferors have been found liable. But certain transferors must take this risk into account when drafting software license agreements.

6.2.2 Limiting Access to Essential Facilities

In many industries, undertakings are dependent on other undertakings that control necessary material and infrastructure. Limiting or refusing access to such facilities can severely limit the ability to compete in a market. This is recognized as a problem under the essential facilities doctrine. The doctrine has been applied to a number of different situations, for example, to raw materials, harbors, railways, airports, or intellectual property.\textsuperscript{1880} It has also been suggested to be applicable to provisions in software license agreements prohibiting reverse engineering.\textsuperscript{1881}

United States

The essential facilities doctrine catches certain forms of refusal to supply. In \textit{United States v. Colgate & Co.},\textsuperscript{1882} the Supreme Court expressed the primary principle regarding refusal to supply. If a private undertaking has no purpose to maintain or acquire a monopoly, the undertaking may chose, at its own discretion, who to deal with.\textsuperscript{1883} However, that freedom of choice becomes limited when Section 2 of the Sherman Act can catch a practice.\textsuperscript{1884} In \textit{United States v. Terminal Railroad Assn. of St. Louis},\textsuperscript{1885} the Court examined a railroad consortium that controlled all switches and bridges over the Mississippi River, which prevented competitors to carry passengers and freight traffic to those destinations. The Court said that the railroad consortium had to “place every

\textsuperscript{1882} 250 U.S. 300 (1919).
\textsuperscript{1883} Id. at 307.
\textsuperscript{1885} 224 U.S. 383 (1912).
such [railroad company] upon as nearly an equal plane as may be with respect to expenses and charges as that occupied by the [consortium members]."\textsuperscript{1886} This is considered as the origin of the essential facilities doctrine.\textsuperscript{1887} The doctrine has also been applied to intellectual property rights.\textsuperscript{1888}

When courts have applied the doctrine,\textsuperscript{1889} they have generally used the test set forth by the Seventh Circuit in \textit{MCI}.\textsuperscript{1890} According to the test, an undertaking with monopoly power will violate Section 2 of the Sherman Act if the following elements are present: "(1) [C]ontrol of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."\textsuperscript{1891} The second element is perhaps the most interesting. Without an essential facility, competitors should no be able to "effectively compete in the relevant market."\textsuperscript{1892} Also, the benefits of an essential facility must not be obtainable from other sources.\textsuperscript{1893} And even if a facility is essential, most courts acknowledge that a legitimate business justification would allow a violator to escape liability.\textsuperscript{1894}

In recent years, the scope of the doctrine has been redefined. In \textit{Verizon Communications v. Law Offices of Curtis V. Trinko, LLP ("Trinko")},\textsuperscript{1895} the

\textsuperscript{1887} U.S. DEP’T OF JUSTICE, supra note 1886, at Chapter 7, III, B. Some have argued the term "doctrine" should be taken with a grain of salt. See Phillip Areeda, \textit{Essential Facilities: An Epithet in Need of Limiting Principles}, 58 ANTITRUST L.J. 841, 841 (1989) ("It is less a doctrine than an epithet, indicating some exception to the right to keep one’s creations to oneself, but not telling us what those exceptions are.").
\textsuperscript{1888} See Data General v. Grumman Systems Corp, 36 F.3d 1147 (1st Cir. 1994).
\textsuperscript{1889} For a collection of cases where the doctrine has been applied by Circuit Courts, see Einer Elhauge, \textit{Defining Better Monopolization Standards}, 56 STAN. L. REV. 253, 261–62, fn. 20 (2003).
\textsuperscript{1891} MCI Commc’ns Corp. v. AT&T Co., 708 F.2d 1081, 1132–33 (7th Cir. 1983).
\textsuperscript{1895} 540 U.S. 398 (2004).
Court said that the essential facilities doctrine had been “crafted by some lower courts.” The Court did not only refrain from applying the essential facilities doctrine, it also refused to acknowledge that it ever had recognized such a doctrine.\footnote{Verizon Communications v. Law Offices of Curtis V. Trinko, LLP., 540 U.S. 398, 410–411 (2004) (“We have never recognized such a doctrine,... and we find no need either to recognize it or to repudiate it here.”). The Court had mentioned the doctrine previously, but never taken a stance on it. See Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 611, fn. 44 (1985) (Due to the circumstances in that case, the Court found it “unnecessary to consider the possible relevance of the 'essential facilities' doctrine.”).} \textit{Trinko} concerned telecommunications, and the existence of a “regulatory structure designed to deter and remedy anticompetitive harm” — in the present case the Federal Communications Commission (FCC) and New York’s Public Service Commission (PSC) — limited the added benefit of competition enforcement.\footnote{Verizon Communications v. Law Offices of Curtis V. Trinko, LLP., 540 U.S. 398, 411–415 (2004). This ruling has attracted some criticism. See Spencer Weber Waller, Microsoft and \textit{Trinko}: A Tale of Two Courts, 2006 Utah L. Rev. 741, 742 (2006) (Arguing that the Court “is wrong on the law, wrong on the facts, wrong as a matter of procedure, wrong as a matter of economics, wrong as a matter of institutional competencies, and a poor contrast with the way Section 2 legal standards have been articulated by courts in antitrust cases since the passage of the Sherman Act.”).} Since then, lower courts have followed the ruling in \textit{Trinko}, and have been careful to apply the doctrine.\footnote{See Covad Communications Company v. Bell Atlantic Corp., 398 F.3d 666, 670 (D.C. Cir. 2005).} Additionally, the Antitrust Modernization Commission recommended in 2007 that “[r] efusals to deal with horizontal rivals in the same market should rarely, if ever, be unlawful under antitrust law, even for a monopolist.”\footnote{Antitrust Modernization Commission, \textit{Report and Recommendations} 101 (2007). \textit{See also} Waller & Tasch, \textit{supra} note 1890, at 744.} In 2008, the Department of Justice said that the doctrine “is a flawed means of deciding whether a unilateral, unconditional refusal to deal harms competition.”\footnote{U.S. Dep’t of Justice, \textit{supra} note 1886, at Chapter 7, III, B. \textit{See also} Waller & Tasch, \textit{supra} note 1890, at 744.} In \textit{Pac. Bell Tel. Co. v. linkLine Commc’ns, Inc.},\footnote{129 S.Ct. 1109 (2009).} the Supreme Court reaffirmed \textit{Trinko} as the limit of the essential facilities doctrine.\footnote{129 S.Ct. 1109 (2009).} Thus the doctrine has arguably fallen out of favor with courts, lawmakers, and the Department of 
Justice. Still, claims have been upheld under the doctrine, but only when a dominant undertaking has changed its behavior in an unregulated market.

Germany

In general, a transferor may determine how to exploit its intellectual property within the subject matter of the exclusive rights. However, as was said in *Magill*, “the exercise of an exclusive right by the proprietor may, in exceptional circumstances, involve abusive conduct.” In such situations, the essential facilities doctrine might become applicable. Granted, the CJEU has avoided using the term, but much discussion about refusal to supply has been framed “in terms of essential facilities,” so the term “essential facilities doctrine” will be used under European Union law. The CJEU has examined the essential facilities doctrine in a number of cases, some concerning intellectual property.

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1903 Some scholars still find the question to be uncertain. See William H. Page & John E. Lopatka, *Bargaining and Monopolization: In Search of the “Boundary Of Section 2 Liability” Between Aspen And Trinko*, 73 Antitrust L.J. 115, 152 (2005) (“We are left with the clear rule that monopolists do not have a duty to assist their competitors, except when they do.”).


1907 *Id.* at para. 50.


1909 *Jones & Sufrin, supra* note 1670, at 513 (5th ed.).

The CJEU has set forth two tests to determine when the “exceptional circumstances” described above apply. In Bronner, the court said that a refusal was abusive when: (1) The refusal is likely to eliminate any competition in the relevant market; (2) it cannot be objectively justified; and (3) the product or service is indispensable to competitors. The CJEU has also applied the doctrine to situations that directly concerned intellectual property, such as Magill, or IMS Health. In IMS Health, the CJEU added an additional prerequisite for intellectual property rights: “That refusal is preventing the emergence of a new product for which there is a potential consumer demand.”

The European Commission has acted several times on software transferors not supplying interoperability information. The most famous action by the Commission concerned Microsoft, later examined by the General Court, known as the Microsoft case. Microsoft was accused of not supplying necessary information to ensure third-party interoperability with Windows, thus using its dominant position to lever prospective transferees to its own, better integrated, software. The Commission identified three relevant markets, the market for work group server software being most

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1913 Id. at para. 41; Commission decision C(2004)900 final of 24 March 2004 relating to a proceeding under Article 82 E.C (Case COMP/C-3/37.792 Microsoft), recital 554, fn. 670. See also Lévêque, supra note 1911, at 73.
1916 Lévêque, supra note 1911, at 73–74.
1918 In the early 1980s, the Commission addressed this issue with IBM. The Commission and IBM settled, which means that there is no formal decision, but it led IBM to release sufficient information for interoperability. See Jones & Sufrin, supra note 1670, at 536–537 (5th ed.); Seungwoo Son, Can Black Dot (Shrinkwrap) Licenses Override Federal Reverse Engineering Rights?: The Relationship Between Copyright, Contract, and Antitrust Laws, 6 Tul. J. Tech & Intell. Prop. 63, 141 (2004).
1921 Lloyd, supra note 1674, at 435–436.
1922 PC operating systems, work group server operating systems, and streaming media players.
relevant for our question. The Commission concluded that Microsoft had a dominant position in this market, and there were barriers to entry in this market. Microsoft argued that its competitors could achieve interoperability through reverse engineering, but the Commission said that such practice was uncertain, especially when Microsoft updated its software. The requirements in Bronner were met: (1) Access to interface information was of significant importance from a competitive perspective; (2) lack of sufficient information created “a risk of elimination of competition” and (3) the Commission rejected Microsoft’s justification to protect its “incentives to innovate.” Finally, the Commission said that Microsoft’s practices discouraged innovation, and prevented new functions from reaching the market. Microsoft was found to have abused this position by refusing competitors sufficient information to allow their work-group server software with computers running Microsoft Windows, and was required to disclose “complete and accurate specifications” of all implemented protocols.

Unlike most other Member States, Germany has codified the essential facilities doctrine. The BGH has clarified it is sufficient if the undertaking has a dominant position in the market of infrastructure, a dominant position

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1923 Commission Decision C(2004)900 final of 24 March 2004 relating to a proceeding under Article 82 EC (Case COMP/C-3/37.792 Microsoft), recitals 472, 514 (With a market share of about 60 percent in the work group server operating systems market, and 90 percent market share in the PC operating systems market.).
1924 Id. at recital 541.
1925 Id. at recital 686.
1926 Id. at recital 554, fn. 670.
1927 Id. at recitals 589, 593. (This would limit technical development at detriment to consumers.) See also Jones & Sufrin, supra note 1670, at 537–539 (5th ed.).
1929 Commission Decision C(2004)900 final of 24 March 2004 relating to a proceeding under Article 82 EC (Case COMP/C-3/37.792 Microsoft), recital 693–700. See also Lévêque, supra note 1911, at 74–75 (The Commission does not mention the test in IMS, since that verdict had yet to arrive, but uses similar arguments as the CJEU in IMS, and would have met the requirements of IMS.).
1932 GWB § 19(4), No. 4 (Ger.); Waller & Tasch, supra note 1890, at 749.
in the downstream market is not required.\textsuperscript{1933} The doctrine has been applied to electricity networks, docks, mobile communication, timetable information systems, and ticket sales networks.\textsuperscript{1934} In \textit{Soda-Club},\textsuperscript{1935} an undertaking sold carbonator kits at a low cost, but tried to make more profits by controlling the secondary market for CO\textsubscript{2}-cylinder filling. The undertaking gained control over this latter market by making retailers replace empty cylinders with the undertaking’s own cylinders. The undertaking also claimed ownership over the cylinders, so the customers merely rented them. And the undertaking tried to prevent others from refilling CO\textsubscript{2}-cylinder without permission. The undertaking was dominant on the market for CO\textsubscript{2}-cylinder filling, to be used in carbonators.\textsuperscript{1936} The Bundeskartellamt found that the undertaking was abusing its power under national and European Union competition law, based on the combined rental system and exclusive refilling right. The undertaking was required to allow refilling by other parties.\textsuperscript{1937} The court of appeal confirmed this decision.\textsuperscript{1938} Finally, the BGH also found the practice to be an abuse of a dominant position under the GWB and European Union law.\textsuperscript{1939}

Other forms of refusal from a dominant undertaking can be prohibited under the general prohibition against discriminatory commercial conduct by a dominant commercial undertaking.\textsuperscript{1940} For example, if an undertaking has licensed intellectual property to some undertakings, the BGH has found it

\textsuperscript{1933} BGH Jun. 28, 2005, BGHZ 163, 296 (Ger.). \textit{See also} Waller & Tasch, \textit{supra} note 1890, at 749.
\textsuperscript{1935} OLG Düsseldorf Mar. 14, 2007, VI-Kart 5/06 (V) (“\textit{Soda-Club}”) (Ger.); BGH Mar. 4, 2008, NJW-RR 2008, 996 (Ger.).
\textsuperscript{1937} OLG Düsseldorf Mar. 14, 2007, VI-Kart 5/06 (V), paras. 7–22 (“\textit{Soda-Club}”) (Ger.).
\textsuperscript{1938} As a remedy, the undertaking had to place a label with the following text on the cylinders: “Dieser Zylinder sowie alle übrigen Zylinder des derzeit umlaufenden Zylinderbestandes dürfen nicht nur vom S.-C., sondern – unter Beachtung der gesetzlichen Vorschriften – auch von anderen Abfüllunternehmen befüllt werden.” \textit{See also} Podszun, \textit{supra} note 1936, at 696–698, fn. 26 (“This cylinder and all of the currently circulating cylinder stock may be refilled not only by Soda Club but also — in compliance with statutory provisions — by other bottlers.”).
\textsuperscript{1939} OLG Düsseldorf Mar. 14, 2007, VI-Kart 5/06 (V), paras. 24–102 (“\textit{Soda-Club}”) (Ger.). \textit{See also} Podszun, \textit{supra} note 1936, at 697–699.
\textsuperscript{1940} GWB § 20(1) (Ger.).
to be an abuse if the undertaking refuses to license the intellectual property to a competitor of these undertakings. However, this is unlikely to apply to standard software.

Comparison
The problems described above often concern what is known as “refusal to deal.” Transferors are not likely to refuse transferring standard software to potential transferees. But the doctrine might still become relevant in certain situations. This might include software license agreements aimed at third-party developers and provisions regarding, inter alia, access to software distribution channels. Also, this might include situations where transferors are not supplying sufficient interoperability information, and the software license agreement prohibits reverse engineering. In such situations, the essential facilities doctrine could apply. There are two major differences between European Union/German law and American law: (1) The doctrine is stricter in Europe, and (2) the doctrine is more likely to be applicable in Europe. Since Trinko, the American version of the doctrine has primarily been applicable only when a dominant undertaking has changed its behavior in an unregulated market. Thus, it is presently more likely that the doctrine will be applicable under German law than under American law.


1944 See Drexl, supra note 1942, at 790.

1945 See Jones & Sufrin, supra note 1670, at 536 (5th ed.).


6.2.3 Competition Limitations Between Undertakings

Software not aimed at end users might create different kinds of problems. Especially for specialized software, but sometimes also to mass-distributed standard software with anonymous standard software license agreements. Such software transfers can be both horizontal and vertical, that is, the parties may be at the same or different levels in the supply/distribution chain. Examples of such software could be, for example, developer tools, frameworks, and filters, processing software and other backend tools that can be incorporated into other software. These examples can be both standard and specialized software.\footnote{See supra section 1.3.3 (Regarding the focus on standard software.).} Like end user software, software license agreements for such software may contain positive or negative provisions, which could make competition law relevant.

Both horizontal and vertical arrangements might cause concern.\footnote{See supra note 1850, at § 4.3 (“The safety zone is designed to provide owners of intellectual property with a degree of certainty in those situations in which anticompetitive effects are so unlikely that the arrangements may be presumed not to be anticompetitive without an inquiry into particular industry circumstances.”).} But competition law recognizes that not all agreements between undertakings pose a threat to competition. To exempt certain agreements from a competition law analysis and create some level of certainty for transfers,\footnote{U.S. Dep’t of Justice & Fed. Trade Comm’n, supra note 1850, at § 4.3 (“The safety zone is designed to provide owners of intellectual property with a degree of certainty in those situations in which anticompetitive effects are so unlikely that the arrangements may be presumed not to be anticompetitive without an inquiry into particular industry circumstances.”).} different legal systems have enacted block exemption guidelines for certain agreements.\footnote{Fesobi, supra note 1673, at 217–219.}

If an agreement falls within the scope of these guidelines, the exception of no competition law analysis applies. If an agreement falls outside the scope of these guidelines, the main rule of competition law analysis applies. A relevant question for transferors is therefore when such exceptions apply.

United States

American competition law includes a safe harbor, which exempts certain agreements from a competition law evaluation. A restraint in an agreement falls within the “safety zone” and will not be challenged, “[a]bsent extraordinary circumstances,” if: (1) The restraint is not a per se violation; and (2) the combined market share of the parties does not exceed 20 percent. If market share data is unavailable or unsuitable, the second requirement can be substituted. For a licensing arrangement in a technology market, the second requirement reads: (2 alt.) “[T]here are four or more independently con-
trolled technologies in addition to the technologies controlled by the parties to the licensing arrangement that may be substitutable for the licensed technology at a comparable cost to the user.” It should be noted that even if a licensing arrangement falls outside the scope of the safety zone, it does not make that arrangement anticompetitive.

Germany

Block exemption is regulated in the so-called Technology Transfer Block Exemption Regulation (TTBER). Technology transfer agreements between two undertakings that fall within the market share thresholds are exempted and fall outside the scope of Article 101 TFEU, unless the agreement contains certain restrictions. First, only bilateral agreements, that is, agreements between two undertakings, fall within the scope of block exemption. But it is argued that a certain amount of analogous application is possible. Second, the parties combined market share must not exceed 20 percent if they are competitors, 30 percent if they are not competitors. Third, agreements must not include provisions that are so serious that block exemption becomes inapplicable. This include: (1) Certain “hardcore restrictions,” for example, allocation of markets, restriction of territories, or fields of use; and (2) less serious, “excluded restrictions,” such as grant-back clauses. Limitations for serious provisions apply both if the parties are competitors and if they are not competitors, but the requirements are stricter between competitors.

1952 U.S. Dep't of Justice & Fed. Trade Comm'n, supra note 1850, at § 4.3.
1953 Id. at § 4.3 (“Indeed, it is likely that the great majority of licenses falling outside the safety zone are lawful and procompetitive.”).
1958 Id. at Article 4(1–2). See also Leupold & Glossner, supra note 1668, at Teil 3. B. VI. 4(a). recital 76.
Comparison

Both American and European Union competition law includes exceptions when a competition law analysis will not be applicable. From a European Union perspective, an agreement will fall within the safe harbor as long as it is a bilateral technology transfer, is not exceeding market share thresholds,\(^{1960}\) and does not include certain prohibited restrictions.\(^{1961}\) From an American perspective, an agreement will fall within the safe harbor if the combined market share of the parties does not exceed 20 percent.\(^{1962}\) There are a number of differences between the two systems, especially: (1) The European Union exemption regulation is much more detailed than the American exemption regulation;\(^{1963}\) and (2) the European Union exemption regulation separates competitors and non-competitors, with different market share requirements and exempted restrictions. The American regulation does not distinguish between competitors and non-competitors, but focuses on the nature of the agreement.\(^{1964}\)

To avoid a competition law analysis, a transferor must not: (1) Exceed relevant market share levels under the regimes; and (2) be a per se violation under American law, or include hardcore or excluded restrictions under the European Union regulation. Otherwise, the transfer may be liable to a competition law analysis under Article 101 TFEU/Sherman Act Section 1.

6.3 Summary

As seen, competition law might become relevant to software license agreements in certain situations. The requirements for competition law liability are similar in the United States and Germany (national and Union level). However, the German and European Union requirements for market power are likely to be lower than the American requirements. Transferors are also generally more likely to be liable under German/European Union law than under American law, since important competition law tools like the essential

\(^{1960}\) The threshold is 30 percent market share between non-competitors, and 20 percent market share between competitors.

\(^{1961}\) Jones & Sufrin, supra note 1670, at 894 (5th ed.).

\(^{1962}\) U.S. Dep't of Justice & Fed. Trade Comm'n, supra note 1850, at § 4.3.


\(^{1964}\) See Fesobi, supra note 1673, at 223–224.
facilities doctrine are much more likely to be applicable in Europe. Both European Union and American law contains an exception for certain agreements between undertakings. To avoid a competition law analysis, transferors must take the boundaries of such exceptions into account.

Still, competition law liability is likely to be an exception, even in Europe. Only a handful of transferors have been found liable under competition law for issues relating to software license agreements for standard software. And only a handful of transferors are likely to be theoretically liable. Also, competition authorities are increasingly settling potential offenses outside court. But the outcome of a competition law is not always predictable, since it can be very open-ended. Also, liability under competition law will be much more noticeable than invalidity under copyright and contract law. Thus, while competition law liability is probably an exception, it is a very problematic exception.

1965 See Jones & Sufrin, supra note 1670, at 363 (5th ed.) (Regarding the recent tendency of Commitments Decisions.).
7 Public Policies

Software license agreements, like all contracts “must not be in conflict either with express statutes or public policy.”1966 “Public policy” is a diverse concept, and can be applicable in many different situations.1967 There are also many different public policies. Certain areas of law include public policy exceptions, for example, contract law and competition law, which limit agreements and practices contrary to public policy. However, some regulation does not only contain public policy exceptions, but the main focus is to uphold a public policy. This includes, for example, data privacy regulation.

7.1 Data Privacy Laws

Privacy is a commonly used term in the public discourse. This is especially true in the U.S., where members of the public, academia, and the judiciary commonly use the term.1968 However: (1) It is difficult or perhaps impossible to define privacy;1969 (2) privacy can mean many different things;1970 (3) laws

1967 Cf. Richard A. Posner, Law & Literature 152–154 (3rd ed., Harvard University Press: Cambridge 2009) (Arguing that even Doctor Faust(us) could have argued that his pact with the devil was contrary to public policy.).

Some definitions focus on freedom from public attention or “interference with one’s acts or decisions.” See BLACK’S LAW DICTIONARY 1315 (9th ed. 2009). However, some mean that privacy is not related to absence of information about oneself, but control over that information. See Charles Fried, Privacy, 77 Yale L. J. 475, 482 (1968); Ken Gormley, One Hundred
aiming to protect personal data or privacy attempt to protect many different values;\textsuperscript{1971} (4) different legal systems have different privacy cultures, for example Germany and the United States;\textsuperscript{1972} and (5) many legal systems try to

\textit{Years of Privacy}, 1992 Wis. L. Rev. 1335, 1356 (1992). Some understand it as a right of an individual to make decisions about herself in the physical space, or about ideas and information related to herself. See Blume, supra note 1969, at 153. It may be possible to summarize different views on privacy as different sets of definitions. See Lee A. Bygrave, \textit{Privacy and Data Protection in an International Perspective}, in INFORMATION & COMMUNICATION TECHNOLOGY: LEGAL ISSUES S6 SCANDINAVIAN STUD. L. 165, 170 (Peter Wahlgren ed., Stockholm Institute for Scandinavian Law: Stockholm 2010). For example: (a) Non-interference. See Olmstead v. United States, 277 U.S. 438, 478 (1928) (The dissident, Justice Brandeis argued that the Constitutional fathers considered “the right to be let alone” to be “the most comprehensive of rights and the right most valued by civilized men.”); Louis D. Brandeis & Samuel V. Warren, “The Right to Privacy”, 4 Harv. L. Rev. 193, 195–220 (1890) (b) Limited accessibility. See Ruth Gavison, \textit{Privacy and the Limits of Law}, 89 Yale L. J. 421, 428–433 (1980) (Separates (loss of) privacy into secrecy (“obtaining information about”), anonymity (“pay attention to”), and solitude (“gain [physical] access to.”). Or (c) information control. See Alan F. Westin, \textit{Privacy and Freedom} 7 (Athenaeum: New York 1967) (“Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others.”).

\textsuperscript{1971} Commonly mentioned examples of interests and values served by individual privacy include: (1) Individuality; (2) autonomy; (3) dignity; (4) integrity; (5) emotional release; (6) self-evaluation; and (7) inter-personal relationships of love. These different values and interests could be summed up as being concerned with “achieving individual goals of self-realization.” See Lee A. Bygrave, \textit{Data Protection Law: Approaching Its Rationale, Logic and Limits} 133–136 (Kluwer Law International: The Hague 2002); Westin, supra note 1970, at 32–39.

\textsuperscript{1972} See James Q. Whitman, \textit{The Two Western Cultures of Privacy: Dignity Versus Liberty}, 113 Yale L.J. 1151, 1159–1161 (2004). Using Bygrave’s taxonomy, the American privacy culture is based on non-interference. See Olmstead v. United States, 277 U.S. 438, 478 (1928); Brandeis & Warren, supra note 1970, at 195–220; Whitman, supra note 1972, at 1213–1214 (Arguing that Brandeis “lumped two distinct concepts of privacy together—only one of which had a clear basis in constitutional authority.”) German privacy culture in the 1920’s was similar. See RG Oct. 28, 1910, RGZ 74, 308, 311 (“Graf Zeppelin”) (Ger.); Spiros Simitis, \textit{Privacy–An Endless Debate?}, 98 Cal. L. Rev. 1989, 1990 (2010). Modern German privacy culture is based on information control, or in the German terminology “information self-determination” (Informationelle Selbstbestimmung). See BVerfG Dec. 12, 1983, BVerfGE 65, 1 (“Volkszählung”) (Ger.). See also BVerfG Mar. 9, 1988, BVerfGE 78, 77 (Ger.); BVerfG Jun. 11, 1991, BVerfGE 84, 192 (Ger.); BVerfG Jul. 5, 1995, BVerfGE 93, 181 (Ger.); BVerfG Dec. 14, 2000, BVerfGE 103, 21 (Ger.); BVerfG Feb. 27, 2008, BVerfGE 120, 274 (Ger.); Gerrit Hornung & Christoph Schnabel, \textit{Data Protection in Germany I: The Population Census Decision and the Right to Informational Self-Determination}, 25 COMPUTER L. & SECURITY REV. 84, 86 (2009); Simitis, supra note 1972, at 1997–1998. German data privacy law focuses on respect and personal dignity, the free development of personality, and the right to control one’s public image. See \textit{Grundgesetz} [GG] arts. 1–2 (Ger.) (Human dignity is inviolable (unantastbar); BGH May 25, 1954, NJW 1954, 1404 (Ger.) (The BGH ordered a newspaper to publish a correction in order to protect the dignity of the claimant, with reference to con-
Public Policies

protect these kinds of values, but different legal systems use different terminology, reflecting different views on what regulation aims to protect. The common term in German and European law for legal protection of privacy is “data protection,” originating from the German term Datenschutz. Privacy and data protection are connected, but not interchangeable. From the perspective of this thesis, legal measures are relevant, making data protection more relevant than privacy. However, completely leaving out privacy can be problematic, so the term “data privacy” has been suggested. From institutional rights. These rights have horizontal effect (affecting private law). See BVerfG Jan. 15, 1958, BVerfGE 7, 198 (“Lütz”) (Ger.); BVerfG Feb 14, 1973, BVerfGE 34, 269 (“Soraya”) (Ger.); Simitis, supra note 1972, at 1991–1992; Whitman, supra note 1972, at 1160–1161. American data privacy law on the other hand focuses on liberty (against the State). It applies to “all invasions on the part of the government and its employés of the sanctity of a man’s home and the privacies of life,” and protects against “invasion of his indefeasible right of personal security, personal liberty and private property.” See Boyd v. United States, 116 U.S. 616, 630 (1886). See also Lawrence v. Texas, 539 U.S. 558, 562 (2003) (“Liberty protects the person from unwarranted government intrusions into a dwelling or other private places.”); Whitman, supra note 1972, at 1161–1162. It should be noted that the Supreme Court in Lawrence used the term “respect” in conjunction with data privacy. See Lawrence v. Texas, 539 U.S. 558, 574–575 (2003) (“…due process right to demand respect for conduct protected by the substantive guarantee of liberty…”). But it is uncertain whether this amounts to any substantial protection for dignity. See Whitman, supra note 1972, at 1214.

See Bygrave, supra note 1970, at 188 (“Well over forty countries have enacted data protection law, and their number is growing steadily. The bulk of these countries are European.”). See Id. at 170; Bygrave, supra note 1968, at 321 (Comparing different concepts in different countries.). This terminological cacophony is problematic, since there are few overlapping terms. There is a corresponding term to privacy in German (die Privatsphäre) and other European languages. See Bygrave, supra note 1970, at 168.


See Blume, supra note 1969, at 153. But cf. Raymond T. Nimmer, LAW OF COMPUTER TECHNOLOGY § 17:63 (Westlaw through November 2013) (“[Data protection] does not deal with privacy, but with control of personal information or data identifiable to a particular individual. The principle creates and protects an individual’s interests relating to collection, processing, or other use of information identifiable with that person.”).

See Bygrave, supra note 1970, at 168 (Noting that data protection typically serves “a broader range of interests than simply privacy protection.”).

Bygrave uses the term data protection as a set of measures, and privacy as a condition or state. See Bygrave, supra note 1971, at 22–23.

See Blume, supra note 1969, at 152 (Arguing that it is necessary to understand privacy in order to understand data protection.); Bygrave, supra note 1968, at 321 (Arguing that while privacy might be ambiguous, it still gives connotations certain values. Data protection arguably fails in describing the central interests that data protection laws aim to serve.).

Bygrave, supra note 1968, at 321.
a comparative perspective, data privacy might be the best attempt to bridge differences between the American and European terminology.

The right to data privacy primarily applies to individuals. A minority of American courts has also given companies a right to data privacy in some situations, but the majority of courts have rejected this right. Thus, transferees that are corporations cannot generally rely on data privacy rights.

7.1.1 Data Privacy and Software License Agreements

Transferors that collect, use, and process personal data must comply with data privacy laws in different countries. This can be complicated since data privacy regulations in Germany and the United States are clearly different. For example: (1) Data privacy regulation in America is decentralized, but centralized in Europe. This means that privacy regulation is harmonized within Europe, while it is not harmonized within the U.S., and regulation varies from state to state. (2) American data privacy has primarily been regulated on a sector-by-sector basis with specialized regulation, in contrast to the German and European Union regulation that have general applicability. But in recent years, American sector-specific regulation has been complemented by broader “statutes and regulatory regimes.” (3) Industry self-regulation is more common in the United States. An explanation to this has been that Americans tend to trust corporations more than governments, while the opposite is true in Europe. And (4) American data privacy regulation has arguably adopted

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1981 Belth v. Bennett, 227 Mont. 341, 740 P.2d 638, 640–641 (Mont. 1987) (A corporation can assert the privacy exception to the “Right to Know” under the Montana Constitution.).
1983 However, corporations might be given other protection, for example protection of trade secrets or proprietary information, as well as personal, financial, or medical information about company owners or employees. See Warner-Lambert Co. v. Execuquest Corp., 427 Mass. 46, 48–50 (Mass. 1998); Nimmer, supra note 1976, at § 17:6; Multi AG Media LLC v. Department of Agriculture, 515 F.3d 1224, 1228 (D.C. Cir. 2008).
market-based remedies “that are conscious of the compliance requirements of data collecting organizations,” while European data protection “focus more on the preservation of individual protections.”

The main question for software license agreements is consent to and disclosure of data collection, processing, and use. For software and webpages/web applications, there are mainly two kinds of text documents that deal with data privacy. I have chosen to divide them into: (1) Data privacy policies or statements; and (2) personal data collection consent in software license agreements. There is not always a bright line between these two but data privacy policies do not always have an assent mechanism (positive or negative), they are merely informative. Also, certain data privacy policies are very general and vague in comparison to consent to personal data collection.

Beyond software license agreements, transferors must also comply with other requirements regarding data privacy. For example, when a transferor sends personal data from European transferees to the United States.

7.1.2 Data Privacy Policies

A data privacy statement could look something like this:

We collect information to provide better services to all of our users – from figuring out basic stuff like which language you speak, to more complex things like which ads you’ll find most useful or the people who matter most to you online.

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1989 The United States and other countries not members of the European Union must ensure and adequate level of protection. See Directive 95/46 of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data, 1995 O.J. (L 281) 31 (EC), Article 25(1); Bundesdatenschutzgesetz [BdSG] [Federal Data Protection Act] January 27, 1977, BGBl. I at 201, § 4b(2) (Ger.). To allow American entities to comply with this requirement, the Safe Harbor Principles have been created. See 2000/520/EC: Commission Decision of 26 July 2000 pursuant to Directive 95/46/EC of the European Parliament and of the Council on the adequacy of the protection provided by the safe harbour privacy principles and related frequently asked questions issued by the US Department of Commerce, 2000 O.J. (L 215) 7, Annex I (This include requirements such as notice and choice regarding personal data collection and use, as well as requirements for data security, data integrity, access, or enforcement.) However, certification is voluntary. See Nimmer, supra note 1976, at § 17:69 (“Most U.S. companies have not adopted the safe-harbor principles, however.”).
Data privacy policies are common on the web,\textsuperscript{1991} and are sometimes required by law, for example in California, where such policies are required for consumers that are located in the state.\textsuperscript{1992} However, when it comes to mobile applications, only a small minority had a data privacy policy in early 2012.\textsuperscript{1993}

As was said above, the line between a data privacy policy and provision seeking consent to personal data collection is not always bright. Still, data privacy policies do not always have a consent mechanism, or are not always sufficiently definitive. This can lead to different problems for transferors. The first problem concerns consent. If the transferee is not given sufficient notice, time to review, and an opportunity to accept the policy, it is not certain that the policy becomes part of the agreement under American\textsuperscript{1994} or under German law.\textsuperscript{1995} If a data privacy policy is only placed on a website, we will have the same problem with enforcement as with browse-wrap license agreements.\textsuperscript{1996}

A second problem concerns imprecise data privacy policies. In the case \textit{In re Northwest Airline Privacy Litigation},\textsuperscript{1997} the court said that “general statements of policy are not contractual.” The privacy statement was not a unilateral contract, and it was not shown that there had been an acceptance.\textsuperscript{1998} Thus, data privacy policies can fail to meet the formal requirements of a binding agreement.\textsuperscript{1999} Both of these problems are solvable under German and American law: (1) Enclose data privacy policies in a click-wrap or web-wrap agreement; and (2) clearly formulating a definite offer that requires acceptance. Whether lack of enforceability is problematic depends on the transferor’s aim. If the

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{1991} \textit{Nimmer, supra} note 1976, at § 17:68.
\item \textsuperscript{1992} \textit{Cal. Bus. \\& Prof. Code} §§ 22575 et seq. (West, Westlaw through 2013) (“Each operator of a commercial Web site or online service has an obligation to post privacy policies that inform consumers who are located in California of the Web site’s or online service’s information practices with regard to consumers’ personally identifiable information and to abide by those policies.”).
\item \textsuperscript{1993} State of California: Department of Justice: Office of the Attorney General, \textit{Press Release: Attorney General Kamala D. Harris Secures Global Agreement to Strengthen Privacy Protections for Users of Mobile Applications,} February 22, 2012 (“It is estimated that a majority of the mobile apps currently available for download through the platforms do not include even the most basic privacy protection: a privacy policy setting forth how personal data is collected, used and shared. One recent study found that only 5 percent of all mobile apps have a privacy policy.”).
\item \textsuperscript{1994} \textit{See Nimmer, supra} note 1976, at § 17:68.
\item \textsuperscript{1995} BGB § 305 (Ger.).
\item \textsuperscript{1996} \textit{See supra} section 4 (Regarding browse-wrap license agreements.).
\item \textsuperscript{1997} 2004 WL 1278459 (D. Minn. Jun. 6, 2004).
\item \textsuperscript{1999} \textit{See supra} section 4.1 (Regarding formal requirements for creating binding agreements.).
\end{enumerate}
\end{footnotesize}
aim is only to comply with legal requirements, enforcement might not be important. However, it is more likely that the aim is to disclaim liability, and if so, enforcement will matter.

If transferors violate their own policies, this might lead to problems, but this is a practice problem, not a data privacy policy problem.

### 7.1.3 Personal Data Collection Consent

Many applications gather personal data that later can be used for targeting of ads. Personal data collection is of growing importance for transferors, and of growing concern among many consumers. Software license agreements are often used to obtain permission to collecting, using, and processing personal data. For example, software license agreements may state that specified software features will send certain information about the computer back to the transferor. Furthermore, the software license agreement may state that the transferor may use the information and share it to third-party software and hardware developers. This might be categorized as “computer information” or “diagnostic data.” Software license agreements may also state that the transferor “and its partners, licensees and third party developers may provide certain services through the [software] that rely upon location information.” In order to be enforceable, such provisions must comply with data privacy laws.

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2001 Nimmer, supra note 1976, at § 17:68 (This can be an unfair trade practice under federal law. If a data privacy policy is part of an agreement, this could also be a breach of contract.).


2003 Access to user data can be an important part of certain software business models, see supra section 2.2. Such software can be “free of charge,” but the transferee can be said to compensate the transferor with privacy instead of money, see Paul M. Schwartz, Property, Privacy, and Personal Data, 117 HARV. L. REV. 2055, 2072 (2004).


2005 See Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 7(a–b) (2009).

2006 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 4(b) (2013).
United States
As was said above, the United States does not have uniformly regulated data privacy laws. Thus, the geographical scope of each data privacy law will be limited.

Some states, such as California, require operators of web sites or web services to post data privacy policies for consumers that are located in the state. This means a number of things (1): The California data privacy regulation only applies to consumers located in California. However, in practice this will likely also affect transferees in other states, unless transferors implement a mechanism where only transferees in California are presented with a data privacy policy, based on their geographical position, and no other transferees are presented with a data privacy policy. That approach seems unnecessary complicated, especially since many transferors are established in California. Thus, it can be argued that the de facto geographical scope of California’s regulation can be broader than California. (2) However, it only applies to web sites or online services. And (3) there is no requirement of consent. The latter has two consequences: (a) If a transferor wishes to enforce a data privacy policy, it must nonetheless meet the formal requirements of an agreement; and (b) as long as personal data collection has been disclosed, there is no possibility for a transferee to object — it is not possible to refuse personal data collection.

As was also said above, self-regulation is more common in the United States than Europe. Amazon, Apple, Google, Microsoft, Research In Motion, and Hewlett-Packard have agreed that private data collection, use, and sharing should be disclosed to consumer transferees before downloading mobile applications (apps). This could make data privacy policies more likely to be enforceable, by meeting the requirement of notice, as long as the other formal requirements of a binding agreement are meet. Still: (1) The focus is on disclosure, not consent; and (2) the focus is on mobile applications.

2008 Cal. Bus. & Prof. Code §§ 22575 et seq. (West, Westlaw through 2013) (“Each operator of a commercial Web site or online service has an obligation to post privacy policies that inform consumers who are located in California of the Web site’s or online service’s information practices with regard to consumers’ personally identifiable information and to abide by those policies.”).
It should also be noted that a blueprint for a “Consumer Privacy Bill of Rights” has also been introduced. At the moment it is not enforceable, but the intention is to implement it in legislation. This “Bill of Rights” introduces a number of data privacy rights. According to this, transferors should give consumers control and simple choices over personal data collection, use, and disclosure.\textsuperscript{2010} If this becomes implemented, it could require transferors to seek consent.

When American transferors are exporting personal data from European transferees to the United States, they must conform to the safe harbor principles if they are certified safe harbors. According to the safe harbor principles, an offer to opt out must be available. If sensitive personal data is collected or used, an explicit opt in is generally required.\textsuperscript{2011}

Germany

Two questions become relevant from this perspective: (1) The geographical scope of German data privacy regulation;\textsuperscript{2012} and (2) the implications of its application.

The German Federal Data Protection Act (Bundesdatenschutzgesetz) (BDSG) does not apply if the undertaking collecting, processing, or using personal data is located in another Member State (or EEA Member State), unless that undertaking has a branch in Germany. If the undertaking does not have a branch in Germany, the law of that other Member State applies. However, the BDSG will apply if an undertaking that is not located in a Member State (or EEA Member State) collects, processes, or uses personal data inside Germany.\textsuperscript{2013} Thus, the result would vary if a French or American transferor would collect personal data.

The relevant question is when a transferor in a non-Member State is considered to collect personal data in Germany. According to the Data Protection Directive, national law will apply if the transferor uses equipment located in

\textsuperscript{2010} The White House, The Consumer Privacy Bill of Rights 47, Section 1 (2012).
\textsuperscript{2012} Whether German data privacy regulation applies to a transferee is a different question than whether German law will apply to a software license agreement. See supra section 3.4.2.
that Member State.\textsuperscript{2014} A less complicated application of this rule is when a transferor uses a processing system or server located in Germany in order to process personal data.\textsuperscript{2015} A more complicated question is when a transferee’s computer can be that equipment.

According to Jotzo, German law will apply if a transferor relies on users located in Germany. This means that the transferor must have some influence over the personal data collection.\textsuperscript{2016} Whether a transferor has such influence is likely to be influenced by the technical solution that is used. For example, the result will likely be different whether installed software will send back data to the transferor, or whether the transferee enters personal data in a globally accessible web form. In the first situation, the personal data is collected in Germany, and German law will likely apply.\textsuperscript{2017} In the second situation it is unclear whether a transferor has sufficient influence. Arguably, the transferor could not know what users were leaving personal data on its webpage. Also, in this situation, it is the transferee that has the key influence over the server. In the second situation, the law of the location of the server is likely to apply.\textsuperscript{2018}

But if the controller is located in another Member State, and data collection, processing, and use, is not carried out by a German branch, German law will not apply.\textsuperscript{2019} A German administrative court found that German law was not applicable to Facebook. While Facebook had a branch in Hamburg, the branch did not process any data, unlike the European headquarters in Ireland. Thus, only Irish data privacy law was applicable.\textsuperscript{2020}

\begin{footnotes}
\item[2014] Directive 95/46 of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data, 1995 O.J. (L 281) 31 (EC), Article 4(c).
\item[2015] See Leupold & Glossner, supra note 2013, at Teil 5. F. VI. 1, recital 349. If this equipment is located in another Member State, that Member State’s law will apply. Even though implementations may vary, the result would likely not be substantially different from the perspective of a transferor.
\item[2017] The result would likely be the same if cookies or JavaScript were used to gather personal data. As a software example, Jotzo mentions iTunes Genius, which analyses the transferee’s music preferences in order to give suggestions of music that the transferee might be interested in.
\item[2018] Jotzo, supra note 2016, at 236.
\item[2019] BDSG § 1(5) (Ger.).
\item[2020] Verwaltungsgericht [VG] [Administrative Court] Schleswig Feb. 14, 2013, 8 B 60/12; 8 B 61/12, paras. 25–33 (Ger.).
\end{footnotes}
It should be noted that there is a draft of a Data Protection Regulation that will supersede the Data Protection Directive. Unlike the Directive, the Regulation would not have to be implemented in the Member States. From the perspective of the above question of applicability, the draft states that the Regulation will apply to entities not established in a Member State if their processing activities relate to: “[T]he offering of goods or services to such data subjects in the Union” or “the monitoring of their behaviour.” Thus, the application of German/European data protection will become clearer in the future if this Regulation will be adopted in its current form in 2014 and become effective in 2016 as planned.

If German data privacy regulation becomes applicable, data collection, use, and processing or personal data is only permissible if consent is given, unless permitted by other laws. This requirement for consent applies to, for example, the situation when personal data is collected for advertising purposes or address trading. If certain categories of personal data are gathered, the consent must specifically refer to this data. Such data include “racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, health or sex life.” For most software, such sensitive data will not be gathered. However, there are exceptions, for example, social network services and small, specialized applications that might focus on political opinions or philosophical beliefs. Transferees that create applications and services that gather such data must therefore observe these stricter requirements.

The consent must be free, and the transferee must be informed of the purpose of collection, use, and processing of personal data. The consent must be in writing. A transferee can obtain consent through a standard-form agreement. But if standard-form agreements are used, such provisions must

2022 Proposal for a Regulation of the European Parliament and the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM (2012) 11 final (January 25, 2012), 2012 O.J. (C 102) 24, Article 3(2).
2023 BDSG § 4(1) (Ger.).
2024 Id. at § 28(3).
2025 Id. at § 4a(3).
2026 Id. at § 3(9).
2027 Id. at § 4(a).
2028 See LEUPOLD & GLOSSNER, supra note 2013, at Teil 4. E. V. 5, recital 87.
meet the requirements under contract law, that is, they must not be surprising or ambiguous, and they must withstand content control. The latter means an overall examination of the design, content, and scope of the consent, and whether the provision leads to unreasonable disadvantages for the transferee. A transferee giving consent must not have been put under duress, for example if a person has been in “a certain situation (e.g. in an employment relationship) under social or economic duress to give its consent.”

If consent to personal data collection is given together with other written declarations, it must be distinguishable by appearance. If it is clearly distinguishable, a separate signature is not needed, and an opt-out checkbox may be sufficient, except if personal data is collected for marketing purposes, where express consent is necessary. However, for e-commerce, and other situations when the Telemediengesetz (German Tele Media Act) is applicable, an independent action is needed. Consent to personal data collection from a website requires an act that is clear and deliberate. This requires an active act, such as ticking a checkbox. The consent must be recorded, transferees must be able to retrieve the contents of the agreement, and be able to revoke the consent at any time. Thus, whether opt-in is required or opt-out is sufficient could vary between different programs.

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2029 BGB § 305(c) (Ger.).
2030 Id. at § 307. See also LEUPOLD & GLOSSNER, supra note 2013, at Teil 4. E. V. 5, recital 87.
2031 See Jutta Geiger, The Transfer of Data Abroad by Private Sector Companies: Data protection Under the German Federal Data Protection Act, 4 German L.J. 747, 750 (2003).
2032 BDSG § 4(a)(1) (Ger.).
2035 This would include, for example, software distribution channels, shopping applications, and video on-demand applications.
2036 See LEUPOLD & GLOSSNER, supra note 2013, at Teil 4. E. V. 5, recital 87.
2037 See Andrew Charlesworth, Information Privacy Law in the European Union: E Pluribus Unum or Ex Uno Plures?, 54 Hastings L.J. 931, 943 (2002) (Regarding differences between the opt-in model, which requires a positive indication, and the opt-out model, where a negative indication, such as unchecking a checkbox is required to avoid declaring assent.).
The draft Data Protection Regulation will also include other changes for transferors. Under the draft, consent must be “specific, informed and explicit,” “by a statement or by a clear affirmative action.” Thus, when consent is required, it must be explicit (opt-in). From the question of this thesis, if the draft will be adopted in its current form, it means that explicit consent will become the norm. Also, the draft clarifies that consent “shall not provide a legal basis for the processing, where there is a significant imbalance between the position of the data subject and the controller.”

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Comparison

There are clear differences between German / European Union and American data privacy laws when it comes to consent and disclosure. In Germany and the European Union, the focus is on consent. While this consent can sometimes presently be negative (opt-out), it will generally have to be explicit (opt-in) when European Union data privacy has been reformed. In contrast, consent is not needed under American law, but disclosure of personal data collection may sometimes be necessary, either by legal requirements, or based on commitments entered by mobile platform owners.

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(1.L201) 37 (EC), Preamble 17 (“Consent may be given by any appropriate method enabling a freely given specific and informed indication of the user’s wishes, including by ticking a box when visiting an Internet website.”).

Proposal for a Regulation of the European Parliament and the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM (2012) 11 final (January 25, 2012), 2012 O.J. (C 102) 24, Article 4(8).

Proposal for a Regulation of the European Parliament and the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM (2012) 11 final (January 25, 2012), 2012 O.J. (C 102) 24, Article 7(4) (The draft also includes other changes relevant for transferors and transferees: For example, (1) Processing personal data form a child under 13 requires consent from parent or custodian, Article 8; and (2) a right to be forgotten and a right to erasure of personal data will be included, Article 17.) The latter right could potentially create some new problems: (1) It will be very difficult to technically implement, or might even be unimplementable; and (2) this right will probably lead to a great amount of litigation concerning failures to “forget.”

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7.1.4 Summary
Data privacy in Europe and the United States is founded on very different principles and has been regulated in different ways. From a software license agreement perspective, the main question is consent or disclosure of personal data collection, processing, and use. As we have seen, Germany and the United States have taken very different approaches to this. California, which is considered to have strong data privacy regulation, requires a privacy policy. As noted by California’s Attorney General, this is a basic form of data privacy protection. Germany and other Member States of the European Union go beyond this and require consent.

While the California regulation obviously only applies to consumers located in California, it is likely that transferors will apply this to all consumers, since a separate solution would not be cost-effective. Thus California’s leverage is likely to set a, probably global, minimum standard that transferors will follow. The same is probably also true with the industry self-regulation of data privacy policies for mobile applications that has been negotiated by California’s Attorney General. Also, the proposed “Consumer Privacy Bill of Rights” would be likely to have a similar effect if it would be enacted. However, data privacy policies are not always enforceable if there is no consent, or if the policy is mere information, but such problems are easily overcome.

Under German law, consent is generally needed for collecting, processing, and using personal data. Sometimes, opt-out is sufficient, and opt-in is sometimes required. A new European Union data protection regulation has been drafted, and if enacted in its current state, consent must generally be explicit (opt-in). Currently, many transferors fail to obtain a legally valid consent.

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2043 State of California: Department of Justice: Office of the Attorney General, Press Release: Attorney General Kamala D. Harris Secures Global Agreement to Strengthen Privacy Protections for Users of Mobile Applications, February 22, 2012 (“It is estimated that a majority of the mobile apps currently available for download through the platforms do not include even the most basic privacy protection: a privacy policy setting forth how personal data is collected, used and shared.”).
2044 Cf. Benjamin Schütze, USA: App-Store-Betreiber verpflichten sich zu mehr Datenschutz, ZD-Aktuell 2012, 02833 (Ger.) (Noting that while the industry self-regulation and the proposed “Consumer Privacy Bill of Rights” would not be as comprehensive as European data privacy regulation, it will probably still have consequences for European transferees: “Mittelbar davon profitieren werden davon aller Voraussicht nach auch europäische Internet- und App-Nutzer.” [Most likely, European Internet and app users will also indirectly benefit from this.]).
2045 See Verbraucherzentrale Bundesverband (vzbv), Press Release: App-Store-Betreiber bestehen AGB-Check nicht, August 20, 2012 (“Besonders Bedingungen zum Datenschutz sind nach
but it is not especially difficult to overcome differences between German and American law. Many or most transferors are, or will be, required to disclose personal data collection, processing, and use, in order to comply with industry self-regulation for mobile applications or California regulation. The leap to adding a button or checkbox asking for consent to collect, process, or using personal data is not insurmountable, and will not affect any business models.

Data privacy is currently under a strong focus. Both the European Union and the United States are currently revising or working on new legislation in this area. As seen, if and when this becomes introduced, this will add new requirements for transferors.

"Ansicht des Verbands rechtswidrig: Eine rechtskonforme Einwilligung für die Nutzung der Verbraucherdaten werde nicht eingeholt. Zum Beispiel wurden nach den Bestimmungen von google, iTunes und Nokia personenbezogene Daten erfasst, ausgewertet und weiterverarbeitet, ohne dass die Nutzer aktiv zustimmten." [Data privacy policies are especially likely to be illegal, according to the association: Legally valid consent for the use of consumer data is not being obtained. For example, under Google's, [Apple's] iTunes, and Nokia's software license agreements have personal data been collected, analyzed, and processed without active consent by the user.]
8 Mapping Individual Provisions

This mapping divides provisions into the following categories: (1) Negative; (2) positive; (3) procedural; or (4) liability.

8.1 Negative Provisions

Many provisions require transferees to refrain from doing something that otherwise would have been lawful. Such provisions can be described as negative provisions.

8.1.1 Prohibiting Reverse Engineering

As was described above, access to source code is necessary for effective software development. Transferors often wish to prevent source code access to other actors with technical and legal means. One way to circumvent technical means (for example, distribution by transferors of only binary executables) is through reverse engineering. This allows a party to obtain knowledge about the underlying ideas, or the “structure and operation,” of a program.

Interest in access to source code is probably not mainly found among consumer end users, but among professional users, third-party developers, competitors, and similar actors. When transferors prevent source code access through technical means they often also try to prevent reverse engineering through legal means. Many software license agreements include provisions similar to this:

2046 See supra section 2.1.1.
2047 Rod Dixon, Breaking Into Locked Rooms to Access Computer Source Code: Does the DMCA Violate a Constitutional Mandate When Technological Barriers of Access are Applied To Software?, 8 Va. J.L. & Tech 2, 28 (2003) (“[S]oftware developers … either block access or withhold access to the ideas embedded within source code from endusers through a number of methods, including technological barriers, hardware locks, licensing restrictions, and claims that reverse engineering software is unsupportable under copyright law.”).
2048 Dixon, supra note 2047, at *29. See La. Rev. Stat. Ann. § 51:1962(3) (West, Westlaw through 2013) (Defining reverse engineering, decompiling and disassembling as “any process by which computer software is converted from one form to another form which is more readily understandable to human beings, including without limitation any decoding or decrypting of any computer program which has been encoded or encrypted in any manner.”).
2049 Interest in source code can originate from different purposes, for example, interoperability purposes, but also less noble purposes.
2050 Reverse engineering could in itself raise legal questions. See Dixon, supra note 2047, at
You may not and you agree not to, or to enable others to, copy (except as expressly permitted by this License), decompile, reverse engineer, disassemble, attempt to derive the source code of, decrypt, modify, or create derivative works of the Apple Software or any services provided by the Apple Software, or any part thereof (except as and only to the extent any foregoing restriction is prohibited by applicable law or to the extent as may be permitted by licensing terms governing use of Open-Sourced Components).

United States

Under American copyright law, reverse engineering of legally obtained software has traditionally been considered fair use, but since 1998 there is a statutory right to reverse engineering for interoperability purposes. The statute does not claim this right to be mandatory. Before 1998, provisions prohibiting reverse engineering were examined under the fair use doctrine, but since then, the major question has been copyright preemption, and sometimes also copyright misuse.

As seen, the requirements to avoid copyright preemption are low. The main requirement is to add an extra element beyond reproducing the exclusive rights found in Section 106 of the Copyright Act, which is seldom a prob-

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*29 (Reverse engineering creates copies of the work in the computer’s memory.) However, this is not a problem under copyright law.

2051 Apple, Software License Agreement for Mac OS X [Snow Leopard: 10.6], Article 2.i (2009).


2053 17 USC § 1201(f)(1). This is an exception to the general principle that circumvention of “technological measure that effectively controls access” to copyrightable works is prohibited. See 17 USC § 1201(a)(1)(A); Meninsky, supra note 2052, at 610; Principles of the Law of Software Contracts § 1.09 cmt. c. (2009).

2054 DSC Communications Corp. v. Pulse Communications, Inc., 170 F.3d 1354, 1363 (Fed. Cir. 1999) (However, the plaintiff in this case had made copies of the software after the plaintiff had understood the underlying ideas and principles of the software. The court therefore rejected the fair use defense.).

2055 See Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1089–1090 (9th Cir. 2005); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630, 638–639 (8th Cir. 2005).


2057 See supra section 5.1.2.

lem in practice. Provisions that prohibit reverse engineering have uniformly been upheld by the United States Court of Appeals for the Federal Circuit, in for example Bowers v. Baystate Tech., and DSC Communications Corp. v. Pulse Communications, Inc., based on the principle that “the Copyright Act does not preempt contractual constraints on copyrighted articles.” Many other courts have upheld such clauses on the same premises.

The copyright misuse doctrine might seem as a viable approach, since provisions prohibiting reverse engineering could be argued to extend exclusive rights beyond the scope of copyright law. In Altera Corp. v. Clear Logic, Inc., the defendant argued the prohibition of reverse engineering to be copyright misuse. However, the court noted that copyright misuse is an affirmative defense, and since there were no allegations of copyright infringement, the court did not allow the defendant an independent copyright misuse claim. This case shows the limitations of the copyright misuse doctrine. However, it is not certain that this would have been a viable approach even if there had been allegations of copyright infringement. Generally, there must be restraints to development of competing products, or attempts to prevent the transferee from using a competing product. This kind of provi-

(2d Cir. 1983); Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 457–459 (6th Cir. 2001); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630, 638 (8th Cir. 2005).

2059 Meninsky, supra note 2052, at 605.


2061 170 F.3d 1354, 1364 (Fed. Cir. 1999).


2063 See, e.g., ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1452 (7th Cir. 1996); Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 457 (6th Cir. 2001); Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc., 991 F.2d 426, 433 (8th Cir. 1993); Taquino v. Teledyne Monarch Rubber, 893 F.2d 1488, 1501 (5th Cir. 1990); Acorn Structures v. Swantz, 846 F.2d 923, 926 (4th Cir. 1988); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630 (8th Cir. 2005). See also Meninsky, supra note 2052, at 605.


2065 424 F.3d 1079 (9th Cir. 2005).

2066 See Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005).


2068 See Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1157–1158 (9th Cir. 2011); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 518–521 (9th Cir. 1997).
sion does not prevent transferees from using competing products. Thus, such provisions would not be considered as copyright misuse within the Ninth Circuit’s jurisdiction.\textsuperscript{2069} The remaining question is whether such provisions could limit the development of competing products.\textsuperscript{2070} This seems like a very difficult route. \textit{Alcatel} shows that development restraints can be copyright misuse,\textsuperscript{2071} but this is arguably more likely for hardware restrictions, like in \textit{Alcatel}.

A third approach would be public policy,\textsuperscript{2072} but public policy is a difficult route,\textsuperscript{2073} and courts have generally been reluctant to apply state public policy against software license agreements.\textsuperscript{2074}

A fourth approach would be competition law. Provisions that prohibit reverse engineering could, at least theoretically, affect competition adversely. A number of American scholars have argued that provisions prohibiting reverse engineering could be invalid due to anticompetitive behavior.\textsuperscript{2075} Different aspects of competition law might become relevant to such provisions.

Some argue that such provisions would be per se unlawful under Section 1 of the Sherman Act.\textsuperscript{2076} Provisions prohibiting reverse engineering limit what would be a permissible right in the absence of contract. Such provisions could then be unreasonable since they would extend copyright protection; this would prevent discovery of the underlying ideas, which cannot be protected by copyright, and this could suppress technological development.\textsuperscript{2077} However, there is no judicial support for this.

\textsuperscript{2069} See \textit{Apple Inc. v. Psystar Corp.}, 658 F.3d 1150, 1157–1158 (9th Cir. 2011); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 518–521 (9th Cir. 1997).

\textsuperscript{2070} See \textit{Lasercomb America, Inc. v. Reynolds}, 911 F.2d 970, 978–979 (4th Cir. 1990).

\textsuperscript{2071} \textit{Alcatel USA, Inc. v. DGI Techs, Inc.}, 166 F.3d 772, 793–794 (5th Cir. 1999).

\textsuperscript{2072} See \textit{Principles of the Law of Software Contracts} § 1.10 ill. 7 (2009) (Arguing that such provisions can in fact be void under state trade-secret law public policy, since reverse engineering is permissible under state trade-secret law.).

\textsuperscript{2073} Richardson v. Mellish, (1824) 130 Eng.Rep. 294 at 303 (Eng.) (“It is never argued at all but when other points fail.”).

\textsuperscript{2074} \textit{Principles of the Law of Software Contracts} § 1.10 cmt. b (2009) (“To date, few courts have struck a term or terms in a software agreement on state public-policy grounds.”).


\textsuperscript{2076} See Son, \textit{supra} note 2075, at 128–132.

\textsuperscript{2077} Rogers, \textit{supra} note 2075, at 92–93.
It has also been suggested that the essential facilities doctrine could be applied to such provisions. Under American law, the requirements for the essential facilities doctrine as expressed by the *MCI* test include: “(1) [C]ontrol of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.”

Granted, if a transferor has not disclosed interoperability information, and then prohibits reverse engineering, this would effectively affect competitors' ability to compete.

However, since *Trinko*, the possibilities to apply the doctrine might be limited. It could be argued that the market conditions in *Trinko* were different than the software industry's market conditions. The telecommunications market in *Trinko* had a “regulatory structure designed to deter and remedy anticompetitive harm” — the Federal Communications Commission (FCC) and New York’s Public Service Commission (PSC) — that was argued to limit the added benefit of competition enforcement. This argument is not applicable to the software market. But in *Trinko*, the Court was quite clear that it did not intend to recognize the doctrine. Still, there is one opening for the doctrine, post *Trinko*, if a dominant transferor changes its behavior in an unregulated market. Thus, if a transferor would change its behavior by suddenly including a provision that prohibits reverse engineering, it might increase the likelihood of being caught by the essential facilities doctrine. This means that we are operating within a very limited scope.

When is software an essential facility? All programs cannot be an essential facility, but operating systems and other basic services, standards, and similar might meet the requirement of an essential facility. But the doctrine has seldom been applied to copyrighted material. Thus, only a handful of

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2079 *MCI Commc’ns Corp. v. AT&T Co.*, 708 F.2d 1081, 1132-33 (7th Cir. 1983).
2082 *Id.* at 411–415.
2083 *Id.* at 410–411 (“We have never recognized such a doctrine,…. and we find no need either to recognize it or to repudiate it here.”).
Mapping Individual Provisions

programs can theoretically meet the requirement of being an essential facility. Combined with the general limited applicability of the doctrine, it is far from certain that the doctrine will be applicable to anything more than a handful software license agreements. Some argue that if a transferor make technical changes, does not disclose these changes, and then prohibits reverse engineering, it could constitute a violation under Section 2 of the Sherman Act. However, most transferors are interested in interoperability, and publish development kits other tools to facilitate third-party development. Also, there is no case law in support for this, or that provisions prohibiting reverse engineering would be a competition law violation. And in the light of *Trinko*, this seems like a very difficult route.

Thus, to summarize, it is unlikely that provisions prohibiting reverse engineering would be invalid under the four above approaches. It should be noted that no cases examining provisions prohibiting reverse engineering under N.Y. law have been found, but it is unlikely that the result would be substantially different in that jurisdiction.

This kind of provision commonly explicitly prohibits reverse engineering, but provisions can sometimes also be interpreted to prohibit reverse engineering. In *Altera Corp. v. Clear Logic, Inc.*, the software license agreement allowed transferees to “use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by ALTERA or its authorized distributors.” The defendant had reverse engineered files created by the plaintiff’s software. The defendant argued that the provision only covered software use, not the software’s output. Neither the district court nor the court of appeal supported this interpretation. The Ninth Circuit found the agreement to be clear that the plaintiff “sought to prevent competitors from benefitting from its software.” The defendants practice thus fell within the scope of the software license agreement. Thus, the agreement effectively prohibited reverse engineering even though it did not refer to reverse engineering.

Theoretically, a transferor may be awarded both damages for copyright infringement and breach of contract, depending on whether the reverse engineering has been inside or outside the scope of copyright law. In *Bowers v.*

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2086 See Son, *supra* note 2075, at 134–143.
2087 Things were arguably different in the 1990s, as seen by the European Union Microsoft case. However, competition is arguably much healthier today, especially in the mobile market.
2089 424 F.3d 1079 (9th Cir. 2005).
the requested copyright and contract damages arose from the same copying. The district court had omitted duplicate copyright damages, and the Federal Circuit did not find this to be an error. Thus, it is possible that damages may be limited to contract claims.

It should be noted that the validity of this kind of provision would be different under the UCITA, and the result could be different under the ALI Principles. The ALI Principles state that terms prohibiting reverse engineering can be enforced, but the enforcement is dependent on the “nature of the contract.” The ALI Principles state that provisions prohibiting reverse engineering can be reasonable in negotiated software license agreements, but are “more troublesome when contained in a standard-form agreement in a retail-like transaction.” This might suggest that many such clauses found in software license agreements can be deemed “troublesome” under this evaluation. However, it seems unlikely that courts, for example in New York, would go against the common view and refuse to enforce provisions prohibiting reverse engineering based on the ALI Principles.

Germany

Under German law, reverse engineering is permissible for interoperability purposes, similar to American law. However, this right is mandatory, and German law explicitly declares that any contractual provision that prohibits reverse engineering for interoperability reasons is invalid. Furthermore, such provisions are not only invalid according to German copyright law; they

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2091 302 F.3d 1334 (Fed. Cir. 2002).
2093 See Uniform Computer Information Transactions Act 118(b) cmt. 2–4 (Westlaw through 2013) (Provisions prohibiting reverse engineering would be unenforceable if the sole purpose of the reverse engineering was to achieve interoperability.).
are also unenforceable under contract law according to BGB § 307.\textsuperscript{2099} Thus, provisions prohibiting reverse engineering have no practical chance of being enforceable under German law.\textsuperscript{2100}

However, we must remember that the German right to decompilation only applies for interoperability purposes with other programs,\textsuperscript{2101} for the development of an independently developed program.\textsuperscript{2102} Furthermore, decompilation must be essential to achieve interoperability, which it is not if, for example, necessary information for interoperability has been made available.\textsuperscript{2103} And decompilation is not allowed for the entire program, only the part that is necessary to achieve interoperability.\textsuperscript{2104} The decompiling party has the burden of proof to show that these requirements are met.\textsuperscript{2105} Decompilation for other purposes is not allowed.\textsuperscript{2106} Thus, only provisions that prohibit all reverse engineering, including for interoperability purposes, are invalid.

Since terms prohibiting reverse engineering for interoperability purposes are invalid by themselves,\textsuperscript{2107} there is no need for competition law to make such provisions unenforceable. However, competition law violations may be associated with substantial fines,\textsuperscript{2108} and this can be important from a practical perspective.

\textsuperscript{2099} See Wandtke & Bullinger, supra note 2098, at Teil 1. Abschnitt 8. § 69(e). II. 7, Recital 25.
\textsuperscript{2100} This applies to all other Member States of the European Union as well, since the mandatory right to reverse engineering for interoperability purposes is derived from the Software Directive. See Directive 2009/24 of the European Parliament and of the Council on the legal protection of computer programs, 2009 O.J. (L 111) 16 (EC), Preamble (16).
\textsuperscript{2101} Wandtke & Bullinger, supra note 2098, at Teil 1. Abschnitt 8. § 69(e). II. 2(b), recital 8.
\textsuperscript{2102} Id. at Teil 1. Abschnitt 8. § 69(e). II. 2(c), recital 9.
\textsuperscript{2103} Id. at Teil 1. Abschnitt 8. § 69(e). II. 4(a), recital 14.
\textsuperscript{2104} Id. at Teil 1. Abschnitt 8. § 69(e). II. 4(b), recital 16.
\textsuperscript{2105} Id. at Teil 1. Abschnitt 8. § 69(e). II. 4(d), recital 16 (“Nach deutschen Rechtsgrundsätzen obliegt dies dem Dekompilierenden”). See also OLG Düsseldorf Jan. 16, 2001, CR 2001, 371 (Ger.).
\textsuperscript{2106} See Wandtke & Bullinger, supra note 2098, at Teil 1. Abschnitt 8. § 69(e). II. 2(a), recital 7 (“Wird mit der Dekompilierung ein anderer Zweck verfolgt, ist diese im Grundsatz unzulässig und daher von der Zustimmung des Rechtinhabers abhängig.” Roughly: If decompilation is pursed for other purposes, the basic principle is that such actions are prohibited and requires consent from the right’s holder.).
\textsuperscript{2108} See Ian J. Lloyd, INFORMATION TECHNOLOGY LAW 436 (6th ed., Oxford University Press: Oxford 2011) (Regarding the Microsoft case: “In total, the penalties imposed Micro-
The preamble to the Software Directive notes that it does not limit the application of Articles 101 and 102 TFEU. If an undertaking, especially with market power, does not provide necessary information and limits reverse engineering, this will in principle cause problems under German and European Union competition law. And the Microsoft cases (the European Commission’s decision and the General Court’s ruling) show that a refusal to supply competitors with information for interoperability purposes can be abuse of a dominant position under the essential facilities doctrine. However: (1) This will apply to very few transferors; and (2) this analysis will become relevant when a transferor refuses to disclose necessary information. Most transferors supply necessary interoperability information even though they might prohibit reverse engineering. Still, if one of the handful of relevant transferors would try to limit interoperability, even after the Microsoft cases, such provisions could potentially be problematic under competition law.

Comparison

Both German and American law allows reverse engineering for interoperability purposes. However, when it comes to provisions prohibiting all reverse engineering, there is a clear difference between German and American law. Many American courts have upheld such clauses. The two most common challenges against such provisions, copyright preemption and copyright misuse, have been unsuccessful. German law, on the other hand does not...
enforce provisions that prohibit reverse engineering for interoperability purposes, neither under copyright law, nor under contract law. Since the mandatory right to reverse engineering in German copyright law is derived from the European Union Software Directive, such provisions should be invalid in all other European Union Member States as well.

There is a theoretical risk that provisions prohibiting reverse engineering could violate competition law, for example under the essential facilities doctrine. Due to the potentially substantial fines, competition law violations could clearly alter the behavior of transferors. But the risk of competition law violation is likely to be small. There are very few situations when competition law could become applicable to provisions prohibiting reverse engineering for a number of reasons: (1) Very few programs could be deemed as essential facilities, and very few transferors have a dominant power/monopoly power over that facility (for example, a platform); and (2) many, if not the majority of transferors are interested in achieving interoperability, not limiting it. As we have seen, the essential facilities doctrine currently has a very limited scope in the United States. In Germany, there is at least some possibility of applying the doctrine against provisions prohibiting reverse engineering, but only a handful of transferors could likely become subject to the doctrine.

If we summarize, the differences between German and American law are clear, but they should perhaps not be exaggerated. It must be noted that the German non-waivable right to reverse engineering only applies to reverse engineering for interoperability purposes. Under American law, the right to reverse engineering for interoperability purposes can be waived. But for

638–639 (8th Cir. 2005). See also ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996); Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 457 (6th Cir. 2001); Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc., 991 F.2d 426, 433 (8th Cir. 1993); Taquino v. Teledyne Monarch Rubber, 893 F.2d 1488, 1501 (5th Cir. 1990); Acorn Structures v. Swantz, 846 F.2d 923, 926 (4th Cir. 1988); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630 (8th Cir. 2005). See Nimmer, supra note 2056, at § 7:134; Meninsky, supra note 2052, at 605.


cross-national validity, reverse engineering for interoperability purposes must be allowed.

Thus, it becomes important to point out the limitations of the right to reverse engineering for interoperability purposes. The right to reverse engineering only applies for the development of an independently developed program, and only if the requirements for reverse engineering are met. Otherwise, a transferee cannot rely on this right. Thus, the added benefit of prohibiting all reverse engineering can be discussed, and should be balanced against the benefit of cross-national validity.

Special Case Study: Reverse Engineering and Location

Some software license agreements recognize the above differences between legal systems and supplies alternative provisions:

No Reverse Engineering. Except as otherwise expressly permitted in Section 16.1, Customer will not reverse engineer, decompile, disassemble, or otherwise attempt to discover the source code of the Software.

Nothing included in this agreement (including Section 4.4) shall limit any non-waivable right to decompile the Software that Customer may enjoy under applicable law. For example, if Customer is located in the European Union (EU), Customer may have the right upon certain conditions specified in the applicable law to decompile the Software if it is necessary to do so in order to achieve interoperability of the Software with another software program, and Customer has first asked Adobe in writing to provide the information necessary to achieve such operability and Adobe has not made such information available. In addition, such decompilation may only be performed by Customer or someone else entitled to use a copy of the Software on Customer’s behalf. Adobe has the right to impose reasonable conditions before providing such information. Any information supplied by Adobe or obtained by Customer, as permitted hereunder, may only be used by Customer for the purpose described herein and may not be disclosed to any third party or used to create any software that is substantially similar to the expression of the Software or used for any other act that infringes the copyright of Adobe or its licensors.

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2118 Id. at Teil 1. Abschnitt 8. § 69(e). II. 2(c), recital 9.
2119 Id. at Teil 1. Abschnitt 8. § 69(e). II. 4(a–b), recital 14–16 (That is: (1) Reverse engineering must be essential; (2) reverse engineering is only permissible for the part of a program that is required to achieve interoperability; and (3) the decompiling party has the burden of proof to show that these requirements are met.).
2121 Id. at Section 16.1.3.
This provision could theoretically allow complete prohibition of reverse engineering under American law, whilst complying with German law. However, this kind of provision raises other questions related to: (1) The principle of transparency [Das Transparenzgebot] under German law; and (2) questions relating to applicable law.

As was said above, statements that contractual provisions are only applicable to the extent permitted by law are problematic under German law. They violate the principle of transparency and fail to meet the incorporation requirements under BGB § 305(2). That is, an agreement must clearly state what will apply between the parties. The above provision tries to state applicable law, but it arguably creates unnecessary uncertainty with the phrase “Customer may have the right upon certain conditions specified in the applicable law.” A better solution would arguably be to stay closer to the applicable law. Something like this:

[You are allowed to] decompile [the relevant parts of] the Software if it is necessary to do so in order to achieve interoperability [between that portion] of the Software [and] another software program, and … Adobe has not made such information available.

The second question concerns the phrase “if you are located in the European Union (EU).” It does not state, “if you are a citizen of the European Union,” “if your habitual residence is within the European Union,” or “if the laws of a Member State of the European Union will govern this agreement under the rules of private international law.” The provision above should probably not be interpreted as a choice-of-law clause. However, rules of private international law do not operate on location, but on habitual residence. In most situations, the two will overlap. But due to the nature of digital software distribution, it is very easy to hypothesize a situation where transferees would be temporary located within the European Union, but not subject to the laws of the Member States, would enter into software license agreements when transferring software. Thus, the ambiguity of the phrase “you may have the

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2122 See supra section 4.4.3.
2124 Adobe, Software License Agreement: Adobe Photoshop CS6, Section 16.1.3 (2012).
2125 Id. at Section 16.1.3.
2126 Id. at Section 16.1.3.
2127 See infra section 8.3.4.
2128 See supra section 3.4.2.
right” is not unwarranted. However, if the provision would avoid the word “located” it would be possible to avoid the phrase “you may have the right,” which could resolve any potential vagueness issue from a German perspective.

Another problem with the above provision is that it is quite long. In order to achieve a cross-nationally valid agreement, whilst prohibiting all reverse engineering under American law, a quite long provision has been necessary. While this is not a problem in itself, the total length of the agreement also increases, which might bury important provisions and affect their incorporation adversely. A transferor must decide whether the benefit of being able to prohibit all reverse engineering under American outweighs a potentially increased risk of incorporation failure of perhaps more important provisions.

### 8.1.2 Terms That Prohibit “Debugging”

When prohibiting reverse engineering, transferors sometimes specify a number of activities, including debugging/error correction. That is, to find and resolve defects in software. Some provisions are less explicit on reverse engineering and more explicit on debugging/error correction:

> Neither reproduction nor modification, including error-correction, of the full software or of parts of it, is permitted.

Similar to *Altera*, this provision might require some interpretation. The term “reproduction” will arguably cover reverse engineering, since reverse engineering requires reproduction. Thus, this provision will arguably prohibit reverse engineering. Regarding prohibition of reverse engineering, the out-

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2130 See supra section 4.4.2.
2131 Brian Check, *End User License Agreement for Computer Jockeys* (as of Feb. 9, 2014) (“You may not reverse engineer this software (including disassembly, decompilation, debug, and any other means).”).
2132 Transferees may debug to find workarounds to defects, or to learn about the underlying principles of the software. See Charles McManis, *Intellectual Property Protection and Reverse Engineering of Computer Programs in the United States and the European Community*, 8 HIGH TECH. L.J. 25, 30–31 (1993); G. Gervaise Davis III, *Scope of Protection of Computer-Based Works: Reverse Engineering, Clean Rooms and Decompilation*, 370 PLI/Pat 115, 142–145 (1993) (Debugging can be considered a rationale for reverse engineering.). Thus, there is a fine line between debugging and reverse engineering for interoperability purposes.
2134 Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079 (9th Cir. 2005).
Mapping Individual Provisions

come is known.2135 Another question is whether debugging/error correction in itself can be prohibited?2136

From an American perspective, the outcome is not entirely certain. Courts have not examined this question and scholars have been very quiet about it as well.2137 A likely explanation is that American copyright law does not mention error correction, unlike the European Union Software Directive and the transposed national laws of the Member States, but allows modification to run the software on a different machine.2138 Still, the result is likely to be similar to provisions prohibiting reverse engineering. It is unlikely that this kind of provision would be invalid under copyright preemption, copyright misuse has a limited subject matter and jurisdictional scope, and public policy is seldom successful. It is possible to consider the fair use doctrine,2139 but it is unlikely that this approach would work better against debugging than reverse engineering.

In Germany, a slightly different analysis is needed for provisions prohibiting error correction. The German Copyright Act allows for error correction without the authorization by the rights’ holder, unless there are specific contract provisions.2140 While the German Copyright Act prohibits contractual provisions against a number of rights, error correction is not among them.2141 Thus, at first sight, such provisions seem enforceable. The Software Directive is a bit ambiguous about this. The Directive states in the preamble that contracts prohibiting error correction are unenforceable.2142 On the other hand, Article 5(1) only states that the right to error correction without authorization

2135 See supra section 8.1.1.
2136 Anti-debugging is often carried out through copy protection.
2137 See Richard H. Stern, Shrink-wrap License Restrictions — Preempted?, 17 Micro, IEEE 75, 78 (1997) (Arguing that ProCD would mean that a number of clauses would be valid, including provisions that prohibit debugging.).
2138 17 USC § 117. This can be seen as a wider right than the European Union right to error correction. See Pamela Samuelson, Comparing U.S. and EC Copyright Protection for Computer Programs: Are They More Different Than They Seem, 13 J.L. & Com. 279, 283–285 (1993).
2139 Certain forms of debugging will lead to disassembly, and disassembly has been considered fair use when legitimate. See Sega Enterprises, Ltd. v. Accolade, Inc., 977 F.2d 1510, 1520–1528 (9th Cir. 1992). Based on the factors to consider, for example the likely non-commercial nature of debugging, it is possible that debugging could be fair use. The doctrine could override provisions limiting fair use.
2140 UrhG § 69(d)(1) (Ger.).
2141 Id. at § 69(g)(2).
2142 See Directive 2009/24 of the European Parliament and of the Council on the legal protection of computer programs, 2009 O.J. (L 111) 16 (EC), Preamble (13) (“This means that the …, … act of correction of its errors, may not be prohibited by contract.”).
applies “[i]n the absence of specific contractual provisions”; Article 8(2) does not state that provisions prohibiting this are “null and void” either.2143 This makes things less clear. Early on, legal scholars argued that Article 5(1) of the (older) Software Directive only applied in the absence of contractual provisions.2144

However, German law seems to have taken a different view on this matter, or perhaps a different interpretation of “specific contractual provisions.” In NJW 2000, 3212,2145 the software license agreement prohibited the software to be used for purposes of third parties. In case of breach, the transferee promised to pay 600,000 DM (a tenth of the license fee). In order to make the software work on a new operating system, the transferee purchased a translation program from a third party. However, there were still problems and the transferee contacted a contractor, which eliminated the error. The transferor argued that this was a violation of the software license agreement, since the software had been disclosed to the contractor fixing the error. The Oberlandesgericht (Higher Regional Court) said that if the provision ruled out error correction by third parties, it would prevent seeing problems in interaction between programs. This interpretation would be unfair and surprising.2146 The BGH said that the rights under UrhG Section 69(d)(1) could not be excluded by contract. A contract can only specify how these rights can be carried out. A software license agreement could therefore not prohibit a third party from doing the troubleshooting.2147 Thus, provisions that directly

2144 Graham P. Smith, Shrink-Wrap Licences In Europe After The EC Software Directive, 11 COMPUTER L.J. 597 (1992) (“The enigma (if not ambiguity) arises because the opening words “In the absence of specific contractual provisions” suggest that an appropriate contractual provision can restrict or even prohibit the user's rights to load, display, run, transmit or store a program, even where those acts are necessary for the use of the program. This view is supported by Article 9(1) which makes void contractual provisions contrary to Article 6 (which deals with decompilation for the purposes of inter-operability) or which remove or limit the rights given to users by Articles 5(2) and (3). Article 6 does not, however, refer to Article 5(1). Accordingly, one might reasonably interpret Article 5(1) as only applying to the extent that there is no contractual provision to the contrary. Indeed, this is the interpretation adopted by the UK Government.”).
2145 BGH Feb. 24, 2000, NJW 2000, 3212 (Ger.).
2146 Id. at para. 12.
prohibit debugging seem unenforceable, but it is unclear how a contract can specify how the right to debugging can be carried out.

Thus, it is likely that the result would be the same for error correction and reverse engineering, but the outcome has been more uncertain under German law, and will also require a slightly different legal analysis under German law than reverse engineering.

8.1.3 Provisions Restricting Public Disclosure

Some software license agreements limit the transferee’s ability to disclose information about the software, for example not to benchmark, or to publicly criticize the software, or publish reviews without prior consent. Such provisions are known as nondisparagement clauses or the more colorful term “gag-wrap licenses.” The reason for such clauses can be to “exclude disclosure or unpermitted use of trade secrets or proprietary information.”

Nondisparagement clauses in software license agreements can look something like this:

Installing this software constitutes acceptance of the terms and conditions of the license agreement in the box. Please read the license agreement before installation. Other rules and regulations of installing the software are:

... 

b. The customer shall not disclose the result of any benchmark test to any third party without Network Associates’ prior written approval.

c. The customer will not publish reviews of this product without prior consent from Network Associates, Inc.

2148 That is, in a controlled environment measure the performance of software and/or hardware.
2150 BLACK’S LAW DICTIONARY 285 (9th ed. 2009) (A nondisparagement clause is “[a] contractual provision prohibiting the parties from publicly communicating anything negative about each other.”).
2152 Nimmer, supra note 2056, at § 7:133.
Mapping Individual Provisions

Such clauses raise a number of questions. Under American law, it has sometimes been argued that nondisparagement clauses are problematic from a freedom of speech perspective. However, freedom of speech only prohibits the state from restricting speech, not private undertakings from restricting speech. This makes freedom of speech an inapplicable defense in most situations, both under German and American law. In FreeLife Intern., Inc. v. American Educational Music Publications Inc., the district court said that nondisparagement clauses were not unconstitutional violations of free speech.

“The First Amendment protects individuals from government infringement on speech, not private infringement.” Between private parties, an alleged First Amendment infringement must be the result of state action in order to be successful. Thus, freedom of speech is not likely to be a successful route for challenging nondisparagement clauses. Still, the discourse that nondisparagement clauses violate freedom of speech is interesting. It is arguably a good example of misunderstandings in this market.

Nondisparagement clauses have also been examined under the copyright misuse doctrine. In Video Pipeline, Inc. v. Buena Vista Home Entertainment, Inc., the license agreement prohibited use of a website for derogatory or critical purposes. *This provision was examined under the copyright mis-

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2158 Can this be explained by: (a) Misunderstanding of freedom of speech; or (b) not a legal, but a moral argument against nondisparagement clauses?

2159 342 F.3d 191 (3d Cir. 2003).

2160 Video Pipeline, Inc. v. Buena Vista Home Entertainment, Inc., 342 F.3d 191, 203 (3d Cir. 2003) (“The Website in which the Trailers are used may not be derogatory to or critical of the entertainment industry or of [Disney] (and its officers, directors, agents, employees,
use doctrine. The court recognized the doctrine, but held that the license agreement did not “interfere significantly with copyright policy.” Thus, copyright misuse might not be a successful approach for nondisparagement clauses either.

The ALI Principles state that provisions prohibiting benchmarking could be caught under public policy. But as we know, the application of the public policy doctrine is probably relatively limited in practice. Interestingly enough, the UCITA — which has been criticized for being too business-friendly — would not enforce provisions that prohibit normally lawful discussion.

But there is one notable exception to nondisparagement clause validity: People v. Network Associates. It is possible that the outcome of this case has been misunderstood as a victory for freedom of speech against nondisparagement clauses, and has created the discourse that nondisparagement clauses violate freedom of speech. In People v. Network Associates, Inc., the court found the above nondisparagement clause to be invalid, but not on the ground that it violated freedom to speech. The court focused on the phrase “other rules and regulations,” which seemed to imply that these restrictions also existed outside the software license agreement, in federal or state law. The court said that consumers could come to the conclusion that the soft-

affiliates, divisions and subsidiaries) or of any motion picture produced or distributed by

1. See supra section 5.1.3.

2. See Pamela Samuelson, Principles For Resolving Conflicts Between Trade Secrets and the First Amendment, 58 HASTINGS L.J. 777, 791–792 (2007) (“Cognizant of the implication of this licensing strategem for free speech and competition policy, the New York Attorney General’s office successfully brought suit against Network Associates to compel the firm to drop these provisions from its mass market licenses. The public had a legitimate interest in thwarting this attempted privication of information through a mass market license. Yet, other firms continue to use similar license terms.”).
ware license agreement provisions were not contractual restrictions, but rather “binding law or other rules and regulations imposed by an entity other than Network Associates,” and was therefore considered deceptive under New York State business law. Thus, invalidity was the result of design failure, rather than some inherent problem with nondisparagement clauses.

If this clause would have been examined under German law, it could possibly be considered a misleading commercial practice. It is less likely that a German court would refuse to enforce it due to being insufficiently clear. It is unclear whether other nondisparagement clauses — such that are likely to be valid under American law — are likely to be problematic under German law. There are no special rules regarding this, so we must likely fall back on the general clause of the BGB. Since there is no statutory right to publish this kind of information, the only requirement is being sufficiently clear and comprehensive. While nondisparagement clauses might fail this requirement, this type of provision should arguably not generally be a problem under German law.

Thus, nondisparagement clauses are not likely to violate freedom of speech, and will not necessarily violate other areas of law either, unless they are unclearly or ambiguously written.

8.1.4 Provisions Restricting Software to Certain Hardware

In the computer and software industry, business models go in and out of fashion. Early on, transferors developed their own hardware and software. Later, a separate software industry emerged where transferors only focused on software. Especially in recent years, it has, once again, become popular for transferors to integrate software into their own hardware. Since hardware sales are important for this business model, transferors that embrace this strategy often wish to restrict the use of software to their own hardware.


UWG § 5 (Ger.).

BGB § 307(1) (Ger.).

Cf. Sir Basil Markesinis, Hannes Unberath & Angus Johnston, The German Law of Contract: A Comparative Treatise 175 (2nd ed., Hart Publishing: Portland 2006) (If a contractual provision does not derogate from any legal provision, the only requirement under the general clause of the BGB is that the contractual provision must be sufficiently clear and comprehensive.).

See supra section 2.1.4. It should be noted that certain transferors, such as Apple, have used this approach during its lifetime, while other transferors that have only focused on software have begun to also focus on hardware.
Some software license agreements therefore only allow the transferee to use the software with that specific hardware:

This License allows you to install, use and run one (1) copy of the Apple Software on a single Apple-labeled computer at a time. You agree not to install, use or run the Apple Software on any non-Apple-labeled computer, or to enable others to do so.

An even closer form of software and hardware integration can be achieved through, so-called, “CPU-clauses”; that is, contractual provisions that only allow software to be used in conjunction with a computer with a specified CPU. This kind of provision can be contrasted to the provision quoted above, that only limit the use to a certain brand of computers, not a specific computer. CPU-clauses should also be distinguished from upgrade clauses, which allow installation on other hardware, but only after paying an additional fee. Such provisions could become very expensive for transferees of certain kinds of software.

United States
For this kind of provision, the copyright misuse doctrine might become relevant. In Alcatel USA, Inc. v. DGI Techs, Inc., the software license agreement only allowed the software to be used with the plaintiff’s hardware. The Fifth Circuit argued that the plaintiff had used its copyright to gain intellectual property-like protection over its hardware. The court said that it was not technically feasible for competitors to create software for the hardware,

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2175 Apple, Software License Agreement for Mac OS X [Snow Leopard: 10.6], Section 2 (2009).
2177 See Leupold & Glossner, supra note 2147, at Teil 1. C. 6(f), recital 219.
2178 See LG Frankfurt/Main Dec. 17, 1998, CR 1999, 147 (Ger.) (The license fee for the original hardware was DM 200,000. The new license fee for the upgraded hardware would be DM 287,000, in addition to increased maintenance fees.).
2179 See supra section 5.1.3.
2180 166 F.3d 772 (5th Cir. 1999).
2181 See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 793–794 (5th Cir. 1999) (“[B]ased on the licensing agreement, [it could be concluded] that ‘DSC has used its copyrights to indirectly gain commercial control over products DSC does not have copyrighted,’ namely, its microprocessor cards.”).
and that the district court should have allowed the defendant to invoke the copyright misuse defense.\footnote{Id. at 794–795 (“[T]here was also evidence that it was not technically feasible to use a non-DSC operating system because the switch has a ‘common control’ scheme in which each microprocessor card in a network of such cards runs the same operating system. Hence, without the freedom to test its cards in conjunction with DSC’s software, DGI was effectively prevented from developing its product, thereby securing for DSC a limited monopoly over its uncopyrighted microprocessor cards.”).}

However, unless a software license agreement is used to gain copyright protection over unprotectable products, as in \textit{Alcatel}, or to tie software and hardware, such hardware restrictions in software license agreements are ordinarily enforced.\footnote{See Nimmer, supra note 2056, at § 7:135}

In \textit{S\&H Computer Systems v. SAS Institute, Inc.},\footnote{568 F.Supp. 416, (M.D. Tenn. 1983).} the software license agreement included a CPU-clause, only allowing the software to be used on a designated CPU, identified by serial number. The transferee had installed the software in a different machine and reverse engineered the software to create a competing product. The transferee had therefore used the software on a non-designated CPU and created unauthorized copies. The court found that this was a breach of contract, but also copyright infringement, since the software license agreement was terminated and the transferee still continued to use the software.\footnote{Id. at 416, 422 (M.D. Tenn. 1983).} This case is reminiscent of \textit{MAI Systems Corp. v. Peak Computer, Inc.},\footnote{991 F.2d 511 (9th Cir. 1993).} where the transferee had “a license to use [the] software to operate one system.” By running the software on several computers, this constituted a copyright violation.\footnote{See also Nimmer, supra note 2056, at § 7:135.} But it should be noted that \textit{MAI} was laid down before the Ninth Circuit adopted the copyright misuse doctrine.\footnote{See Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 521 (9th Cir. 1997).}

In \textit{Triad Sys. Corp. v. Se. Express Co.},\footnote{64 F.3d 1330 (9th Cir. 1995).} the software license agreement prohibited third-party use. The plaintiff sued a computer service company for copyright infringement, and the defendant claimed copyright misuse. The court refused the copyright misuse defense, since the plaintiff did not attempt to prohibit the defendant or independent service companies from developing their own service software to compete with the plaintiff.\footnote{64 F.3d 1330, 1333-1334, 1337 (9th Cir. 1995).}
In *Apple Inc. v. Psystar Corp.*, the defendant had copied the plaintiff’s software onto its own hardware. The plaintiff’s software license agreement prohibited software use on other hardware than its own. The plaintiff sued for copyright infringement and the defendant argued copyright misuse. The Ninth Circuit noted that it had only once upheld the copyright misuse defense and applied it “sparingly.” The court had upheld it when the transferor prevented the transferee from using a competing product. To distinguish from *Triad*, the defendant invoked the first-sale doctrine against subsequent use restrictions. However, the court rejected this claim, since the software license agreement met the *Vernor* requirements. The court said that the situation was different from *Alcatel*, where the defendant had to test the plaintiff’s software on its own hardware for compatibility reasons. The defendant had its own hardware and could develop its own software. The Ninth Circuit found that the plaintiff’s software license agreement did not constitute copyright misuse. The software license agreement did “not restrict competitor’s [sic] ability to develop their own software, nor does it preclude customers from using non-Apple components with Apple computers.” It “merely restricts the use of Apple’s own software to its own hardware.” The court found that this “represents the legitimate exercise of a copyright holder’s right to conditionally transfer works of authorship.”

The Ninth Circuit separated a number of cases into different categories. In *Alcatel* and *Practice Management*, the software license agreements, explicitly or effectively, prohibited transferees from using competing systems. In *Psystar*, transferees were not prohibited from using non-Apple software on the Apple hardware, only prohibited from using Apple software on non-Apple hardware. Competitors could develop software for their own hardware, or develop software for Apple’s hardware. Thus, the software license agreement did not restrain development of competing products, unlike in *Alcatel* and *Practice Management*. From this perspective, *Psystar* and *Triad* belong to the same category.

*also* *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970, 978–979 (4th Cir. 1990).

*2191* 658 F.3d 1150 (9th Cir. 2011).

*2192* See the quote above.

*2193* *Apple Inc. v. Psystar Corp.*, 658 F.3d 1150, 1157–1158 (9th Cir. 2011); *Practice Mgmt. Info. Corp. v. Am. Med. Ass’n*, 121 F.3d 516, 518–521 (9th Cir. 1997).

*2194* *Apple Inc. v. Psystar Corp.*, 658 F.3d 1150, 1159–1160 (9th Cir. 2011).

*2195* See *Alcatel USA, Inc. v. DGI Techs, Inc.*, 166 F.3d 772, 793–794 (5th Cir. 1999); *Practice Mgmt. Info. Corp. v. Am. Med. Ass’n*, 121 F.3d 516, 520–521 (9th Cir. 1997); *Apple Inc. v. Psystar Corp.*, 658 F.3d 1150, 1160 (9th Cir. 2011).

*2196* *Apple Inc. v. Psystar Corp.*, 658 F.3d 1150, 1160 (9th Cir. 2011).
It should be noted that there is no breach of software license agreement if the transferor is aware that a transferee has transferred the software to other computers than the designated computer, but the transferor does not object to it within reasonable time.\textsuperscript{2197}

Thus, the majority view is that hardware restrictions, including CPU-clauses are valid and enforceable. They are only likely to be invalid when the development of competing products becomes restrained like in \textit{Alcatel} and \textit{Practice Management}; for example, when a software license agreement prohibits the transferee from using competing products.

Hardware restriction clauses in software license agreements could, at least theoretically, lead to problems under competition law.\textsuperscript{2198} In \textit{Alcatel USA, Inc. v. DGI Techs, Inc.},\textsuperscript{2199} and the preceding litigation, there had also been claims of liability under Section 2 of the Sherman Act. The district court case went to a jury, which found monopolization under Section 2. The district court’s final judgment overturned this verdict, since the defendant could not prove that the expansion cards were the relevant market.\textsuperscript{2200} The Fifth Circuit said that there was no evidence that the plaintiff’s product had a superior or unique product that allowed supra-competitive prices. There was no evidence of substantial information and switching costs. Thus, the court agreed with the district court that market realities did not point to the conclusion that the expansion cards were the relevant market.\textsuperscript{2201} This case gives us no conclusive support for competition law liability of hardware restriction clauses. Granted, if the transferor could have charged supra-competitive prices, and if there were substantial switching costs, the relevant market could be as narrow as the defendant claimed in \textit{Alcatel}. And based on the software license agreement in question, this might have been monopolization. However, this becomes purely theoretical.

\textbf{Germany}

Certain case law and some legal doctrine have found CPU-clauses to be invalid, if the software has been transferred perpetually against a single payment,\textsuperscript{2202} but according to Metzger, the legal literature is divided on


\textsuperscript{2198} \textit{See Nimmer, supra note 2056, at § 7:135.}

\textsuperscript{2199} 166 F.3d 772 (5th Cir. 1999).

\textsuperscript{2200} \textit{Alcatel USA, Inc. v. DGI Techs, Inc.}, 166 F.3d 772, 779–780 (5th Cir. 1999).

\textsuperscript{2201} \textit{Id.} at 781–784.

\textsuperscript{2202} OLG Frankfurt Mar. 10, 1994, NJW-RR 1995, 182 (Ger.); OLG Frankfurt Dec. 14,
Mapping Individual Provisions

CPU-clauses have been upheld when software has been transferred for a limited time. In *NJW 2003, 2014*, the BGH examined a provision that required the transferee to pay an additional fee if the transferee wanted to use the software on a more powerful computer, thus not completely prohibiting the use of the software on other hardware. This provision could thus be characterized as an upgrade clause. The BGH said that producers of complex, high-priced software had a legitimate interest to trace the use of their software, and that clauses that initially limit the use of software to certain hardware are not *a priori* inappropriate. This situation must be judged differently from perpetual, single payment transfers, since the software transferred for a limited time, against recurring fees is part of an ongoing obligation. While this indicates a different result for perpetual transfers, a final answer has not yet been given. CPU-clauses are probably only enforceable as an exception. For example, if the transferor can justify such clauses based on the protection of the transferor’s reputation, if the software would be likely to malfunction on other hardware, or to limit the risk of piracy.

Thus, CPU-clauses, or at least upgrade clauses, could be valid if justifiable. This might be possible if the software is: (1) Transferred against recurring fees; and (2) if the software is complex and highly priced. It is uncertain to what extent *NJW 2003, 2014* will be applicable to end user software. If CPU-clauses are invalid for permanently transferred end user software, this is at least partly due to the fact that such software transferred perpetually against a lump sum are considered to be sales under German law, and European Union law for the purpose of distribution right exhaustion. Software transferred

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1999, CR 2000, 146 (Ger.); LG Frankfurt/Main Dec. 17, 1998, CR 1999, 147 (Ger.). See also Determann & Fellmeth, supra note 2176, at 85–87; Leupold & Glossner, supra note 2147, at Teil 1. C. 6(f), recital 220 (Invalid under BGB § 307(2)(2) (Ger.)).


2205 Id. at para. 10.

2206 See Leupold & Glossner, supra note 2147, at Teil 1. C. 6(f), recital 220.


2208 See Metzger, supra note 2203, at 1995.

2209 See OLG Frankfurt Mar. 10, 1994, NJW-RR 1995, 182 (Ger.).

2210 See Leupold & Glossner, supra note 2147, at Teil 1. C. 6(f), recital 220–222.


for a limited time is, on the other hand, considered to be leases under German law.\textsuperscript{2213} Thus, this question is probably an example of the importance of whether transferred software is licensed or sold.\textsuperscript{2214}

In Germany, courts and legal discussion have focused on CPU-clauses, but the result is arguably likely to be the same for provisions that ties the software to hardware from a certain manufacturer.\textsuperscript{2215}

It is not very clear whether this type of provision is problematic under German competition law. Provisions in software license agreement that limit the use of software to certain hardware, for example through CPU-clauses, could potentially create issues with competition law. However, this issue has not been clarified under German law. Thus, it is unclear whether such restrictions would violate Article 101 TFEU or GWB § 1, or whether the exception in Article 101(3) TFEU or GWB § 2 would apply.\textsuperscript{2216} It might be possible to hypothesize about a situation where a hardware restriction could create some sort of exclusive sale territory,\textsuperscript{2217} or prohibit/limit parallel trade,\textsuperscript{2218} but this becomes speculative.

Comparison

Both general hardware restrictions and CPU-clauses are likely to be valid under American law. The main exception is when transferors try gaining copyright protection over non-protectable products, and when restraining the development of competing products.\textsuperscript{2219} Under German law, the main rule is the opposite. If software is complex, highly priced, and transferred for a limited time, upgrade clauses might be justifiable.\textsuperscript{2220} However, if transferred

\textsuperscript{2213} BGH Jun. 3, 1981, NJW 1981, 2684 (\textit{Programmsperre I}) (Ger.).

\textsuperscript{2214} See supra section 3.1.1.

\textsuperscript{2215} Cf. BGH Jul. 6, 2000, NJW 2000, 3571, para. 4 (Ger.) (Regarding OEM restrictions. See also further below about OEM restrictions.).


\textsuperscript{2218} Joined Cases C-501/06 P; C-513/06 P; C-515/06 P and C-519/06 P, GlaxoSmithKline Services Unlimited, formerly Glaxo Wellcome plc v. Commission, 2009 E.C.R. I-9291, paras. 58–62. See also Alison Jones, \textit{The Journey Toward an Effects-Based Approach under Article 101 TFEU—The Case of Hardcore Restraints}, 55 ANTitrust BULL. 783, 794–796 (2010) (Regarding other restrictions contrary to Article 101 TFEU.).

\textsuperscript{2219} See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 793–794 (5th Cir. 1999); Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1160 (9th Cir. 2011).

8 Mapping Individual Provisions

perpetually, against a single payment, the result has often been invalidity.\footnote{OLG Frankfurt Mar. 10, 1994, NJW-RR 1995, 182 (Ger.); OLG Frankfurt Dec. 14, 1999, CR 2000, 146 (Ger.); LG Frankfurt/Main Dec. 17, 1998, CR 1999, 147 (Ger.). See also Determann & Fellmeth, supra note 2176, at 85–87; Leupold & Glossner, supra note 2147, at Teil 1. C. 6(f), recital 220 (Invalid under BGB § 307(2)(2) (Ger.).).} It has been possible to justify upgrade clauses for complex and expensive software, if transferred for a limited time against recurring fees,\footnote{BGH Oct. 24, 2002, NJW 2003, 2014, paras. 30–31 (Ger.).} but this suggests that such provisions would not be justifiable for consumer-grade software transferred for a limited time against recurring fees. While German case law and legal doctrine have focused on CPU-clauses, it seems unlikely that the result would be different for provisions that only tie the software to hardware from a certain manufacturer. Thus, hardware restrictions are likely to have a limited scope under German law.

Special Case Study: OEM Copies: Limits to Further Distribution

In many examined provisions, the transferee is an end user. But some intermediates also enter into software license agreements with the transferor. This relationship raises similar questions as between transferors and end users. One such example is Original Equipment Manufacturer (OEM) copies. This refers to software that is bundled with hardware from a different manufacturer. The most common example is Microsoft Windows that is bundled with a PC from another company. Such copies are often much cheaper than a full packaged retail product, but an OEM copy may come with other packaging or limited features. In order to refrain third parties from selling OEM copies separate from the hardware, software license agreements between transferors and OEMs prohibit selling software without hardware. For example:

For each product key for desktop operating system software, you must pre-install one copy of the software on a Customer System prior to distribution using the OPK [OEM preinstallation kit]. If the software includes more than one language version, you must install only one language version. See www.microsoft.com/oem/opk for additional information about the OPK. You may not distribute the OPK and Preinstallation Tools to the end user. In addition, you may use the Preinstallation Tools we make available to you for preinstalling the software in accordance with the OPK.\footnote{Microsoft, Microsoft OEM Builder License for Windows 8.1, Section 5(a)(i) (2013).}

Thus, this is a slightly different variant of hardware restriction: (1) It is not aimed at end users, but at OEMs; and (2) it does not require software to

\footnotesize
\begin{footnotes}
\item[\footnote{Microsoft, Microsoft OEM Builder License for Windows 8.1, Section 5(a)(i) (2013).} Microsoft, Microsoft OEM Builder License for Windows 8.1, Section 5(a)(i) (2013).]
\end{footnotes}
be used with certain hardware, it requires OEMs to transfer software with hardware.

OEM license agreements have been found valid under American law. In *Adobe Systems Inc. v. Hoops Enterprise LLC,* the defendant purchased OEM copies in bulk from intermediaries and resold the software. The plaintiff sued for copyright infringement and the defendant invoked the first-sale doctrine as a defense. The district court found that the *Vernor* requirements were met, thus rejecting the first-sale doctrine defense.

The result under German law has been the opposite. In *NJW 2000, 3571,* the BGH examined a situation where a third-party dealer had bought OEM copies from a dealer and sold the OEM copies to consumer end users without bundling them with hardware, in violation of the OEM license terms. The BGH said that distribution rights had been exhausted when the software was marketed, and that it was alien to the German legal system to take a limited grant of rights to influence the wider distribution of the software.

Thus, this question shows the importance of the question whether transferred software is licensed or sold.

OEM license agreements also raise questions under competition law. In *United States v. Microsoft Corp.,* the plaintiff argued that Microsoft’s OEM software license agreement violated competition law. It was argued that the OEM requirements prevented the distribution of rival Internet browsers. Microsoft argued that it was only “exercising its rights” as copyright holder, and these requirements did not unduly restrict competitors.

The court did not generally accept this justification, and only accepted one

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2225 *Adobe Systems Inc. v. Hoops Enterprise LLC,* 2012 WL 1710951, *1 (N.D. Cal. May 15, 2012) (The court also said that the first-sale doctrine “does not apply to the Adobe OEM software that was manufactured abroad” by relying on *OMEGA SA v. Costco Wholesale Corp.,* 541 F.3d 982, 985 (9th Cir. 2008). However, the Supreme Court later abrogated the geographical limitation in *OMEGA.* See *Kirtsaeng v. John Wiley & Sons, Inc.,* 133 S.Ct. 1351, 1357–1371 (2013).
2226 BGH Jul. 6, 2000, NJW 2000, 3571 (Ger.).
2227 *Id.* at para. 4. See also *Leupold & Glossner,* supra note 2147, at Teil 3. B. VI. 2. recital 67–68.
2228 See supra section 3.1.1.
2229 253 F.3d 34 (D.C. Cir. 2001).
2230 *United States v. Microsoft Corp.,* 253 F.3d 34, 61 (D.C. Cir. 2001) (By prohibiting: “(1) removing any desktop icons, folders, or ‘Start’ menu entries; (2) altering the initial boot sequence; and (3) otherwise altering the appearance of the Windows desktop.”).
2231 *Id.* at 60–63.
of Microsoft’s limitations: To limit the alteration of the Windows desktop appearance, so that OEMs could not make “substantial alterations” and substitute the user interface. OEM shells that prevented transferees from ever seeing the Windows desktop were considered a “drastic alteration of Microsoft’s copyrighted work,” and this outweighed the anticompetitive effects of the provision. This restriction did not violate Section 2 of the Sherman Act, but the other restrictions violated the Sherman Act.2232

In 2009, the European Commission sent a Statement of Objection to Microsoft with a preliminary view that the bundling of Internet Explorer with Windows constituted an abuse under Article 102 TFEU.2233 A later agreement between Microsoft and the Commission led to a solution where Windows transferees became able to choose between twelve different Internet browsers.2234

While the American case and the European Union investigation and agreement basically covered the same thing, the bundling of Internet Explorer with Windows, only the American case concerned the software license agreement, while the European Union investigation focused on technical tying.2235 However, if the Commission had examined OEM restrictions like in United States v. Microsoft Corp., this would potentially have been a violation as well.

In the European Microsoft case, it was neither contractually nor technically possible to obtain OEM copies of Windows without Windows Media Player. This dual coercion applied primarily to OEMs, but was passed on to consumers. This technical and contractual coercion would apply directly to the end user when obtaining a retail copy of the operating system.2236 Both the Commission and the General Court found this to be a violation under Article 102 TFEU, since Microsoft could use this tying to expand its own position, and weaken competition, “to the detriment of consumers”2237 Microsoft was fined heavily and required to distribute a version of Windows

2232 Id. at 63–64.
2235 The memo is not completely clear on this point, but it seems that it was only focused on technical tying.
without Windows Media Player. The market consequences of the latter are likely to have been minimal, since Microsoft only sold 1,787 copies of that version of Windows in 2006.\textsuperscript{2238}

Thus, OEM restrictions can be caught both as technical and contractual tying under American and European Union competition law.

The kind of OEM restrictions examined \textit{United States v. Microsoft Corp.} have also been examined as a form of collusion between Microsoft and OEMs under American law. In \textit{Dickson v. Microsoft Corp.},\textsuperscript{2239} the plaintiff argued that Microsoft and the OEMs conspired by entering into agreements with anticompetitive provisions.\textsuperscript{2240} The court, however, dismissed this lawsuit, since the plaintiff failed to show that there was a conspiracy and an unreasonable restraint on trade. The OEMs and Microsoft had entered into separate agreements, but had no connection between each other, and this did not constitute a single conspiracy. The plaintiff had to prove that OEMs individually “played a significant role in the relevant market” (market power). The plaintiff failed to do this since the PC market was “fiercely competitive.” And Microsoft’s market power was not sufficient. Thus, the court could not accept that the OEM software license agreements created unreasonable restraints on trade. The court also noted that even if market power could be proven, consumers that had bought software through an intermediary could not seek compensatory damages. Relying on \textit{Illinois Brick Co. v. Illinois},\textsuperscript{2241} the Fourth Circuit said that an indirect purchaser could not recover from an intermediary’s supra-competitive prices; which was the result of the initial sellers overcharging.\textsuperscript{2242} \textit{Dickson} shows that this route might be difficult, since proving individual market power among OEMs is difficult. Granted, the PC (desktop) market has fewer competitors today, but it will still be difficult to prove market power. Under German law, we are still not any wiser whether

\textsuperscript{2238} \textit{See} Lloyd, \textit{supra} note 2108, at 438.

\textsuperscript{2239} 309 F.3d 193, 199 (4th Cir. 2002).

\textsuperscript{2240} \textit{Dickson v. Microsoft Corp.}, 309 F.3d 193, 199 (4th Cir. 2002) (“(1) a prohibition against removing icons, folders, or Start menu entries from the Windows desktop; (2) a prohibition against modifying the initial Windows boot sequence; (3) the integration of Internet Explorer (IE), Microsoft’s Internet browser software, and other application software with Microsoft’s operating software; and (4) the inclusion of long-term distribution contracts, exclusive dealing distribution arrangements, and per-processor license fees.”).

\textsuperscript{2241} 431 U.S. 720 (1977).

this kind of provision would violate Article 101 TFEU or GWB § 1, or whether the exception in Article 101(3) TFEU or GWB § 2 would apply.2243

Thus, to summarize, OEM license agreements raise two questions: (1) Are such provisions valid; and (2) do such provisions avoid conflict with competition law? The first question is relatively simple to answer. OEM license agreements have been found valid under American law,2244 but have been found invalid under German law.2245 The second question is more difficult to answer. American law shows that hardware restrictions might conflict with competition law. Alcatel shows the importance of being able to define the relevant market under Section 2 of the Sherman Act.2246 United States v. Microsoft Corp. shows that OEM restrictions can be caught under Section 2 of the Sherman Act, but such restrictions may be justifiable in very specific situations to avoid drastic alterations of the transferor’s copyright.2247 Dickinson shows that it might be difficult to challenge OEM restrictions as conspiracies under Section 1 of the Sherman Act, since it is difficult to prove individual market power among OEMs.2248 The Microsoft case shows that OEM restrictions might constitute contractual and technical tying under Article 102 TFEU of European Union competition law.2249 It is more difficult to answer this question from a German perspective. Bundling can clearly violate Article 102 TFEU/GWB § 19, and it is possible that bundling through OEM restrictions could be a violation if challenged. The outcome under Article 101 TFEU/GWB § 1 is uncertain.2250 However, this uncertainty does not change the fact that OEM restrictions and hardware clauses are already invalid under German law.

8.1.5 Provisions Restricting Use to Specific Transferees

Software use can be restricted to specific transferees in different ways. Generally, in the absence of specific provisions, the number of client copies that the

2243 See Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 29.
2245 BGH Jul. 6, 2000, NJW 2000, 3571, para. 4 (Ger.). See also Leupold & Glossner, supra note 2147, at Teil 3. B. VI. 2. recital 67–68.
2246 See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 781–784 (5th Cir. 1999).
2250 See Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 29.
software license agreement permits is the main restriction. However, some software license agreements specify that the software can only be used by a designated transferee or for a designated purpose. For example:

4. Software License.
   (a) License. … Customer may use the Software (one version with maximum of two copies permitted — a working and a backup copy) … solely to fulfill Customer’s own internal information processing needs on the particular items of Equipment … for which the Software is configured and furnished by [MAi].

   Licensee shall not give access nor shall it disclose the Diagnostics (in any form) … to any person … without the written permission of [MAi]. Licensee may authorize not more than three (3) of its bona fide employees to utilize the Diagnostics … if, and only if, they agree to be bound by the terms hereof.

United States

In *Trandes Corp. v. Guy F. Atkinson Co.*, the transferor (*Trandes*) transferred a program to the transferee (*WMATA*) under a software license agreement that authorized the transferee to “[a]llow [its] contractor to operate any module only if it is used for [Trandes’] projects and then only with the expressed written approval of Trandes of each contractor.” Each contractor would also have to sign a software license agreement. This “license would end when the contractor ceased doing business with” the transferee. The transferee did not seek or obtain permission for its contractor (*Atkinson*), and the contractor did not sign a software license agreement. The transferee was found to have breached the software license agreement, and the contractor to have “misappropriated the trade secrets of [the transferor] by acquiring the Tunnel System and using it without authorization.”

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2251 See Nimmer, supra note 2056, at § 7:138, fn. 2. Cf. Tingley Systems, Inc. v. Norse Systems, Inc., 49 F.3d 93, 98 (2d Cir. 1995) (Failing to prove that the software could only be used on certain hardware.); Cyrix Corp. v. Intel Corp., 879 F.Supp. 672, 674, 676 (E.D. Tex. 1995) (The software license agreement, which allowed the transferee “to make, use, lease, sell and otherwise transfer IBM Licensed Products and to practice any method of process involved in the manufacture or use thereof,” did not limit the transferee to act as a foundry.).


2253 MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 517, fn. 3 (9th Cir. 1993).


the transferee’s development of its own product by using the software, and giving third parties access to the software was considered a breach of the software license agreement.2257

In Altera Corp. v. Clear Logic, Inc.,2258 the software license agreement allowed the transferee to “use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by ALTERA or its authorized distributors.”2259 When transferees used the plaintiff’s software on devices sold by the plaintiff, a file (bitstream) was created. The defendant, a competitor, encouraged transferees to send their files to the competitor, which then created chips that were compatible with the transferor’s chips. The defendant’s devices were not programmable, in contrast to the plaintiff’s, and thus required files generated by devices comparable to the plaintiff’s devices. The defendant’s devices were on the other hand cheaper than the plaintiff’s devices. Thus, a transferee would start using the plaintiff’s device and program it to the transferee’s needs. The transferee could then send a bitstream to the defendant that would make cheaper devices based on the specifications.2260

The plaintiff was not pleased with this approach. This resulted in a number of claims between the two companies, and between transferor and transferees. The defendant argued that the software license agreement provision was preempted or constituted copyright misuse, which the court rejected. The provision was upheld.2261 Thus, this kind of limitation seems valid.

Germany

In the previously mentioned case NJW 2000, 3212,2262 the software license agreement prohibited software use for third party purposes. In case of breach, the transferee promised to pay 600,000 DM (a tenth of the license fee). In order to make the software work on a new operating system, the transferee purchased a translation program from a third party. However, there were still problems and the transferee contacted a contractor, which eliminated the error. The transferor argued that this was a violation of the software license agreement.

also Trandes Corp. v. Guy F. Atkinson Co., 996 F.2d 655, 665 (4th Cir. 1993) (Regarding breach of software license agreement.).
2258 424 F.3d 1079 (9th Cir. 2005).
2259 Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1090 (9th Cir. 2005).
2260 Id. at 1081–1082.
2261 Id. at 1089–1092.
2262 BGH Feb. 24, 2000, NJW 2000, 3212 (Ger.).
agreement, since the software had been disclosed to the contractor fixing
the error. However, the BGH said that this was not a violation, since the
transferee was allowed to troubleshoot the software, and the transferee must
be allowed to let a third party do the troubleshooting. But the transferee was
not allowed to disclose the software for other purposes.\footnote{2263} Thus, German law
contains an exception for troubleshooting, but \textit{NJW 2000, 3212}\footnote{2264} shows that
the transferee could not disclose the software for other purposes.

Comparison

As seen, provisions restricting software use to certain transferees have been
upheld under American law.\footnote{2265} The general principle should be the same
under German law, but such restrictions do not apply for troubleshooting
purposes.\footnote{2266} As seen, the right to troubleshooting in UrhG § 69(d)(1) is
mandatory under German law, and cannot be prohibited by “no debugging”
clauses. \textit{NJW 2000, 3212}\footnote{2267} shows that a transferor cannot refuse a third party
from conducting the troubleshooting.\footnote{2268} Thus, the main rule should be the
same under German and American law, but German law contains an excep-
tion for troubleshooting.

Special Case Study: Single Use

It should be noted that some software license agreements use a different ter-
minality in order to achieve a similar result. For example:

\begin{quote}
This version of Overlap is licensed in a single use only environment. To obtain
licensing for multiple use environments, including networks and multiple
installations, call 1 800 OVERLAP.
\end{quote}

\ldots

\begin{quote}
This copy is to be used by only a single user and will be used to the benefit of
said single user.\footnote{2269}
\end{quote}

Since this kind of provision also attempts to restrict software use to specific
transferees, the effect of the above provision is arguably similar to sole use

\footnote{2263} \textit{Id.} at paras. 3–5, 17–28.
\footnote{2264} Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1089–1092 (9th Cir. 2005); Trandes
Corp. v. Guy F. Atkinson Co., 798 F.Supp. 284, 286–287 (D. Md. 1992); CMAX/Cleveland,
\footnote{2265} BGH Feb. 24, 2000, \textit{NJW} 2000, 3212 (Ger.).
\footnote{2266} \textit{Id.} at paras. 20–25.
14, 2007).
restrictions. However, this restriction might require some interpretation. In *Overlap, Inc. v. Alliance Bernstein Investments*, the transferee, a company, was accused of loading the software on too many computers. When trying to establish the scope of the software license agreement, the court examined the above quoted snippets. The court could not “conclude as a matter of law whether and how the use of the software’s outputs was limited,” since it was not sufficiently specific. The term “single use environment” was not defined. Neither was it clear whether a “user” referred to the transferee (the company), or an employee that accepted the software license agreement when the software was loaded unto the employee’s computer. Nor was the term “benefit” clear. The defendant’s motion to dismiss the claim for breach of license was dismissed. The parties later settled, so we do not know what the outcome would have been. As with *Altera Corp. v. Clear Logic, Inc.*, this provision required some interpretation. However, this provision was arguably worse, since the court could interpret the provision in *Altera*. *Overlap* shows the importance of clear definitions.

Special Case Study: Restrictions on Use For Certain Purposes

Related to the question of restrictions to specific transferees is the question of restrictions to certain purposes. Some software license agreements include provisions that limit the purposes for which the transferee may use the software. For example:

1. Information provided through the Public Disclosure Program shall be used ONLY:

   ...

   c. for other non-commercial purposes consistent with the promotion of just and equitable principles of trade and the protection of investors and the public interest.

2269 Id. at *3.
2271 424 F.3d 1079 (9th Cir. 2005).
Similar provisions may, for example, be used to restrict software to consumer use, educational use, or noncommercial use. Such provisions are important if transferors wish to pursue price discrimination.

Such provisions can be enforceable under American law, and violations can be enforced both as copyright infringement and as breach of contract.

From a German perspective, the main question is whether such restrictions would violate BGB § 305 et seq. The likely answer would be negative. It is unlikely that such restrictions would create an unreasonable disadvantage to the transferee in order to be caught under the general clause. Such provisions are neither likely to conflict with the intended use of the software, if the software is described as being for educational use, personal use, or similar, and as long this does not make software use economically impractical.

Thus, as long as the software license agreement is sufficiently clear about intended use, this type of provision should generally be cross-nationally valid, unless the intended software use would be deemed economically impractical under German law.

### 8.1.6 Provisions Prohibiting Software Resale

Some software license agreements include provisions that prohibit resale of software:

2274 ProCD v. Zeidenberg, 86 F.3d 1447, 1449–1450 (7th Cir. 1996).
2277 See supra section 1.1.3 (Regarding price discrimination as a reason for use of software license agreements).
2279 Lowry's Reports, Inc. v. Legg Mason, Inc., 271 F.Supp.2d 737, 756–757 (D Md. 2003) (However, in this case, the contract was lost or destroyed, and the motion for copyright infringement and breach of contract was dismissed.) See also Nimmer, supra note 2056, at §7:139.
2280 BGB § 307 (Ger.).
2281 Cf. Michael Martinek, Franz-Jörg Semler, Stefan Habermeier & Eckhard Flohr, Handbuch des Vertriebsrecht 12. § 47. II. 4(b), recital 32 (3rd ed., C.H. Beck: München 2010) (Regarding conflicts between software license agreements and intended use of the software. General restrictions against on intended use can be, for example, restrictions on copying or debugging. Other restrictions can conflict with the defined use of the software, or if unreasonable restrictions makes the transferee’s use of the software economically impractical.).
No Resale: Any transfer or resale of DriveSafe.ly is prohibited.\footnote{DriveSafe.ly, DriveSafe.ly Terms of Service ("TOS") and End User License Agreement ("EULA"), Section 3(c) (as of Feb. 9, 2014).}

or

You may not rent, lease, lend, sell, redistribute or sublicense the Apple Software.\footnote{Apple, Software License Agreement for OS X Mavericks [10.9], Section 2(H) (2013).}

Alternatively, the provision could limit all transfers.\footnote{See Principles of the Law of Software Contracts § 1.09 (2009).} Whether this type of provision is valid and enforceable depends on whether the transferred software is deemed licensed or sold.\footnote{See supra section 3.1.1.}

United States

As was said above,\footnote{See supra section 3.1.1.} the current American view, at least in California and Washington if the Vernor requirements are met,\footnote{Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (That is, as long as the copyright owner: "(1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions."); MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938 (9th Cir. 2010); UMG Recordings, Inc. v. Augusto, 628 F.3d 1175, 1183 (9th Cir. 2011); MDY Indus. LLC v. Blizzard Entm’t, Inc., 2008 WL 2757357, *9 (D. Ariz. Jul. 14, 2008). See also MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 518, fn. 5 (9th Cir. 1993); Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330, 1333 (9th Cir. 1995); Wall Data Inc. v. Los Angeles County Sheriff’s Department, 447 F.3d 769, 784–785 (9th Cir. 2006); Nimmer, supra note 2056, at § 1:110 (“With few exceptions, cases hold that licensees are not owners of the copy for purposes of copyright and, thus, that they do not receive the benefit of first-sale defenses.”). See also supra section 3.1.1.} is that software is licensed and not sold. This means that terms prohibiting resale would be considered valid and enforceable, and any first-sale defense would be rejected.

If courts would adopt the ALI Principles, such provisions should generally be enforceable.\footnote{Principles of the Law of Software Contracts § 1.09 cmt. c. (2009).} According to Nimmer, the software license agreement...
decides ownership, not copyright law. Nimmer also argues that a license cannot generally be transferred without the transferor’s consent. Using this argument, as long as the Vernor requirements are met, provisions prohibiting software resale should arguably not be necessary.

However, if a transferor fails to restrict transfer in a software license agreement, it might exhaust claims on copyright infringement for software resale. In *Cyrix Corp. v. Intel Corp.*, the software license agreement granted the transferee the right “to make, use, lease, sell and otherwise transfer IBM Licensed Products and to practice any method of process involved in the manufacture or use thereof.” The court “was convinced” that the quoted language was not “intended to have some limiting effect on the rights granted,” and the transferee had “the right to act as a foundry and to make, use, lease, sell and otherwise transfer” the products. In *Quanta Computer v. LG Electronics*, the Supreme Court examined post-sale restrictions. The defendant had authorized Intel to make and sell products embodying defendant’s patents. Intel had sold the components to the plaintiff, which had combined the component with other components. The court said that the license agreement did not restrict “Intel’s right to sell its microprocessors and chipsets to purchasers who intend to combine them with non-Intel parts.” Due to this, the patent exhaustion doctrine prevented the defendant from asserting claims against the plaintiff. The court did not examine whether there was a breach of contract.

While *Cyrix* and *Quanta* are primarily known as recent examples of the patent exhaustion doctrine (first-sale doctrine), the discussion about

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2289 *Nimmer, supra note 2056, at § 1:117 (“The basic principle is that contracts are enforceable separately from copyright. The terms of a contract determine whether or not the transferee is an owner or otherwise qualifies for section 117 and section 109 as a matter of copyright law.”).*

2290 *Id. at § 7:137. See In re CFLC, Inc., 89 F.3d 673, 679–680 (9th Cir. 1996) ((Patent Licenses are generally nonassignable without consent)).*


2293 *Cyrix Corp. v. Intel Corp., 879 F.Supp. 672, 675–676 (E.D. Tex. 1995).*


2296 *Quanta Computer v. LG Electronics, 553 U.S. 617, 128 S.Ct. 2109, 2122, fn. 7 (2008) (“We note that the authorized nature of the sale to Quanta does not necessarily limit LGE’s other contract rights. LGE’s complaint does not include a breach-of-contract claim, and we express no opinion on whether contract damages might be available even though exhaustion operates to eliminate patent damages.”).*

Mapping Individual Provisions

contractual restrictions is still interesting from a software license agreement perspective. Commentators have expressed uncertainty whether it is possible to contract around the patent exhaustion doctrine.\(^\text{2297}\) **Dong** presents three possible views on this question based on Quanta: (1) A better written software license agreement could have contracted around the doctrine; (2) regardless of writing, post-sale use restrictions would not be within the scope of patent rights, and would therefore not be valid — and perhaps patent misuse; or (3) while the Court might have disapproved of post-sale use restrictions, it did not rule out the transferors contract rights.\(^\text{2298}\) Based on the Court’s writing, options 1 or 3 seem most likely.

It is possible that transfer restrictions could be evaluated under other doctrines as well. It has been argued that, for example, preemption,\(^\text{2299}\) and state public policy might be relevant challenges against such provisions.\(^\text{2300}\) However, preemption is very limited in practice, and courts seldom apply public policy. Transfer restrictions do not prevent transferees from using competing products, and are unlikely to be considered as copyright misuse within Ninth Circuit’s jurisdiction.\(^\text{2301}\)

If, however, the **Vernor** requirements are not met, and the ownership of a copy is transferred, the result could be different. In that situation, a violation of a software license agreement might only constitute a breach of contract, and not copyright infringement.\(^\text{2302}\) As was discussed in chapter three, if an allegedly violated provision does not touch upon the exclusive rights of copyright, it will be considered a covenant within the jurisdiction of the Ninth Circuit, and injunctive relief will probably be unavailable.\(^\text{2303}\) Still, it could be possible with some level of enforcement even if the **Vernor** requirements are not met.


\(^{2298}\) See Dong, supra note 2296, at *59–62.

\(^{2299}\) Principles of the Law of Software Contracts § 1.09 (2009) (“Preemption is likely but uncertain” of provisions that bar all transfers.).

\(^{2300}\) Id. at § 1.10 ill. 4. See also Jean Braucher, Unfair Terms in Comparative Perspective: Software Contracts, in Commercial Contract Law: A Transatlantic Perspective 339, 354–359 (Larry DiMatteo, Qi Zhou, Severine Saintier, & Keith A. Rowley eds., Cambridge University Press: Cambridge 2013).

\(^{2301}\) See Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1157–1158 (9th Cir. 2011); Practice Mgmt. Info. Corp. v. Am. Med. Ass’n, 121 F.3d 516, 518–521 (9th Cir. 1997).

\(^{2302}\) See Nimmer, supra note 2056, at § 7:137.

\(^{2303}\) See supra section 3.2.1.
Germany

A German transferee of perpetually transferred software against a payment or fee is considered a buyer and not a licensee. That is, ownership over software copies is transferred to the transferee. Based on this, software resale restrictions have not been enforceable in court. This result also extends to the entire European Union. In *UsedSoft v. Oracle*, the CJEU clarified that distribution rights within the Union is exhausted for a software copy if the software is perpetually transferred software “in return of payment of a fee.”

An important aspect of German and European Union copyright law — the principle of distribution exhaustion — can explain this. If software is put on the market within the European Union, the distribution right becomes exhausted, and subsequent transfers cannot be limited. If a provision in a software license agreement violates this section, it becomes invalid. The applicability of the exhaustion principle to digitally transferred software has been more uncertain, since the exhaustion principle found in the Software Directive can either be interpreted to be applicable or inapplicable to digitally transferred software. However, the CJEU said that it did not matter if the software was transferred from the Internet or from a physical medium. The Software Directive stated that protection should apply to software in any form, and the CJEU concluded that the intention of the legislature was to regulate both tangible and intangible copies. The CJEU found that the principle of exhaustion applied to both tangible and intangible copies. Thus, provisions prohibiting resale are unenforceable even for digitally transferred software. But in order to avoid copyright infringement, the original transferee must make its copy unusable.

For transferors, there is no guarantee that

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2309 OLG Frankfurt Jun. 25, 1996, NJW-RR 1997, 494 (Ger.).
2310 *See* LEUPOLD & GLOSSNER, *supra* note 2147, at Teil 1. C. 6(b)(aa), recital 213.
2311 *See* Case C-128/11, UsedSoft GmbH v. Oracle International Corp., Judgment of 3 July 2012, not yet reported, para. 32.
2312 *Id.* at paras. 47–48, 53–59.
2313 *Id.* at paras. 70, 78, 88.
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the original transferees will make their digital or physical copies unusable. But transferors can use technical measures, such as product keys to enforce this.\footnote{\textit{Id.} at para. 79.}

Additionally, such provisions can probably also become unenforceable regardless of copyright exhaustion. Such provisions for perpetually transferred software could violate BGB Section 307, which is also applicable between business actors, since such provisions can be considered to create an unreasonable disadvantage for the transferee.\footnote{OLG Frankfurt jun. 25, 1996, NjW-RR 1997, 494 (Ger.). \textit{See also} Leupold & Glosnner, supra note 2147, at Teil 1. C. 6(b)(aa), recital 207.}

Still, this does not completely rule out transfer limitations. In “Steam”,\footnote{BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).} the BGH examined computer games linked to user accounts. The game could either be transferred on physical media or downloaded from the Internet. The transferee had to register an account with the online service. This linked the game with the user account, and the game could later on only be played with that user account. A provision in the license agreement prohibited the transfer of the user account. The plaintiff argued that this limited the possibility of resale. The BGH did not agree, and upheld the provision. The provision did not prohibit resale, only transfer of the user account. A copyright holder can decide how to make the work available to the public. Even if the specific design limited marketability, the license agreement did not prohibit selling the physical media, and the principle of distribution exhaustion did not become applicable.\footnote{\textit{Id.} at paras. 4–9, 22–27. \textit{See also} Leupold & Glosnner, supra note 2147, at Teil 1. C. 6(b)(aa), recital 208.}

Based on this case, it seems possible for a transferor to limit transfers, as long as the transfer of physical media is not limited.

Comparison

This question touches upon a now familiar issue, that is, whether software is considered licensed or sold.\footnote{See supra section 3.1.1.} As we know, German law (and European Union law) and American law have completely different views on this issue.

Unsurprisingly, the validity of resale prohibiting provisions is also generally completely different under American and German law. Such provisions are generally enforceable under American law, while they are not enforceable under German law (and the other Member States of the European Union). However, there are exceptions. If the ownership of a software copy is con-
sidered to have been transferred under American law, the likely result is only breach of contract, and not copyright infringement. The German case “Steam” suggests a possible German exception when resale restrictions can be enforced in practice, when software use is tied to a user account, not the physical media. However, this could require a special technical solution, being more of a service, and a different business model.

8.2 Positive Provisions

Unlike negative provisions, positive provisions may allow or require transferors to do something.

8.2.1 Data Collection

Software license agreements are often used to obtain permission for collecting, using, and processing personal data. Such provisions can be divided into provisions concerning collection and use of data regarding use (diagnostics) and location, for example:

A. Diagnostic and Usage Data. If you choose to allow diagnostic and usage collection, you agree that Apple and its subsidiaries and agents may collect, maintain, process and use diagnostic, technical, usage and related information, including but not limited to unique system or hardware identifiers, information about your computer, system and application software, and peripherals, that is gathered periodically to provide and improve Apple’s products and services, facilitate the provision of software updates, product support and other services to you (if any) related to the Apple Software, and to verify compliance with the terms of this License. …

B. Apple and its partners, licensees and third party developers may provide certain services through the Apple Software that rely upon location information. To provide and improve these services, where available, Apple and its partners, licensees and third party developers may transmit, collect, maintain, process and use your location data, includ-

2319 That is, if the Vernor requirements are not met. See Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010). See supra section 3.1.1.
2320 See BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.). See also LEUPOLD & GLOSSNER, supra note 2147, at Teil 1, C. 6(b)(aa), recital 208.

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The use of personal data creates two important tasks for transferors: (1) Conforming to rules and regulations concerning protection and handling of personal data.\(^{2322}\) And (2) making software license agreements compliant with data privacy regulation. For software license agreements, the second question is of primary importance, but transferors must also take the first question into account.

As seen,\(^{2323}\) there are major differences between German and American requirements. German law requires consent,\(^ {2324}\) while American law, or rather California law, requires data collection disclosure for: (1) Web sites/services;\(^{2325}\) and (2) mobile applications among the major platforms.\(^ {2326}\)

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\(^{2321}\) Apple, _Software License Agreement for OS X Mavericks [10.9]_, Section 4(A–B) (2013).

\(^{2322}\) For example, if American transferors export personal data to the United States from Europe, they must conform to the Safe Harbor principles if they are certified safe harbors. _See_ 2000/520/EC: Commission Decision of 26 July 2000 pursuant to Directive 95/46/EC of the European Parliament and of the Council on the adequacy of the protection provided by the safe harbour privacy principles and related frequently asked questions issued by the US Department of Commerce, 2000 O.J. (L 215) 7, Annex I.

\(^{2323}\) _See supra_ section 7.1.3.

\(^{2324}\) BDSG § 4(1) (Ger.).


\(^{2326}\) State of California: Department of Justice: Office of the Attorney General, _Press Release: Attorney General Kamala D. Harris Secures Global Agreement to Strengthen Privacy Protections for Users of Mobile Applications_, February 22, 2012. (This concerns Amazon, Apple, Google, Microsoft, Research In Motion, and Hewlett-Packard. They have agreed that private data
This means that different kinds of problems will arise under American and German law. Under American law, data collection can create two different kinds of problems: (1) Contractual issues arising from data collection disclosure, such as (a) consent issues,\textsuperscript{2327} (b) being more than mere statements, thus meeting the requirements of a binding offer that can be accepted,\textsuperscript{2328} if enforcement is important,\textsuperscript{2329} or (c) problems arising if the transferor violates its own policy, including contractual liability if the policy amounts to a binding agreement.\textsuperscript{2330} And (2) the potential risk of unconscionability arising from the kind of provision exemplified above. However, such data privacy provisions must be very far-reaching in order to be substantively unconscionable. While such unconscionable provisions might exist in theory, the example above would probably not qualify for this. Finally, data privacy provisions are, as seen, long and detailed. This might create a potential risk of burying other provisions, which might affect the enforceability of such provisions.

From a German perspective, slightly different problems might become relevant. It should be noted that German data privacy law might be applicable to a software transfer, even if German law will not govern the software license agreement. Thus, consent through a software license agreement might be necessary in additional situations. German data privacy law will apply if the transferor relies on transferees located in Germany. This requirement is likely to be met if personal data is gathered in Germany.\textsuperscript{2331} Based on this, German requirements might become applicable in a number of situations, and it will not be possible to avoid these requirements through choice-of-law clauses.

\textsuperscript{2327} For example, timing of disclosure, sufficient notice, time to review, and opportunity to accept the policy. See Nimmer, supra note 2056, at § 17:68. This might be less of an issue for mobile applications, since the industry has accepted to disclose information before consumer transferees download applications.

\textsuperscript{2328} See In re Northwest Airlines Privacy Litigation, 2004 WL 1278459, *6 (D. Minn. Jun. 6, 2004) (The court said that “general statements of policy are not contractual.” The privacy statement was not a unilateral contract, and it was not shown that there had been an acceptance.). See also Nimmer, supra note 2056, at § 17:68.

\textsuperscript{2329} See Omer Tene & Jules Polonetsky, Privacy in the Age of Big Data: A Time for Big Decisions, 64 Stan. L. Rev. Online 63, 68 (2012) (“Privacy policies often serve more as liability disclaimers for businesses than as assurances of privacy for consumers.”).

\textsuperscript{2330} Nimmer, supra note 2056, at § 17:68 (This can be an unfair trade practice under federal law. If a data privacy policy is part of an agreement, this could also be a breach of contract.).

\textsuperscript{2331} Florian Jotzo, Gilt deutsches Datenschutzrecht auch für Google, Facebook & Co. bei grenzüberschreitendem Datenverkehr?, 2009 MMR 232, 236 (2009) (Jotzo suggests that iTunes Genius, which analyses the transferee’s music preferences in order to give suggestions of music that the transferee might be interested in, might be an example of this.).
If German data privacy law is applicable, two questions become important: (1) Consent;\textsuperscript{2332} and (2) content control.\textsuperscript{2333} The consent could be invalid under general contractual requirements or the special requirements for data collection. Under the former, this kind of provision is generally not different from other provisions. But since this kind of provision tend to be long and detailed, it might interfere with incorporation of other provisions. Under the special requirements for data collection, a number of problems might arise: (1) If sensitive data is gathered,\textsuperscript{2334} and the consent does not refer to this data,\textsuperscript{2335} the consent may be invalid; (2) the consent may also be invalid if it is not distinguishable by appearance from other contractual provisions;\textsuperscript{2336} or (3) if the requirements of implied or express consent are not met. In most situations, an opt-out checkbox may be sufficient for consent,\textsuperscript{2337} but express consent (opt-in) is required if: (a) Personal data is collected for marketing purposes;\textsuperscript{2338} or (b) the software falls within the scope of the \textit{Telemediengesetz} (German Tele Media Act).\textsuperscript{2339} Additionally, if the proposed European Union Data Protection Regulation would be adopted in its current state, express consent will always be required.\textsuperscript{2340} Thus, even if consent has been given, it can be invalid if it is only implied (opt-out) when express consent (opt-in) is required. The requirements of consent are currently likely to be a problem for many transferors.

\textsuperscript{2332} BDSG § 4(1) (Ger.).
\textsuperscript{2333} See \textsc{Leupold \& Glossner}, \textit{supra} note 2147, at Teil 4. E. V. 5, recital 87.
\textsuperscript{2334} BDSG § 3(9) (Ger.) (Regarding sensitive data, including: “racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, health or sex life.”).
\textsuperscript{2335} \textit{Id.} at § 4a(3) (Regarding the requirement of specific consent.).
\textsuperscript{2336} \textit{Id.} at § 4(a)(1).
\textsuperscript{2338} UWG § 7 (Ger.). See BGH Jul. 16, 2008, NJW 2008, 3055 (“Payback”), paras. 36–44 (Ger.).
\textsuperscript{2339} This would include, for example, software distribution channels, shopping applications, and video on-demand applications. For such applications, a clear and deliberate act is required. \textsc{See Leupold \& Glossner}, \textit{supra} note 2147, at Teil 4. E. V. 5, recital 87.
\textsuperscript{2340} Proposal for a Regulation of the European Parliament and the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM (2012) 11 final (January 25, 2012), 2012 O.J. (C 102) 24, Preamble 8 (Requiring the consent to be “specific, informed and explicit,” “by a statement or by a clear affirmative action.”).
If transferors have met the first requirement of consent, the next question is whether the substantive content will survive content control. This will require an overall examination of the design, content, and scope of the consent, and whether the provision leads to unreasonable disadvantages for the transferee. A recent ruling by a German lower court shows that data privacy provisions can create unreasonable disadvantages to the transferee. The court struck down Apple’s data privacy policy found on <http://www.apple.de>. The consumer association vzbv had challenged 15 of Apple’s provisions, but Apple promised to withdraw seven provisions before the proceedings. The court struck down the remaining eight provisions, since they created unreasonable disadvantages by violating fundamental principles of German data privacy law. The data privacy policy did not give transferees sufficient transparency of the scope of data collection and use, for example, how the transferor would use the data, and how and with whom it would share the data. Also, the court found a location data provision to be invalid. Even though the data was promised to be anonymized, the court said that location-based products and services would not be possible without individualizing the data. Even though the case concerned an online data privacy policy, and some questions related to lack of consent, the case also shows that the provisions could not withstand content control under the general clause of the BGB or German data privacy law. Thus, even though this is one case by one lower court, it could potentially be important to software license agreements in the future, if higher German courts will confirm this view.

Thus, both consent and substantive content can be problematic under German law. Under American law, lack of disclosure will likely be the major problem. If an enforceable contract is considered important, there is a risk that data privacy policies fail to meet basic contractual requirements. There is also a risk of liability for violating one’s own data privacy policy, and a theoretical risk of unconscionability when obtaining permission to use personal data, but since American law lacks formal requirements, this risk is much smaller under American law than under German law.

2341 BGB § 307 (Ger.). See also Leupold & Glossner, supra note 2147, at Teil 4, E. V. 5, recital 87.
2342 See BDSG § 4(a) (Ger.).
2343 LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.).
8.2.2 Grant-Back Clauses

Some software license agreements include provisions that require transferees to grant back any modifications to the transferor and other transferees without compensation. Generally, such provisions are more common for specialized software, and relatively uncommon for end user software. However, a number of widely used software license agreements, also used for standard software aimed at end users, contain such provisions.2344 For example:

You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.2345

There are different forms of grant-back clauses. They can be divided into assignment grant-back clauses, exclusive grant-back clauses, or non-exclusive grant-back clauses. The first assigns the created intellectual property (mostly patents) to the transferor; the other requires the transferee to license the created intellectual property under an exclusive or non-exclusive license. The above example provision is an example of a licensed grant-back clause.

United States

Grant-back clauses can be caught either under competition law or under intellectual property law.2346 Grant-back clauses can control or limit technical development, and as we know, such agreements can be caught under Section 1 of the Sherman Act.2347 Grant-back clauses can also be problematic from an intellectual property perspective, and be caught under the intellectual property (copyright or patent) misuse doctrine.2348

2344 So-called share-alike or copyleft clauses requires are examples of this. See Mikko Välimäki, Copyleft Licensing and EC Competition Law, 27 EUR. COMPETITION L. REV. 130, 130 (2006).
2346 PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 1.09 cmt. c. (2009) (Recognizing that grant-back clauses can be problematic from a copyright and competition law perspective. From a copyright perspective, such provisions can be used to extend copyright. From a competition law perspective, such provisions can either stimulate or stifle competition depending on how they are written.).
2347 15 USC § 1.
Grant-back clauses can be exclusive or nonexclusive. Non-exclusive grant-back clauses allow the transferee “to practice its technology and license it to others,” and are, under the Department of Justice IP-Guidelines, “less likely to have anticompetitive effects” compared to exclusive grant-back clauses.\(^ {2349}\)

Competition law agencies will examine whether a transferor has market power and whether a grant-back clause “is likely to reduce significantly [transferees’] incentives to invest in improving the licensed technology.” If an agency finds the latter, it will examine whether the provision has any “pro competitive effects, such as: (1) [P]romoting dissemination of [transferees’] improvements to the licensed technology, (2) increasing the [transferees’] incentives to disseminate the licensed technology, or (3) otherwise increasing competition and output in a relevant technology or innovation market.”\(^ {2350}\)

In *Transparent-Wrap Mach. Corp. v. Stokes & Smith Co.*,\(^ {2351}\) the Court said “that the inclusion in the license of the condition requiring the licensee to assign improvement patents is not per se illegal and unenforceable.”\(^ {2352}\) But it is important to notice the circumstances in *TransWrap*. If the license would terminate, the transferor would resume the production of the patented product. For this to work, it was important for the transferor that it could resume the production of the improved product.\(^ {2353}\)

A number of factors can be examined: (1) Whether grant-back clauses are legitimate, such as in *TransWrap*; (2) whether the grant-back is exclusive or nonexclusive; (3) market position (the Department of Justice IP-Guidelines’ focus on factor 2 and 3); (4) assignments of grant-backs have also been more likely to be valid than license grant-backs; (5) grant-backs that only cover a licensed product or process might be more likely to be valid than grant-backs that cover a licensed product or process.

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\(^ {2350}\) *Id.* at § 5.6.

\(^ {2351}\) 329 U.S. 637 (1947).


\(^ {2353}\) See Bergsten, *supra* note 2348, at 700–701 (But this could arguably also have been solved with non-exclusive licenses.).
that cover an entire field or industry; and (6) a grant-back clause that lasts for a longer period of time than a patent is more likely to be illegal than a grant-back clause that lasts for a shorter time than a patent.\textsuperscript{2354}

Thus, if grant-back clauses strengthen the position of the transferor, limits the transferee’s ability to compete, or restraints trade, such provisions could be caught under Section 1 or 2 of the Sherman Act.\textsuperscript{2355} But based on the above, it is not likely that the share-alike clause in the GNU GPL would be problematic since: (1) It is non-exclusive; (2) the grant-back only concerns the licensed software, not the entire industry or field; (3) transferors that use this kind of provision often have a small market share, at least in the consumer market; and (4) it promotes dissemination of improvements.

Granted, GNU/Linux might have a strong position in certain server product markets. And the mobile operating system Android currently has a strong market position in the smartphone market. But in the latter example, only the lowest level of the operating system, the \textit{kernel},\textsuperscript{2356} is transferred under the GNU GPL version 2, with a grant-back clause. Thus, the practical scope of the grant-back clause is limited, and will not likely significantly reduce incentives to improve the technology.

\textbf{Germany}

It is likely that the results would be similar and German competition law and European Union competition law, so the two will be examined together.

A grant-back clause could be an illegal restraint on technical development.\textsuperscript{2357} Article 101 TFEU can catch agreements between undertakings that control or limit technical development.\textsuperscript{2358} However, for such agreements, block exemption under the TTBER could become applicable, since it exempts certain agreements from an Article 101 TFEU evaluation.\textsuperscript{2359} But even if the block exemption regulation is applicable to the agreement — that is, the software license agreement is considered a bilateral agreement between

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\textsuperscript{2354} \textit{Id.} at 700–707.
\textsuperscript{2355} Stedman, \textit{supra} note 2352, at 169–170.
\textsuperscript{2357} Välimäki, \textit{supra} note 2344, at 132–133.
\textsuperscript{2358} Article 101(1)(b) TFEU.
\textsuperscript{2359} Commission Regulation 772/2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements, 2004 O.J. (L 123) 11 (EC) (a.k.a. TTBER), Article 2.
two parties, and the market-share thresholds are not exceeded, — an Article 101 TFEU assessment could still be necessary, since exclusive grant-back obligations are excluded from block exemption.

Still, it is not certain that the GNU GPL’s grant-back clause will violate European Union competition law. Välimäki argues that the GNU GPL grant-back clause will probably not violate European Union competition law for two reasons: (1) The software license agreement does not extend beyond copyright law; and (2) the grant-back is non-exclusive, meaning that it applies to all transferees. This seems consistent with the European Commission’s view on block exemption. Thus, the GNU GPL’s grant-back clause should not be problematic under German or European Union competition law, but exclusive grant-back clauses will likely be problematic.

Comparison

Grant-back clauses can be problematic under both American and German competition law. Much case law regarding grant-back clauses concerns patents, since the potential consequences of grant-back clauses are greater when patents are involved. Still, it is possible that grant-back clauses for copyrightable material can create issues in software license agreements as well.

Such provisions are, on the other hand, generally uncommon in standard software and especially end user software. The main exception is perhaps the GNU GPL. However, while that software license agreement contain a grant-back clause, it is unlikely to cause problems under American or German competition law, for a number of reasons: (1) The grant-back is non-exclusive; (2) the grant-back only concerns the licensed software, not an entire field or industry; (3) the software license agreement does not extend beyond copyright law; and (4) transferors using this kind of software license agreements often have a small market share.

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2361 Commission Regulation 772/2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements, 2004 O.J. (L 123) 11 (EC), Preamble 14, Article 5.

2362 See Välimäki, supra note 2344, at 132–133.

2363 Commission Notice: Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, 2004 O.J. (C 101) 2, para. 109 (“However, the block exemption does cover non-exclusive grant back obligations in respect of severable improvements.”).
It is very unlikely that this kind of provision would affect competition in the market. If this kind of provision would be exclusive, extend beyond copyright law, or be used by transferors with substantial market share, the result could be different.

8.2.3 Future Transfers Under the Same Software License Agreement

Some software license agreements determine the software license agreement for future transfers. For example, the section of the GNU GPL cited above regarding grant-back clauses also regulate this by requiring derivative works to be transferred under the same software license agreement as the original work. This raises questions under competition law.

Under American law, in *Wallace v. International Business Machines Corp.*, the Seventh Circuit examined whether this aspect of the GNU GPL, that it “authorize[s] not only copying but also the creation of derivative works — and the license prohibits charging for the derivative work.” The plaintiff argued that the GNU GPL was the conspiracy that IBM, Red Hat, and Novel used to eliminate competition. The court examined whether this was a situation of predatory pricing. But predatory pricing should lead to monopoly prices in the future, which is not possible with the GNU GPL. The court noted that GNU/Linux and other open source software that is offered free of charge had not affected competition in the software market, since the number of proprietary operating systems was growing. Neither could the GNU GPL be considered a restriction of trade. The court also examined whether the software license agreement led to price-fixing. Maximum prices are evaluated under a rule of reason analysis, but this could not lead to another conclusion regarding the software license agreement; GNU/Linux did not have a sufficient market share, and it did not pose a threat to consumer welfare in a longer perspective. The plaintiff’s claim could thus be rejected with a “quick

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2364 *See Wallace v. International Business Machines Corp.*, 467 F.3d 1104, 1105–1108 (7th Cir. 2006).
2365 *See Välimäki, supra note 2344, at 133.*
2366 *Free Software Foundation, GNU General Public License (GPL): Version 2, Section 2(b) (1991). See also Free Software Foundation, GNU General Public License (GPL): Version 3, Section 5(c) (2007).*
2367 467 F.3d 1104 (7th Cir. 2006).
2368 *Wallace v. International Business Machines Corp.*, 467 F.3d 1104, 1105–1107 (7th Cir. 2006) (“It is a cooperative agreement that facilitates production of new derivative works, and agreements that yield new products that would not arise through unilateral action are lawful.”).
look.” Judge EASTERBROOK concluded that “[t]he GPL and open-source software have nothing to fear from the antitrust laws.”

German courts have only slightly touched upon these questions, regarding the determination of software license agreement for derivate works and the limitation of price. In CR 2006, 729, the court was undecided of whether this infringed Article 101 TFEU or GWB § 1. In CR 2008, 57, the defendant argued that this clause violated Article 101 TFEU and GWB § 1. But the court did not comment on this question. It has been argued that the GNU GPL should not qualify as a restricted price fixing under the European Union TTBER. Thus, while the fate of such provisions under German competition law is currently uncertain, it is not very likely that they would be problematic.

To summarize, this kind of provision is not likely to violate American competition law, and it is also unlikely that it would violate German or European Union competition law.

8.3 Procedural Provisions

**Procedural provisions refer to provisions concerning questions potential disputes.**

Many American business actors routinely include arbitration and forum selection clauses in agreements with consumers; therefore limiting the risk of litigation in foreign fora, class action lawsuits, and punitive damages. This

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2370 See Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 31.

2371 LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).

2372 Id. at *9 (“Es kann dahinstehen, ob, wie die Beklagte geltend macht, die Regelung des GPL wegen Verstoßes gegen Art. 81 EGV und § 1 GWB – insbesondere das Verbot von Preisbindungen und das Verbot, die Konditionen für einen Zweitvertrag in einem Erstvertrag festzulegen – unwirksam ist.”). See also Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 31.

2373 LG München I Jul. 12, 2007, CR 2008, 57 (Ger.).

2374 Id. at *6.

2375 See Id. at *7–14. See also Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 31, fn. 36 (According to one unnamed source, the court apparently said at the hearing that a competition law analysis was unlikely to succeed.).

2376 See Valimäki, supra note 2344, at 132 (The provision does not require the software to be priced at zero since copyright royalties are not the only way to price software.) See supra section 2.2 (Regarding the Red Hat model and revenue sources.).

sometimes also applies to software license agreements. Some software license agreements, many according to some commentators, but not all, includes forum, choice-of-law, and arbitration clauses, and sometimes also class action waivers.

Such provisions raises important questions, since: (1) Valid and effective choice-of-law clauses could affect the validity of an asymmetrically valid software license agreement in a specific software transfer; and (2) valid and effective forum- and arbitration clauses, as well as class action waivers, could be of practical importance for software license agreement validity, since they could affect the willingness of litigation, both for transferors and transferees.

8.3.1 Arbitration Clauses

Some software license agreements includes arbitration clauses:

Any dispute or claim arising out of or in connection with this Agreement or the performance, breach or termination thereof, shall be finally settled by binding arbitration in San Francisco, California under the Rules of Arbitration of the International Chamber of Commerce by three arbitrators appointed in accordance with said rules. … Notwithstanding the foregoing, either party may apply to any court of competent jurisdiction for injunctive relief or enforcement of this arbitration provision without breach of this arbitration provision.


2379 Among certain categories of software license agreements are such clauses very uncommon, for example among open source licenses, where such clauses are almost non-existent. For one exception of minor importance, see IBM, IBM Public License: Version 1.0, Section 7 (1999) (“This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America.”).

2380 Class action suits allows several similar litigations to be aggregated into one lawsuit, where one or more “members of a class may sue or be sued as representative parties on behalf of all” members of the class, that is, representing the class. See Fed. R. Civ. P. 23; 28 USC § 1332 (d). See Stephen C. Yeazell, Civil Procedure 798–799 (7th ed., Wolters Kluwer Law & Business: Austin 2008) (Class actions have both been praised and criticized. Aggregation of litigants "tends to shift the focus from the client to the lawyer, from damages to attorney’s fees, and from litigation to settlement." Rules made for one-on-one litigation may have different effects in mass-litigation, and class actions may thus also change underlying substantive law.).

United States

Arbitration under American law is regulated through the Federal Arbitration Act (FAA).2382 With the FAA, “Congress declared a national policy favoring arbitration,”2383 and arbitration agreements are to be considered “valid, irrevocable, and enforceable,”2384 both by federal courts,2385 and state courts,2386 unless such agreements are invalid on common contractual grounds,2387 for example, public policy, unconscionability, fraud, or duress.2388 State law will be applicable to assess such matters, but state law may not discriminate against arbitration agreements,2389 and states may not make any law to “undercut the enforceability of arbitration agreements.”2390 Also, if there are “any doubts concerning the scope of arbitrable issues” these “should be resolved in favor of arbitration.”2391 Thus, there is a lot in favor of arbitration, and arbitration has a wide scope. Even statutory claims, arising under the Sherman Act, have been found arbitrable.2392

In Lieschke v. RealNetworks, Inc.,2393 the plaintiffs filed suit for software that allegedly communicated with the transferor’s servers beyond the privacy disclosure. The software license agreement required arbitration, which the plaintiffs sought to avoid. The court said that, “[a] party contesting the submission of the claim to arbitration must clearly show that the presumption of arbitrability does not apply.” The plaintiffs argued that arbitration was not required, since the alleged communication was not part of the agreement. The court did not accept this since arbitration is applicable beyond the law of contracts. The plaintiffs also argued that arbitration with individual plaintiffs would be inefficient, since there were many potential plaintiffs. The court also

2387 9 USC § 2.
Mapping Individual Provisions

rejected this and noted that courts must enforce arbitration agreements “even where the result would be the possibly inefficient maintenance of separate proceedings in different forums.” Thus, the arbitration clause was upheld.

However, arbitration clauses can be found unconscionable against consumers, if the “place or manner” in which arbitration is to occur is unreasonable taking into account “the respective circumstances of the parties.” In Comb v. PayPal, Inc. the court said that it was unconscionable to require “individual consumers from throughout the country to travel to one locale to arbitrate claims involving … minimal sums.” In Bragg v. Linden Research, Inc. the court examined an arbitration clause in Second Life’s Terms of Use. The consumer was “an experienced attorney,” but since the agreement was an adhesion contract, he could not use his experience to bargain. The consumer had no “reasonable market alternative,” and the arbitration clause was considered buried in the terms of use. This made the agreement procedurally unconscionable, even though only moderately so. Substantive unconscionability was found due to lack of mutuality; taken together, the costs of arbitration, the forum selection clause, and the confidentially clause tilted unfairly in Linden’s favor. The agreement was found to be severely substantive unconscionable, which rendered the clause unconscionable, even though it was only moderately procedurally unconscionable.

2397 218 F.Supp.2d 1165 (N.D. Cal. 2002).
But in *Hubbert v. Dell Corp.*,\(^{2403}\) the court examined an arbitration clause that was accessible by contrasting blue hyperlinks found on five pages with forms that had to be filled out to make an order. All webpages stated that sales were subject to the defendant's terms and conditions. These facts made the court draw the conclusion that the consumer had been given reasonable notice. The arbitration clause was partially written in capital letters, which also made the arbitration clause conspicuous. The court said that an arbitration clause did not become procedurally unconscionable only because it was found in a contract of adhesion. Neither was the clause substantially unconscionable, since: (1) The plaintiff could not prove that excessive fees that effectively denied arbitration would be charged; (2) the plaintiff's argument that a remedy would be lost (punitive damages) could not be proven; and (3) the plaintiff's argument that arbitration prevented a class action lawsuit was not sufficient to prove the clause to be substantially unconscionable. Thus, the clause was not unconscionable.\(^{2404}\)

It is possible that an arbitration clause can become invalid without invoking the doctrine of unconscionability. In *DeFontes v. Dell, Inc.*,\(^{2405}\) the court found an arbitration clause to be unenforceable, since the agreement did not make it reasonably apparent for the plaintiffs that they had assented to the terms by keeping a computer.\(^{2406}\)

**Germany**

Under German law, an arbitration clause must be found in a signed document, or in a form of telecommunication that keeps a permanent record.\(^{2407}\) If one party to the agreement is a consumer, the consumer must personally sign the agreement, and this agreement cannot contain anything but matters relating to the arbitration. This requirement can also be met on the Internet, if the signing meets the requirements of the Electronic Signature Act (*Signaturgesetz*).\(^{2408}\) However, this means that a regular click-wrap agreement


\(^{2405}\) 984 A.2d 1061 (R.I. 2009).

\(^{2406}\) DeFontes v. Dell, Inc., 984 A.2d 1061, 1072–73 (R.I. 2009). See also supra section 4.2.1 (Regarding requirements for shrink-wrap license agreement validity.).

\(^{2407}\) Zivilprozessordnung [ZPO] [Code of Civil Procedure] January 30, 1877, RBGBl. 83, § 1031(1) (Ger.).

\(^{2408}\) ZPO § 1031(5) (Ger.); BGB § 126(a)(1) (Ger.); Gesetz über Rahmenbedingungen für elektronische Signaturen [Signaturgesetz] [SigG] [Electronic Signature Act] July 22, 1997, BGBl. I at 1870, 1872 et seq. (Ger.). See also Leupold & Glossner, supra note 2147, at Teil 5. H. III, recital 421–422. The German Electronic Signature Act is an implementa-
is not sufficient, since the transferee must sign the arbitration agreement with a qualified electronic signature. This requires the transferee to have a certificate, a password for that certificate, and a device for signing the certificate. This means that standard assent mechanisms for software license agreements are not sufficient, and that a special assent mechanism must be used in order to meet the form requirements of arbitration clauses under German law. This is likely to be a major stumbling block for transferors.

If these formal requirements are met, a party may, until the arbitration tribunal has been formed, challenge the arbitration clause at the local Oberlandesgericht. If the place of arbitration is outside Germany, the local Oberlandesgericht of the respondent, or alternatively the Berlin Kammergericht, have jurisdiction for this assessment. However, if the formal requirements are met, there should generally be few problems with enforcement. Still, it is possible that an arbitration clause in a consumer agreement can be considered as an unfair contract term, and therefore not binding on the consumer, if “it causes, contrary to the requirement of good faith, a significant imbalance in the parties’ rights and obligations arising under the contract, to the detriment of the consumer.” It is not necessary for a consumer to plead that the arbitration agreement should be declared void in order for a national court to invalidate it. According to the CJEU, the Unfair Terms Directive should be interpreted as, that a national court should “determine whether the arbitration agreement is void and annul that award where that agreement contains an unfair term, even though the consumer has not pleaded that invalidity in


See BGB § 126(a)(1) (Ger.); SigG § 2 (Ger.) (Regarding definition of a qualified electronic signature.).

VERORDNUNG ZUR ELEKTRONISCHEN SIGNATUR [Signaturverordnung] [SigV] [Signature Regulation] November 16, 2001, BGBl. I at 3074, § 15 (Ger.) (Regarding requirements for qualified electronic signature products.); SigG §§ 4–14, 17 (Ger.) (Regarding requirements for certificate providers and products for qualified electronic signatures.).

ZPO §§ 1032(2), 1062 (Ger.).

See Leupold & Glossner, supra note 2147, at Teil 5. H. III, recital 421.


Id. at Article 6(1).

the course of the arbitration proceedings, but only in that of the action for annulment.2416

Thus, to summarize, arbitration clauses are likely to be problematic under German law, primarily by failing to meet the form requirements.

Comparison
Under American law, there is a lot in favor of arbitration, and state law that attempts to limit arbitration can be preempted. Still, it is possible that arbitration clauses against consumers can be found unconscionable, if the “place or manner” would be unreasonable.2417 This is perhaps especially likely under the laws of California.2418

Arbitration clauses are even more likely to be invalid under German law. As seen, German law is generally quite restrictive against arbitration clauses when consumers are involved.2419 From a software license agreement perspective, the formal requirements for arbitration clauses against consumers under German law are likely a deal breaker. Such provisions must be enclosed in a separate document, and be signed with a qualified electronic signature.2420 This means that arbitration clauses will not meet the formal requirements under German law if they are enclosed in software license agreements and assented with click-wrap license agreements. Thus, arbitration clauses will not be valid under German law when the agreements currently found on the market are being used. And even if this would be addressed, it is still possible that such provisions would be considered as unfair contract terms.

Some software license agreements include arbitration clauses that are only applicable for transferees resident in the United States.2421 This could be one solution to avoid invalidity since arbitration clauses are more likely to be valid under American law than under German law.

2418 Beheshti, supra note 2396, at 57–60.
2420 ZPO § 1031(5) (Ger.); BGB § 126(a)(1) (Ger.). See also Leupold & Glossner, supra note 2147, at Teil 5, H. III, recital 421–422.
2421 Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro, Section 2(a) (2013) (“If you live in the United States, this Section 2 [binding arbitration and class action waiver] applies to any dispute.”).
8.3.2 Forum Selection Clauses

Many contracts with multi-jurisdictional parties contain forum selection clauses, and also some software license agreements. For example:

This License Agreement shall be governed by the laws of the State of Washington, without regard to conflicts of law provisions, and you hereby consent to the exclusive jurisdiction of the state and federal courts sitting in the State of Washington. Any and all unresolved disputes arising under this License Agreement shall be submitted to arbitration in the State of Washington.

In the absence of a forum selection clause, a plaintiff is permitted to sue in any court, as long as the court has jurisdiction. The question of applicable forum can be strategically important. Thus, the defendant can try to oppose the plaintiff’s choice of forum, and try to move the lawsuit to another forum. By using forum selection clauses, a transferor becomes able to decide applicable forum for all lawsuits.

Forum selection clauses can be divided into permissive and exclusive forum selection clauses. The first category allow the parties to be brought into each others forum, and the second category only allow one forum to have jurisdiction. It might require some interpretation regarding whether a forum selection clause is exclusive or permissive, and the result may vary between different jurisdictions. Still, forum selection clauses in software license agreements, like the example above, are probably more likely to be considered exclusive.

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2422 Faye Fangfei Wang, *Obstacles and Solutions to Internet Jurisdiction: A Comparative Analysis of the EU and US laws*, 3 J. Int’l Com. L. & Tech. 233, 234 (2008) (“A well-drafted contract, which has factual links with more than one country, will contain a choice of jurisdiction or court clause.”).


2426 See TH Agriculture & Nutrition, L.L.C. v. Ace European Group Ltd, 416 F.Supp.2d 1054, 1074–1079 (D. Kan. 2006) (The court said that the following clause must be considered permissive under the law of the Tenth Circuit/Kansas state law, but mandatory under Dutch law: “Any dispute concerning the interpretation of the terms, conditions, limitations and/or exclusions contained in this Policy is hereby understood and agreed by both the Insured and the Insurers to be subject to the law of the Netherlands. Each party agrees to submit to the jurisdiction of any court of competent jurisdiction within The Netherlands and to comply with all requirements necessary to give such Court jurisdiction. All matters arising hereunder shall be determined in accordance with the law and practice of such Court.”).
United States

Under American law, forum selection clauses are prima facie valid, according to the principles laid down in *M/S Bremen v. Zapata Off-Shore Co.* If forum selection clauses are not unreasonable, affected by “fraud, undue influence, or overweening bargaining power,” or contrary to public policy, they should be upheld. A forum selection clause may be unreasonable if “the chosen forum is seriously inconvenient” for a trial, that is, forcing to litigate would be “so gravely difficult and inconvenient that [a party] will for all practical purposes be deprived of his day in court.” If the clause is valid, and the plaintiff initiates a lawsuit in another forum, the motion should be transferred to the agreed forum, “unless extraordinary circumstances unrelated to the convenience of the parties clearly disfavor a transfer.”

Forum selection clauses have not only been upheld between business actors, but also against consumers. In *Carnival Cruise Lines, Inc. v. Shute*, the Supreme Court said that the company, a cruise line, had a special interest in limiting fora. The customer had been given notice of the clause, and the customer did not satisfy the “heavy burden of proof,” required to make the clause invalid due to being inconvenient; the forum in the agreement was not a “remote alien forum,” due to the location of the accident. The clause did not violate fundamental fairness; it was not a mean “of discouraging cruise passengers from pursuing legitimate claims.” And finally, there was no evidence

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2430 *Id.* at 17–18.


2434 *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 593–594 (1991) ((1) The company’s customers could otherwise initiate litigations in many different fora. (2) Forum selection clauses reduced uncertainty about correct fora, which would help litigators. And (3) limiting fora would save money for the company, which would lead to lower prices and benefit customers.).

2435 *See* Ward v. Cross Sound Ferry, 273 F.3d 520, 523 (2d Cir. 2001) (Courts in similar cases have required that the clause must have been reasonably communicated by the physical characteristics of the agreement, and the customer must have been allowed to become “meaningfully informed” by the clause.).

2436 The forum was in Florida and the accident happened on the coast of Mexico.
of fraud or overreaching behavior.\textsuperscript{2437} Thus, the Court upheld the forum selection clause.

However, other courts have not always followed \textit{Shute} in proceedings between unequally situated parties, or where “there is a significant suggestion of inconvenience or judicial ineconomy” between the parties.\textsuperscript{2438} And finally, both \textit{Shute} and \textit{Bremen} applied federal law, so the result could be different under state law.\textsuperscript{2439}

In the context of software license agreements, forum selection clauses have been upheld against consumers in click-wrap agreements, based on the principles in \textit{M/S Bremen} and \textit{Carnival Cruise}. Forum selection clauses have been considered valid as long as they are not deemed unfair or unreasonable.\textsuperscript{2440} However, if a forum selection clause would be buried in the middle of the software license agreement, it could fail to give notice to the clause and be procedurally unconscionable.\textsuperscript{2441}

But courts have sometimes found forum selection clauses in software license agreements to be unenforceable; for example, if the claims were small and the clauses would require transferees to travel very far (2,000 miles) to court.\textsuperscript{2442}

A forum selection clause could also be unenforceable if it is contrary to public policy.\textsuperscript{2443} A forum selection clause could be unenforceable under

\begin{itemize}
  \item \textsuperscript{2438} 7 Richard A. Lord, \textsc{Williston on Contracts} § 15:15 (4th ed., West Group: Eagan 2003) (But courts have uniformly enforced forum selection clauses between business actors, if the clauses are otherwise reasonable.). \textit{See} Carnival Cruise Lines, Inc. v. Superior Court, 234 Cal.App.3d 1019, 1026–1027 (1991) (The California court remanded after \textit{Shute}, and remanded to the trial court to examine whether there was sufficient notice. If there would be insufficient notice, the court would not find the forum-selection clause valid.).
  \item \textsuperscript{2439} \textit{See} \textsc{Principles of the Law of Software Contracts} § 1.14 (2009).
  \item \textsuperscript{2441} \textit{See} \textit{In re RealNetworks, Inc. Privacy Litigation}, 2000 WL 631341, *1, 5–6 (N.D. Ill. May 8, 2000). \textit{See also} \textsc{Principles of the Law of Software Contracts} § 1.14 (2009) (Allowing forum selection clauses unless being unfair or unreasonable.).
  \item \textsuperscript{2442} \textit{See} Aral v. EarthLink, Inc., 36 Cal.Rptr.3d 229, 241–242 (Cal. Ct. App. 2005); \textsc{Principles of the Law of Software Contracts} § 1.14 cmt. a (2009).
\end{itemize}
public policy, if the state has “a strong public policy against enforcing” such provisions, or if the provision would remove the opportunity to class action lawsuits.

In Williams v. AOL, the court examined a situation where injury arose before accepting the terms of use that contained a forum selection clause. The court found that the plaintiffs did not have notice of the clause. The Massachusetts plaintiffs’ claims were only for a few hundred dollars, and the venue under the agreement would be in Virginia, which would be inconvenient for the plaintiffs. Finally, the defendant had undercut its forum selection clause by allowing similar cases to be transferred from Virginia to Florida, in spite of the forum selection clause. The forum selection clause was therefore not upheld.

Thus, there are mainly two limitations to forum selection clause validity: (1) Lack of notice; and (2) public policy, mainly if lawsuits are likely to concern small claims or if the forum selection would lead to inconvenient results.

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2444 Matunas v. PracticeWorks Sys., 2007 WL 1729738, *3 (D. Idaho Jun. 13, 2007) (“Here, suit was brought in Idaho where there is a strong public policy against enforcing forum-selection clauses. The Idaho Legislature has declared such clauses void.”). See also PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 1.14(d) cmt. a (2009).
2445 Doe 1 v. AOL LLC, 552 F.3d 1077, 1078–1079, 1083–1084 (9th Cir. 2009) (The software license agreement included a forum selection clause and a choice-of-law clause, which would effectively remove class action as an available remedy. This was considered contrary to public policy in California, since the public policy of California strongly advocate class action suits, and consumer regulation prohibit consumers from waiving their available legal remedies.); CAL. CIV. CODE § 1751 (West, Westlaw through 2013); America Online, Inc. v. Superior Court (Mendoza), 90 Cal.App.4th 1, 12–20 (2001). See also Dix v. ICT Group, Inc., 161 P. 3d 1016, 1023–1024 (Wash. 2007) (The Washington Supreme Court refused to enforce a similar forum selection clause against consumers on public policy grounds. Unlike California state law, Washington state law does not include a statutory provision against class action.).
Germany

Under German law, the first question is whether basic contract requirements are met, that is, if the clause has been incorporated into the agreement.2450 If incorporated, the next question is whether the forum selection clause is effective.

In Germany, under the Brussels I Regulation, if at least one party is domiciled in a Member State, and a Member State has been chosen, that court shall have exclusive jurisdiction.2451 This choice shall be in writing unless prior practice between the parties.2452 This requirement can be met by including the forum selection clause in a standard-term agreement,2453 such as a software license agreement.

If the parties have chosen the court of a non-Member State, we apply national law. If the agreement is in writing, at least one party does not have a general venue in Germany, and the parties are business actors, such provisions should generally be enforceable.2454 But in certain situations, such provisions could be unenforceable. In IHR 2013, 35,2455 the BGH decided that an exclusive forum selection clause coupled with a choice-of-law clause in an agreement between an American company and a German sales agent was unenforceable. The agreement would make Virginia law applicable, and remove any right to compensation after the termination of the sales agreement, a right found in German and European Union law, and considered mandatory under private international law by the CJEU.2456

If one party is a consumer, forum selection clauses will be prima facie invalid,2457 unless: (1) The agreement is entered after a dispute has arisen;

2450 The clause must not be surprising. See BGB § 305(c) (Ger.). For example, it must not be hidden.
2451 Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 23(1). See also Wang, supra note 2422, at 234 (Thus, it is possible to choose a different Member State to which neither party has any connection.). Article 23(3) contains an exception. If neither party is domiciled in a Member State, courts of other Member States shall have no jurisdiction unless the chosen court declines. Thus, the court is given a choice. However, this exception is unlikely to apply.
2453 See OLG Köln May 24, 2006, 16 W 25/06, paras. 11–12 (Ger.).
2454 ZPO §§ 38, 40 (Ger.).
2455 BGH Sep. 5, 2012, INTERNATIONALES HANDELSRECHT [IHR] 2013, 35 (Ger.).
(2) the consumer is given additional options; or (3) transferor and transferee have chosen the jurisdiction of their own domicile.\textsuperscript{2458} Thus, in pre-dispute agreements, such as software license agreements, forum selection clauses cannot effectively take away European consumers’ rights to litigate in their own jurisdictions.\textsuperscript{2459} Only permissive forum selection clauses are valid.

Comparison

Granted, there are similarities between American law and German law when it comes to forum selection clauses. Both German and American law requires forum selection clauses to have been incorporated in to the agreement in order to be valid. Also, forum selection clauses between business actors are generally valid and effective under both American and German law. This applies to both permissive and exclusive forum selection clauses.

However, forum selection clauses are prima facie invalid against consumers under German law, while such clauses are generally valid under American law.\textsuperscript{2460} Still, there are exceptions under both American and German law. Under American law, the two main limitations are: (1) Lack of notice;\textsuperscript{2461} and (2) public policy, mainly if lawsuits are likely to concern small claims or if the forum selection would lead to inconvenient results.\textsuperscript{2462} In Germany, only permissive forum selection clauses are valid against consumers.\textsuperscript{2463}

8.3.3 Class Action Waivers

Arbitration agreements and forum selection clauses could have a practical effect on software license agreement validity, if reducing the probability of litigation. Class action waivers, which prohibit class action lawsuits, could have a similar effect. For example:

\textsuperscript{2458} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 17. See also Tang, supra note 2457, at 256.
\textsuperscript{2460} Cordera, supra note 2425, at 244; Tang, supra note 2457, at 256.
\textsuperscript{2463} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 17(2). See also Tang, supra note 2457, at 256.
ANY DISPUTE RESOLUTION PROCEEDINGS, WHETHER IN ARBITRATION OR COURT, WILL BE CONDUCTED ONLY ON AN INDIVIDUAL BASIS AND NOT IN A CLASS OR REPRESENTATIVE ACTION OR AS A NAMED OR UNNAMED MEMBER IN A CLASS, CONSOLIDATED, REPRESENTATIVE OR PRIVATE ATTORNEY GENERAL CTION, UNLESS BOTH YOU AND THE SONY ENTITY WITH WHICH YOU HAVE A DISPUTE SPECIFICALLY AGREE TO DO SO IN WRITING FOLLOWING INITIATION OF THE ARBITRA-TION. THIS PROVISION DOES NOT PRECLUDE YOUR PARTICIPA-TION AS A MEMBER IN A CLASS ACTION FILED ON OR BEFORE AUGUST 20, 2011. THIS PROVISION IS NOT APPLICABLE TO THE EXTENT SUCH WAIVER IS PROHIBITED BY LAW.2464

United States

Class action waivers can be found in: (a) Arbitration agreements; or (b) forum selection agreements. The result might differ between these two types.

In Discover Bank v. Superior Court,2465 the California Supreme Court said that a class action waiver in a consumer arbitration agreement is unconscionable if it is found within an adhesion contract, the dispute will likely involve small sums, and it is alleged that the party with superior bargaining power uses the waiver to “deliberately cheat large numbers of consumers out of individually small sums of money.”2466

However, in AT&T Mobility LLC v. Concepcion,2467 the Supreme Court said that states (read: California) must enforce such class action waivers, and cannot “require a procedure that is inconsistent with the FAA, even if it is desirable for unrelated reasons.” The FAA preempted the principles that had been laid down in Discover Bank, since the latter stood as “an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.”2468 Class action waivers should therefore be considered valid and enforceable.2469

2464 Sony, Sony Entertainment Network: Terms of Service and User agreement, Version 19, Section 17 (last updated Nov. 7, 2013).
2465 30 Cal.Rptr.3d 76 (Cal. 2005).
2469 However, see supra section 8.3.2 (Regarding class-action waivers in forum selection agreements.).
But this does not mean that all class action waivers will be valid and enforceable. In *Trujillo v. Apple Computer, Inc.*, the court examined a class action waiver in an iPhone activation agreement. The plaintiff did not have access to the standard terms on paper or any reference to online terms. The store did not contain any signs with references to online terms. The terms available online at the time of the purchase were furthermore out-of-date. The court did not think that the consumer should have found the terms online on its own. The plaintiff was presented with the terms when activating the phone, and had to accept the terms before activation. The court said that under Illinois law, unavailability of terms prior to purchase, is a critical factor for procedural unconscionability. The court found the arbitration class waiver to be procedurally unconscionable, and this procedural unconscionability was so fundamental that the arbitration requirement became unenforceable.

For class action waivers in forum selection clauses, the result may be different. In *Doe 1 v. AOL*, the software license agreement included a forum selection clause and a choice-of-law clause, which would effectively remove class action as an available remedy. This was considered contrary to public policy in California, since the public policy of California strongly advocate class action suits, and consumer regulation prohibit consumers from waiving their available legal remedies. In *Dix v. ICT Group, Inc.*, the Supreme Court of Washington also refused to enforce a similar forum selection clause against consumers on public policy grounds, even though Washington state law does not contain a provision against class action waivers like California state law. However, such class action waivers are in contrast, neither unconscionable nor conflicting with public policy under New York state law. Thus, the result may differ between states.

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2470 578 F.Supp.2d 979 (N.D. Ill. 2008).
2472 552 F.3d 1077 (9th Cir. 2009).
2473 Doe 1 v. AOL LLC, 552 F.3d 1077, 1078–1079 (9th Cir. 2009).
2475 161 P.3d 1016 (Wash. 2007).
Germany

This question is less important under German law. Germany does not have a legal concept of class action comparable to the one found in the United States, which would allow one member of a group to sue for all members without consent from the others. \(^{2478}\) Thus, if German procedural law would be applicable, the validity of class action waivers would not matter for transferees.

But while German law does not have class actions, it has the *Verbandsklage* (group action), where an association can file suit on behalf of the public. \(^{2479}\) A class action waiver in a software license agreement between transferor and transferee does not affect such associations and group actions.

The European Commission has recommended the Member States to implement collective redress mechanisms before July 26, 2015, \(^{2480}\) allowing bundling of single claims into one court action to facilitate access to justice, and allowing claimants to seek injunctive and compensatory relief. \(^{2481}\) If Germany would implement a collective redress mechanism, a class action waiver deceptive acts or practices. See N.Y. Gen. Bus. Law § 349 (McKinney, Westlaw through 2013).

\(^{2478}\) Dietmar Baetge, *Germany*, 622 Annals Am. Acad. Pol. & Soc. Sci. 125, 126 (2009); William B. Fisch, *European Analogues to the Class Action: Group Action in France and Germany*, 27 Am. J. Comp. L. 51, 78 (1979). However, this difference should not be exaggerated. German law adheres to the rule that the loosing party shall reimburse the prevailing party’s attorney fees and costs See ZPO § 91(1) (Ger.); Eva Zirngibl, *Kollektiver Rechtsschutz im Zivilprozess in den USA und Deutschland* 89 (Diss. Universität Augsburg, Juristische Fakultät: Augsburg 2006). This can be contrasted with the “American rule,” where each party bear their own attorney’s fees. See Alyeska Pipeline Service Co. v. Wilderness Society, 421 U.S. 240 (1975); Fed. R. Civ. P. 54(d). This rule is arguably a major reason behind the class action institute, and German law thus negates this reason. Also, German law allows consumer and commercial interest associations to seek injunctive relief for the use of unfair standard terms. See Baetge, *supra* note 2478, at 126–127. Thus, German law allows for association actions *Verbandsklage*, but not for individual action (class actions.). 

\(^{2479}\) See Gesetz über Unterlassungsklagen bei Verbraucherrechts- und anderen Verstößen [Unterlassungsklagengesetz] [UklaG] [Act on Restraining Orders regarding Consumer Rights and other Offenses] November 26, 2001, BGBl. I at 3138, 3173, § 1 et seq. (Ger.).

\(^{2480}\) That is, within two years after the publication of the Recommendation. See Commission Recommendation 2013/396 on common principles for injunctive and compensatory collective redress mechanisms in the Member States concerning violations of rights granted under Union Law, 2013 O.J. (L 201) 60 (EU), Preamble 24.

\(^{2481}\) *Id.* at Articles 8, 21, 30, 31 (The European Commission separates this from the American class action system and its perceived abuses. The collective redress mechanisms should be “opt-in,” there should be mechanisms to stop unfounded claims at the earliest stages, and contingency fees and punitive damages should be avoided.).
would likely at least be invalid under the general clause of the BGB. Thus, class action waivers might become more relevant under German law in the future, but they will also likely become invalid.

Also, if we assume that an American court has jurisdiction over a software license agreement, meaning that *lex fori* applies to procedural matters, but *lex causae* is German law, the question of class action waiver validity could become relevant. In that situation, content control could become relevant. However, since German transferees would not have the right to class action under German procedural law, in the absence of contract, it is not reasonable than the application of American procedural law would make the provision substantively invalid under German law.

Comparison
The validity of class action waivers under American law may vary depending on whether they are placed in arbitration or forum selection agreements. Since arbitration agreements rely on federal law, the States cannot “require a procedure that is inconsistent with” federal law. If so, such state law can be preempted under obstacle preemption. Still, class action waivers in arbitration agreements might become invalid if being unconscionable, by failing to meet basic contract law requirements. Class action waivers in forum selection agreements can become unenforceable on public policy grounds, but some states, such as New York, do not consider such provisions to be unconscionable or violating public policy.

The question is not especially relevant from a German perspective, since German law does not have class actions. But even if an American forum would have jurisdiction, and American procedural law would apply, it is unlikely that German law would find class action waivers invalid, since the

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2482 See BGB § 307 (Ger.).
right to class action does not currently exist under German law. Thus, class action waivers are likely to be valid under German law.

Thus, class action waivers in arbitration agreements are likely to be unproblematic, as long as they are incorporated into software license agreements, but arbitration clauses are generally problematic under German law. Also, class action waivers in forum selection agreements may be invalid under American law.

8.3.4 Choice-Of-Law Clauses

The cousin of forum selection clauses is choice-of-law clauses. From the perspective of cross-national validity of software license agreements, the latter kind of provisions should arguably be more important, since the question of applicable law is arguably more important than applicable forum for cross-national validity.\textsuperscript{2487} Choice-of-law clauses are not uncommon in software license agreements. For example:

This License will be governed by and construed in accordance with the laws of the State of California, excluding its conflict of law principles.\textsuperscript{2488}

Valid and effective choice-of-law clauses could affect the validity of an asymmetrically valid software license agreement in a specific software transfer. Thus, the validity and enforceability of choice-of-law clauses can be very important.

United States

Under American law, the main principle is that the law chosen by an agreement shall be applied,\textsuperscript{2489} unless the parties or the transaction have no substantial relationship with the chosen jurisdiction, or there is no other reason for this choice,\textsuperscript{2490} or if applying the chosen law would violate a fundamental public policy of the law of the jurisdiction that would apply in the absence of a choice.\textsuperscript{2491} If there is a conflict with a fundamental public policy, and if

\textsuperscript{2487} \textit{See supra} section 3.A.1.

\textsuperscript{2488} Apple, \textit{Software License Agreement for OS X Mavericks [10.9]}, Section 12 (2013).

\textsuperscript{2489} Restatement (Second) of Conflict of Laws § 187 (1971); Milanovich v. Costa Crociere, S.p.A., 954 F.2d 763, 767 (D.C. Cir. 1992) (Also in adhesion contracts, even though such agreements may require scrutinization for "substantial injustice.").

\textsuperscript{2490} Restatement (Second) of Conflict of Laws § 187(2)(a) (1971); Washington Mutual Bank v. Superior Court, 103 Cal.Rptr.2d 320, 328 (Cal. 2001) (If neither of these requirements are met, a court does not need to enforce the choice-of-law clause.). \textit{See also} deLisle \& Trujillo, \textit{supra} note 2424, at 145.

\textsuperscript{2491} Restatement (Second) of Conflict of Laws §§ 187(2)(b), 188 (1971); Washington Mutual Bank v. Superior Court, 103 Cal.Rptr.2d 320, 328 (Cal. 2001). There is no clear
the state not chosen has a “materially greater interest than the chosen state in the determination of the particular issue,” the choice-of-law clause will not be enforced.\(^{2492}\)

Choice-of-law clauses have never been given as much attention in courts as forum selection clauses.\(^{2493}\) As was said, in *Carnival Cruise Lines, Inc. v. Shute*,\(^{2494}\) the Court upheld a forum selection clause against a consumer.\(^{2495}\) There has been some discussion whether this case is applicable to choice-of-law clauses as well.\(^{2496}\) In *Milanovich v. Costa Crociere, S.p.A.*\(^{2497}\) the court upheld a choice-of-law clause in an adhesion contract (cruising ticket) by relying on *Bremen* and *Carnival Cruise*. The court found the provision to have been “reasonably communicated.”\(^{2498}\) The court noted that choice-of-law clauses should generally be upheld, unless it can be established that: (a) Enforcement would be “unreasonable and unjust”; (b) there were contractual impurities, such as fraud, bad faith, or overreaching; or (c) strong public policies of the forum contravene enforcement. The provision in this situation was upheld since it did not contravene any public policy (statute provision).\(^{2499}\)

But choice-of-law clauses could be ineffective if they would uphold class action waivers, and the forum state has a strong public policy in support of

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\(^{2492}\) Washington Mutual Bank v. Superior Court, 103 Cal.Rptr.2d 320, 328 (Cal. 2001); Restatement (Second) of Conflict of Laws § 187(2)(b) (1971).

\(^{2493}\) Cf. Trevor C. Hartley, International Commercial Litigation: Text, Cases and Materials on Private International Law 5–6 (Cambridge University Press: Cambridge 2009) (“[T]he outcome of a case depends much more on jurisdiction than choice of law. This has become clearly apparent, at least in leading centres of litigation, in recent times. It explains why parties will fight tooth and nail on jurisdictional issues; then, once these are decided, settle the case without further litigation. This in turn accounts for the fact that in England today there are far more reported cases on international jurisdiction and procedure than on choice of law.”).


\(^{2496}\) See Zhang, supra note 2378, at 158–159.

\(^{2497}\) 954 F.2d 763, 769 (D.C. Cir. 1992).

\(^{2498}\) Milanovich v. Costa Crociere, S.p.A., 954 F.2d 763, 768, fn. 9 (D.C. Cir. 1992) (The provision was “printed in identical type on the very next page of the ticket” and was incorporated. It should be noted that the court applied American maritime law when establishing this.).

class action. And if an effective choice-of-law clause would make the whole contract invalid, a court could refuse to uphold the choice-of-law clause. But not if the contract would only become invalid in part. Still, if incorporated, choice-of-law clauses should generally be effective under American law.

Germany

Private international law puts a lot of emphasis on the choice of the parties. However, there are several limitations to freedom of choice. For example:

(1) The parties cannot deselect all laws and choose an independent legal system;

(2) the choice of a another legal system in an agreement between two German parties are limited;

(3) mandatory rules protecting economic or socio-political values, for example competition law and consumer law, can override the choice (positive ordre public);

(4) the principle of territoriality in copyright law allows each country to use its own law for infringement;

(5) a forum may refuse to apply the chosen law if being incompatible with the public policy of the forum (negative ordre public).

But apart from these limitations, the main principle is that the law chosen by the parties shall govern the agreement. And the existence and validity of an agreement shall be determined according to the law chosen by the

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2501 CS-Lakeview at Gwinnett, Inc. v. Simon Property Group, Inc., 659 S.E.2d 359, 361–362 (Ga. 2008); Symeonides, supra note 2500, at 303–304. But cf. deLisle & Trujillo, supra note 2424, at 145 (Citing Symeonides, but saying that courts in some jurisdictions would “less often” invalidate a choice-of-law clause that would only lead to partial invalidity.).

2502 See Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2, recital 227–228. This would otherwise arguably have been handy from the perspective of cross-national validity of software license agreements, if the parties could rely solely on the software license agreements or some form of global contractual governance.

2503 See Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 3(3). See also Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(a)(aa), recital 230–231 (Not possible to escape mandatory German law.).


2505 See Leupold & Glossner, supra note 2147, at Teil 5. C. I, recital 33–35.


2507 Id. at Article 3(1).
Mapping Individual Provisions

agreement, unless a party wishes to establish that it did not consent, and it would not be reasonable to apply the law according to the contract. Thus, if German law is chosen, its validity should be examined under German law. In general, such provisions are valid between business actors, and content control under BGB § 307 is not applied to such provisions. However, if the software license agreement points to the law of another legal system, a transferee can challenge this clause if being able to prove lack of incorporation. If it would be unreasonable to examine whether a choice-of-law clause was incorporated under the law of the agreement, German law can become applicable if the transferee has its habitual residence there. However, the most relevant challenge to a choice-of-law clause is that it was surprising. A choice-of-law clause can be surprising if it was hidden in the agreement, or if it points out a legal system that respects no, or an insufficient amount of, international law.

If the transferee is a consumer, many of the same principles apply. Freedom of choice is the main principle, but there are some limitations. There is no content control, but the question of whether the provision was incorporated is relevant. And like between business actors, whether the provision was surprising is especially relevant against consumers, and also the question whether the provision was hidden. Another relevant question is whether the transferee could expect a choice-of-law clause, and if it was recognizable for the transferee that a foreign relationship had been entered. This is not certain if the transferee deals with a German subsidiary, and a choice-of-law clause points out a sister company (for example, in Ireland) or a parent company in the United States. If surprising, the provision will not become incorporated.

There are also other limitations on choice-of-law clauses for consumers. According to the Rome I Regulation, even if a consumer and a business actor choses applicable law to an agreement, that choice must not deprive the consumer of mandatory protection that would have applied in the absence of a contract. However, a consumer cannot expect that choice-of-law clauses

2508 Id. at Articles 3(5) and 10(1).
2509 Id. at Article 10(2).
2510 See BGB § 305(c) (Ger.).
2511 See also Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(b), recital 238–243.
2512 See Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(c), recital 244.
2513 See BGB § 305(c) (Ger.).
2514 See Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(c), recital 244.
2515 Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Article 6(2). See also Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(c)(aa), recital 245. 387
will be restricted if the consumer undertakes transactions abroad.\textsuperscript{2516} For consumer protection to become applicable, the transferor must pursue or direct commercial or professional activities in the country of the transferee’s habitual residence.\textsuperscript{2517} As we have seen, this can be complicated, and the applicability of this provision is dependent on that German law is applicable in the absence of choice.\textsuperscript{2518}

Beyond private international law rules, there is similar protection with a more limited scope. Under the Unfair Terms Directive,\textsuperscript{2519} Member States must take measures so that consumers do not lose protection under the Directive by a choice-of-law clause, if the contract “has a close connection with the territory of the Member States.”\textsuperscript{2520} Thus, if a choice-of-law clause points to a non-Member State, and the law of that legal system would deprive the consumer of protection against unfair contract terms, the choice-of-law clause will be set aside. However, this only applies to unfair contract terms, and only if there is a “close connection” with the consumer’s Member State. The term close connection is not defined.\textsuperscript{2521} Under the German implementation, which applies to consumer contracts,\textsuperscript{2522} it can be assumed to exist if the transferor pursues or directs commercial or professional activities in a Member State or in an EEA State where a consumer is habitually resident.\textsuperscript{2523} Thus, the result would be the same as under the Rome I Regulation.

If there is a choice-of-law clause, German mandatory consumer protection will only become relevant if the transferor directs commercial or professional

\begin{footnotes}
\item[2517] Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (E), Article 6(1) \textit{See also} Leupold & Glossner, \textit{supra} note 2147, at Teil 5. E. I. 2(c)(aa), recital 245.
\item[2518] \textit{See supra} section 3.4.2.
\item[2522] BGB § 310(3)(2) (Ger.).
\item[2523] EGBGB § 46(b) (Ger.). In contrast, the old provision stated that a close connection was assumed if the contract was based on a public offer or advertisement, and the party giving the final declaration was domiciled or resident in German law’s jurisdiction. \textit{See} \textit{GESetz ZUR REGELUNG DES RECHTS DER ALLGEMEINEN GESCHÄFTSBEIDUNGEN [AGB-Gesetz] [AGBG]} [Standard Contract Terms Act] December 9, 1976, BGBl. I at 3317, § 12 (repealed 2002) (Ger.).
\end{footnotes}
activities to Germany. This has to be established based on Alpenhof.\textsuperscript{2524} If a transferor does not direct commercial or professional activities to Germany, German law would not have applied in the absence of contract,\textsuperscript{2525} and choice-of-law clauses are likely to be effective.

Comparison
There are clear similarities between American and German law when it comes to choice-of-law clauses. Basic contract law requirements of incorporation apply. The main principle is that the chosen law shall apply,\textsuperscript{2526} but not if it will be contrary to public policy.\textsuperscript{2527} Under American law, a choice-of-law clause shall not be applied if the parties or the transaction have no substantial relationship with the chosen jurisdiction, or there is no other reason for this choice,\textsuperscript{2528} and a choice in Germany will not affect mandatory regulation, if the parties are both resident in the same legal system and all relevant elements point to that legal system.\textsuperscript{2529}

Differences become clearer when consumers are involved. Still, both German and American law requires the provision to become incorporated.\textsuperscript{2530} The main rule under American law is that such provisions are effective.\textsuperscript{2531} The main rule under the European Rome I Regulation is that a choice cannot deprive a consumer from mandatory protection that would have applied in absence of

\textsuperscript{2524} Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller, 2010 E.C.R. I-12527, paras. 76–85, 93.

\textsuperscript{2525} See supra section 3.4.2.

\textsuperscript{2526} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 3(1); Restatement (Second) of Conflict of Laws § 187 (1971).

\textsuperscript{2527} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 9; Restatement (Second) of Conflict of Laws § 187(2)(b) (1971).

\textsuperscript{2528} Restatement (Second) of Conflict of Laws § 187(2)(a) (1971).

\textsuperscript{2529} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 3(3).

\textsuperscript{2530} See BGB § 305(c) (Ger.); LEUPOLD & GLOSSNER, supra note 2147, at Teil 5. E. I. 2(c), recital 244 (Requiring an examination of whether: (1) The provision was hidden; (2) if the transferee could expect a choice-of-law clause; or (3) whether it was recognizable that a foreign relationship had been entered.). See Milanovich v. Costa Crociere, S.p.A., 954 F.2d 763, 768, fn. 9 (D.C. Cir. 1992) (The requirement of being “reasonably communicated” in order to become incorporated.).

contract. Both regimes have exceptions. Under American law, choice-of-law clauses may be invalid if: (a) Enforcement would be “unreasonable and unjust”; (b) there were contractual impurities, such as fraud, bad faith, or overreaching; (c) strong public policies of the forum contravene enforcement; or (d) if an effective choice-of-law clause would lead to the result of completely invalidating a contract. Still, the general rule should apply in many situations.

Under German law, the main rule is that mandatory consumer protection applies even with a choice-of-law clause. However, when a consumer undertakes transactions abroad this cannot be expected. For consumer protection to become applicable, the transferor must pursue or direct commercial or professional activities in the country of the transferee’s habitual residence. Thus, validity of choice-of-law clauses is dependent on whether German law is applicable in the absence of choice. The requirements in Alpenhof become relevant to establish this. Thus, there are situations when choice-of-law clauses will be valid against German consumers, especially for Internet transactions.

Thus, while German and American law has very different basic approaches to choice-of-law clauses against consumers, the result may sometimes be the same in practice.

8.4 Liability Provisions

This chapter examines provisions that attempt to limit transferors’ warranties and liabilities for software defects and consequential damages.

Software license agreements may exclude or limit warranties, liability, and remedies. There is no bright line between these different functions. In this

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2536 Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Article 6(1) See also LEUPOLD & GLOSSNER, supra note 2147, at Teil 5. E. I. 2(c)(aa), recital 245.
2537 See supra section 3.4.2.
chapter, warranty disclaimers will be defined as exclusion or limitations on responsibility for software quality. Liability disclaimers will be defined as exclusion or limitation of liability for damages to property and persons caused by software defects. Still, there might be some overlap.

8.4.1 Warranty Disclaimers

A warranty disclaimer, or exemption clause, limits the transferee’s lawful right or reduces the available remedies.\textsuperscript{2539} Software license agreements often include some form of warranty disclaimer. Some software license agreements include complete warranty disclaimers, meaning that the software is offered “as-is.” For example:

\begin{quote}
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.\textsuperscript{2540}
\end{quote}

Some software license agreements only exempt warranties to the extent that is possible under applicable law:

\textbf{Microsoft excludes all implied warranties, including those of merchantability, fitness for a particular purpose, and non-infringement. If your local law does not allow the exclusion of implied warranties, then any}

\textsuperscript{2539} Hugh Beale et al., Cases, Materials and Text on Contract Law 494 (Hart Publishing: Oxford 2002). See Black’s Law Dictionary, supra note 2150, at 653 (An “exemption clause” is “[a] contractual provision providing that a party will not be liable for damages for which that party would otherwise have ordinarily been liable.”); Black’s Law Dictionary, supra note 2150, at 531 (A “disclaimer of warranty” is “[a]n oral or written statement intended to limit a seller’s liability for defects in the goods sold.”).

\textsuperscript{2540} Regents of the University of California, New BSD License (1999).
implied warranties, guarantees, or conditions last only during the term of the limited warranty and are limited as much as your local law allows. If your local law requires a longer limited warranty term, despite this agreement, then that longer term will apply, but you can recover only the remedies that are described in this agreement.\textsuperscript{2541}

United States
The first relevant question is whether there are any warranties, especially implied warranties (of merchantability), in software to exclude?

The general source regarding implied warranties is the UCC,\textsuperscript{2542} which creates implied warranties.\textsuperscript{2543} These can be disclaimed,\textsuperscript{2544} unlike express warranties,\textsuperscript{2545} which are almost impossible to disclaim.\textsuperscript{2546} There are mainly three limitations to implied warranty disclaimers: (1) If the customer is a consumer, and there is a written, express warranty;\textsuperscript{2547} (2) different states


\textsuperscript{2542} \textit{See} Robert W. Gomulkiewicz, \textit{The Implied Warranty of Merchantability in Software Contracts: A Warranty No One Dares to Give and How to Change That}, 16 \textit{J. Marshall J. Computer \\& Info. L.} 393, 394–398 (1997) (But even if implied warranties are regulated in the UCC, they can be traced back to common law concepts.).

\textsuperscript{2543} UCC § 2-314 (Westlaw through September 2013) (For example, being “fit for the ordinary purposes for which goods of that description are used.”).

\textsuperscript{2544} \textit{Id.} at §§ 2-316(2), 2-316(3)(a) (Implied warranties can be completely excluded by using expressions such as “as-is.” For consumers, the disclaimer must be in a document, written conspicuously, and state that: “The seller undertakes no responsibility for the quality of the goods except as otherwise provided in this contract.”); \textit{Id.} at § 1-201(b)(10) (Regarding the requirement of conspicuous writing.). For state implementation, \textit{see} CAL. CIV. CODE §§ 1791, 1792–1792.4 (West, Westlaw through 2013); CAL. COM. CODE §§ 2314–2316 (West, Westlaw through 2013).

\textsuperscript{2545} UCC § 2-313 (Westlaw through September 2013) (That is, affirmations, facts, descriptions, samples, or models.).


\textsuperscript{2547} \textit{See} 15 USC § 2308(a). However, “consumer products” only include tangible property. \textit{See} 15 USC § 2301(1). In California, however, limitations on warranties do not expressly only apply to tangible goods. \textit{See} CAL. CIV. CODE §§ 1791(a), 1793 (West, Westlaw through 2013).
may have different limitations on implied warranty disclaimers; and implied warranty disclaimers can be found unconscionable.

Thus, the UCC creates implied warranties and allow them to be disclaimed. However, it has been argued that it is far from certain that implied warranties apply to software transfers. There are mainly two arguments why implied warranties should not apply to software: (1) Implied warranties do not extend to literary works; and (2) the UCC should probably not be applicable to software transfers and software license agreements, as long as the Vernor requirements are met. And perhaps most importantly, courts, in practice, do not apply implied warranties to software especially often. Thus, it is not certain that warranty disclaimers are necessary for software license agreements.

Still, if used, warranty disclaimers are generally likely to be valid and enforceable in software license agreements. A number of cases have touched upon warranty disclaimers in software license agreements.


Implied warranties have not been extended to printed words in recipe books. See Car dozo v. True, 342 So.2d 1053, 1056–57 (Fla. Dist. Ct. App. 1977), cert. denied, 353 So.2d 674 (Fla. 1977). As we know, software is protected as “literary works.” See supra section 3.3. If the exception to implied warranty liability would apply to software, software would then be little susceptible to tort liability. See Donald R. Ballman, Software Tort: Evaluating Software Harm by Duty of Function and Form, 3 Conn. Ins. L.J. 417, 424–425 (1997).

See supra section 3.1.2.

However the result may be different, if: (1) Courts examine the software license agreement “through the lens of” the UCC. See I. Lan Sys., Inc. v. Netscout Serv. Level Corp., 183 F.Supp.2d 328, 331–332 (D. Mass. 2002); or (2) the parties agree that the UCC is applicable. See M.A. Mortenson Co. v. Timberline Software Corp., 93 Wash. App. 819, 970 P.2d 803, 807 (1999); Aubrey’s R.V. Ctr., Inc. v. Tandy Corp., 46 Wash. App. 595, 600 (Wash. Ct. App. 1987).

See Gomulkiewicz, supra note 2542, at 397, fn. 24 (For a list of cases where an implied warranty of merchantability would have applied unless they had been disclaimed.); Principles of the Law of Software Contracts § 303, Rep. n. cmt. b. (2009) (“Few recent cases involve merchantability issues because software publishers almost universally disclaim the warranty.”).

In Moore v. Microsoft Corp., the plaintiff had entered the software license agreement through a click-wrap, which met contractual requirements and effectively disclaimed warranties, waived liability, and limited remedies. In Mortenson v. Timberline, error in a program for preparing construction bids lead the transferee to prepare a bid that was 2 million USD lower than it should have been. The software license agreement contained a provision limiting remedies for any damages. The transferee filed action for breach of warranties, but the court upheld the disclaimer. The provision was not considered procedurally or substantially unconscionable. It was conspicuous and visible to the user each time the software was used. But it should be noted that the plaintiff was “not an inexperienced retail consumer,” but a nationwide professional that had purchased software from Timberline in the past, meaning that the case is not likely to be generally applicable to all transferees.

In Peerless Wall and Window Coverings, Inc. v. Synchronics, Inc., the court examined a warranty and liability disclaimer. The defendant warranted the manual and physical media to be “free from defects” “under normal use for 90 days after the date of original purchase.” But, except for this, there was no “warranties, either express or implied, with respect to the Software, its merchantability, or its fitness for any particular purpose.” The court found the disclaimer to be valid and enforceable. Limitation in time was not legally objectionable since 90-day warranties are routinely upheld on software.

However, in Fieldtech Avionics & Instruments, Inc. v. Component Control.com, Inc., the court did not find the warranty disclaimer to be enforceable. It appeared on “on the third page of the five-page [click-wrap] agreement, [and was] not in larger type or other contrasting font or color.” The warranty Contracts §§ 3.06, 3.05(b) (2009) (Allowing warranty disclaimers of “all implied quality warranties other than the warranty of hidden material defects.” However, if the transferor receives monetary payment for the software, the transferor warrants “that the software contains no material hidden defects of which the transferor was aware at the time of the transfer.”). See also Principles of the Law of Software Contracts (2009) § 303, Rep. n. cmt. b. (For a number of cases with effective warranty disclaimers.).

2562 Id. at 528–531.
disclaimer was therefore not “conspicuous,” and thus not enforceable.\textsuperscript{2564} Thus, the typesetting of warranty disclaimers can be important, and many warranty disclaimers are set in all capitals to be considered “conspicuous.”\textsuperscript{2565}

To summarize, warranty disclaimers in software license agreements are generally valid and enforceable, as long as they meet the requirements for being conspicuous.\textsuperscript{2566} However, uncertainties whether implied warranties apply to software transfers still remain.\textsuperscript{2567} Still, it can be argued that the question of implied warranties never arise since they have been disclaimed.\textsuperscript{2568}

Transferors might wish to include warranty disclaimers just in case, but transferors should reflect on the potential consequences of a provision that is perhaps not necessary: This could mean a risk that other provisions become buried into the software license agreement, and that they will not be enforced due to lack of sufficient notice.\textsuperscript{2569} Thus, transferors must try to weigh these two factors together.

Germany

As we know, German law considers perpetually transferred software to be sold.\textsuperscript{2570} The BGH has applied sales law to software transferred digitally or on physical media and the BGH has repeatedly confirmed software to be a thing.\textsuperscript{2571} This makes transferors potentially liable for defects,\textsuperscript{2572} unless the transferee is made aware of the defects before the transfer.\textsuperscript{2573} If a defect is manifested within six months of the passing of the risk, the thing is presumed

\textsuperscript{2565} \textit{Cf.} UCC § 1-201(b)(10) (Westlaw through September 2013) (Regarding requirements for conspicuousness.).
\textsuperscript{2566} Nimmer, supra note 2056, at § 7:132.
\textsuperscript{2567} \textit{See} Gomulkiewicz, supra note 2542, at 397–398; Gomulkiewicz, supra note 2550, at 698, fn. 58.
\textsuperscript{2568} \textit{Cf.} Principles of the Law of Software Contracts (2009) § 303, Rep. n. cmt. b. (“Few recent cases involve merchantability issues because software publishers almost universally disclaim the warranty.”).
\textsuperscript{2569} \textit{See supra} section 4.4.2 (Regarding problems with long software license agreements.).
\textsuperscript{2570} \textit{See supra} section 3.1.1.
\textsuperscript{2571} \textit{See} BGH Nov. 15, 2006, NJW 2007, 2394, paras. 18–19 (Ger.) (And cited cases.).
\textsuperscript{2572} \textit{See} BGB §§ 433–434 (Ger.); Peter Rott, German Sales Law Two Years After the Implementation of Directive 1999/44/EC, 5 German L.J. 237, 245 (2004) (The thing will be considered free from material defects, if it is suitable for the intended use prescribed in the contract, or if it is suitable for the normal use that such things are used and the buyer can expect this type of thing to be.).
\textsuperscript{2573} BGB § 442 (Ger.). \textit{See also} Rott, supra note 2572, at 247. But this is unlikely in practice.
to have been defective at the passing of the risk.\textsuperscript{2574} The liability for software extends for two years,\textsuperscript{2575} and this cannot be restricted against consumers.\textsuperscript{2576} This and other liability requirements are only mandatory against consumers, and a contract between business actors or between two private persons can deviate from this.\textsuperscript{2577} Still, transferors arguably have more incentives to disclaim warranties under German than American law.

A warranty disclaimer (\textit{Haftungsanschluß}) can, as shown by the examples above, be complete (“as-is”) or more selective. Complete warranty disclaimers are not considered valid under German law against consumers. In fact, such provisions are explicitly unenforceable against consumers.\textsuperscript{2578} In agreements between business actors, this explicit unenforceability of complete warranty disclaimers does not formally apply,\textsuperscript{2579} and only warranty disclaimers that violate the general clause can be caught.\textsuperscript{2580} However, in practice, the result can be the same in contracts between business actors as against consumers.\textsuperscript{2581}

Even selective warranty disclaimers can be excluded or limited. For example, warranty disclaimers that require the transferee to bear the costs for cure, such as transport, costs for materials and work,\textsuperscript{2582} while BGB §§ 309(7–8) creates a better protection against warranty disclaimers, it might also be pos-

\textsuperscript{2574} See BGB § 476 (Ger.) (Unless the nature of the thing makes this presumption incompatible.). See also Rott, supra note 2572, at 247. This applies to all Member States of the European Union. See Directive 1999/44 of the European Parliament and of the Council on certain aspects of the sale of consumer goods and associated guarantees, 1999 O.J. (L 171) 12 (EC), Article 5(3).

\textsuperscript{2575} BGB § 438(1)(3) (Ger.). See also Directive 1999/44 of the European Parliament and of the Council on certain aspects of the sale of consumer goods and associated guarantees, 1999 O.J. (L 171) 12 (EC), Article 5(1).

\textsuperscript{2576} BGB § 475(2) (Ger.). See also Directive 1999/44 of the European Parliament and of the Council on certain aspects of the sale of consumer goods and associated guarantees, 1999 O.J. (L 171) 12 (EC), Article 7.

\textsuperscript{2577} Id. at § 475. See also Rott, supra note 2572, at 242–243.


\textsuperscript{2579} See BGB § 310(1) (Ger.).

\textsuperscript{2580} Id. at § 307.


\textsuperscript{2582} BGB §§ 309(8)(b)(cc) (Ger.).
Mapping Individual Provisions

possible to apply BGB § 307(2), against, for example, exclusion of ordinary negligence, when the warranty disclaimer would interfere with the cardinal obligations of the agreement, and when foreseeable, typical damages affect the other party. Certain warranty disclaimers limit warranty claims, which might be ineffective even between business actors.

Warranty disclaimers that limit liability to a shorter period than the statute given two-year period are invalid against consumers. And this applies not only against German consumers, but also against consumers in all Member States of the European Union.

Thus, complete warranty disclaimers, as in the first example above, will be invalid under German law, and even selective warranty disclaimers, only disclaiming certain warranties, might also be problematic under German law, even between business actors. However, the latter would probably require, for example, exclusion of ordinary negligence, when the warranty disclaimer would interfere with the cardinal obligations of the agreement. Thus, not all warranty disclaimers will be invalid or problematic under German law.

Granted, if the software is considered to be leased — that is, transferred for a limited time against recurring fees — the evaluation of warranty disclaimers will be different. The transferor will still be liable for certain defects due to inconfromity with suitable use under the agreement, but the liability is more restricted than for goods that are sold. Thus, the incentives for warranty disclaimers may be greater in sales contracts. Unlike sale of goods, there

2584 Some warranty disclaimers limit warranty claims when repair is necessary. If repair is not possible, and the agreement only allows price reduction, and no further warranty claims, such as cancellation of the agreement, then are such warranty disclaimers invalid. This also applies between business actors. See BGH Feb. 25, 1981, NJW 1981, 1501 (Ger.); BGH Jul. 14, 1993, NJW 1993, 2436 (Ger.). See also BGH Oct. 29, 1997, NJW 1998, 677 (Ger.) (The warranty disclaimer said that if warranty claims arise, they will be limited to repair or replacement. If three attempts would fail, the customer should be entitled to cancel the contract or a reduction of the purchase price. The BGH found BGB § 309 to be applicable even between business actors, and the warranty disclaimer was ineffective.).
2585 BGB §§ 475(2), 438(1)(3) (Ger.).
2588 See Martinek, Semler, Habermeier & Flohr, supra note 2281, at 12. § 47. II. 4(c), recital 33.
2589 BGB §§ 535–536 (Ger.) (This might allow the transferee a rent reduction.).
Mapping Individual Provisions

is no statute limitation of liability period for leases, but there is on the other hand no limitation against shortening that period in consumer agreements. The main limitation is the exclusion of liability for defects that have been fraudulently concealed. Unlike sale of goods, there are no special consumer limitations for leases. Still, the limitations in BGB §§ 307–309 should be applicable, meaning that certain warranty disclaimers are still likely to be invalid.

Comparison

To summarize, warranty disclaimers are generally valid under American law, even though there are exceptions. However, it is uncertain whether there are any implied warranties for software. Thus, the necessity of warranty disclaimers could be questioned. While it can seem reasonable to add warranty disclaimers just in case, it is necessary to consider the potential effects of including potentially unnecessary provisions in a software license agreement.

From a German perspective, sales law is applied to perpetually transferred software, which create potential liability for defects. Warranty disclaimers that limit liability to a period shorter than two years are invalid against consumers. Complete warranty disclaimers are not valid against consumers, and the result may in practice be the same between business actors. Even selective warranty disclaimers can be invalid, even between business actors, but not all warranty disclaimers are likely to be invalid.

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2590 Compare Id. at § 536(d) (For leases.), and Id. at § 444 (For sale of goods, liability cannot be excluded for fraudulently concealed defects or if a guarantee has been given.).


2592 See Gomulkiewicz, supra note 2542, at 397–398; Gomulkiewicz, supra note 2550, at 698, fn. 58. But it can be argued that such uncertainty is due to effective warranty disclaimers. Cf. Principles of the Law of Software Contracts (2009) § 303, Rep. n. cmt. b. ("Few recent cases involve merchantability issues because software publishers almost universally disclaim the warranty.").

2593 See supra section 4.4.2 (Regarding problems with long software license agreements.).

2594 See BGH Nov. 15, 2006, NJW 2007, 2394, paras. 18–19 (Ger.).

2595 See BGB §§ 433–434 (Ger.); Rott, supra note 2572, at 245.

2596 BGB §§ 475(2), 438(1)(3) (Ger.).

2597 BGB §§ 309(8)(b)(aa), 307(2) (Ger.). See also Säcker & Rixecker, supra note 2123, at Buch 2. Abschnitt 2. § 309(8). 5(a), recital 23–26; Metzger & Jaeger, supra note 2578, at 70–73; Spindler, supra note 2578, at 78.


2599 See BGB § 309(8)(b)(cc) (Ger.); BGH Jan. 21, 1999, NJW 1999, 1031 (Ger.); BGH
This puts transferors in a difficult position. Complete warranty disclaimers might be preferable for a transferor if implied warranties would apply under American law. It is perhaps more likely that a transferor would be liable under German law, but as-is warranty disclaimers are invalid under German law. A compromise would be to use more selective warranty disclaimers, but it is still not certain that such provisions will be valid under German law. Thus, a transferor might have to compromise on cross-national validity, compromise on exemption, or completely avoid warranty disclaimers.

Nationally Adjusted Warranty Disclaimers

Certain transferors have observed these differences between the United States and Europe, but unlike the second example above, which only implies that other warranties might be available in some legal systems, some transferors provide special provisions to comply with European Union requirements:

If Customer obtained the Software in the European Economic Area (EEA), Customer usually resides in the EEA and Customer is a consumer (that is its use of the Software is for personal, non-business related purposes), then Section 6 (Limited Warranty) does not apply to Customer’s purchase and use of the Software. Instead, Adobe warrants for a period of 2 years from purchase that the Software provides the functionalities set forth in the applicable user manual (the “agreed upon functionalities”) when used on the Compatible Computer. Non-substantial variation from the agreed upon functionalities will not establish any warranty rights.2600

This is one solution to overcome the German limitations on warranty periods.2601 However, this requires that this provision becomes incorporated into the agreement, and that this special provision does not bury other contractual provisions.2602

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2601 BGB §§ 475(2), 438(1)(3) (Ger.).
2602 See supra section 4.4.2 (Regarding problems with long software license agreements.).
8.4.2 Liability Disclaimers

Most of us have experienced software failure. This is caused by design failures in the software, and can lead to substantial losses for companies and individuals. Software errors can also lead to life-threatening situations. Both damages to property and life might become relevant even to standard software. Damages to property can manifest itself in the example of data loss, which is becoming an increasing risk when transferors store increasingly important data in software applications and services. Damages to life and health might become relevant in the context of, inter alia, defective mobile consumer medical applications, which are becoming increasingly popular. Questions of liability might be especially relevant for different software services, such as cloud software. Thus, transferor may want to avoid liability by including liability disclaimers. For example:

_Harm to Your Mobile Device or Computer:_ YOU UNDERSTAND AND AGREE THAT YOU USE, ACCESS, DOWNLOAD, OR OTHERWISE OBTAIN INFORMATION, MATERIALS, OR DATA THROUGH THE iSPEECH PLATFORM OR ANY REFERENCE SITES AT YOUR OWN DISCRETION AND RISK AND THAT YOU WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO YOUR PROPERTY (INCLUDING YOUR COMPUTER SYSTEM) OR LOSS OF DATA THAT RESULTS FROM THE DOWNLOAD OR USE OF SUCH MATERIAL OR DATA.

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2603 See Frances E. Zollers, Andrew McMullin, Sandra N. Hurd & Peter Shears, No More Soft Landings for Software: Liability for Defects in an Industry hat has Come of Age, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 745, 749–751, 778–779 (2005) (Regarding software defects. However, transferees can be claimed to be “causative agent” for at least some of these failures.).


2605 Daniel B. Garrie, The Legal Status of Software, 23 J. MARSHALL J. COMPUTER & INFO. L. 711, 736 (2005) (Such examples of serious errors include a computerized radiation machine that overdosed radiation, which caused serious injury and death, aircrafts flying wrong, or fighter planes turning upside down when crossing the equator.).

2606 DriveSafe.ly, DriveSafe.ly Terms of Service (“TOS”) and End User License Agreement (“EULA”), Section 7(e) (as of Feb. 9, 2014).
United States
As was said above, courts do not apply implied warranties to software especially often.2607 And from a tort perspective, there are no known cases were transferors have been strictly liable for software defects.2608 When software has led to life-threatening situations, legal proceedings have led to settlements.2609 Thus, it is uncertain to what extent transferors are liable under a tort evaluation.

If software would be considered a product, a transferee could claim strict product liability for software defects. However, product liability primarily applies to tangible products.2610 This raises questions about its applicability to digitally transferred software.2611 Whether software falls within the scope of strict product liability is not completely clear.2612 Intangible property has sometimes been considered as a product within tort law.2613 In Winter v. G.P. Putnam’s Sons,2614 the court examined liability of a mushroom encyclopedia. The court said that “[p]roducts liability law is geared to the tangible world.”2615 The court noted that while products liability had been applied to aeronautical charts,2616 the court would not extend the liability to a book. However, the court noted that “[c]omputer software that fails to yield the result for which it was designed” could fall within the same category of highly technical tools as aeronautical charts.2617 Different commentators argued that software should be considered as products.2618 However, no software transferor has been strictly liable for software defects.2619 Thus, it is far from certain that a transferor would be subject to strict product liability.

2607 See Gomulkiewicz, supra note 2542, at 397, fn. 24.
2608 Zollers, McMullin, Hurd & Shears, supra note 2603, at 766.
2609 Garrie, supra note 2605, at 736–738.
2611 See Restatement (Third) of Torts: Products Liability § 19 (1998) (“For purposes of this Restatement: (a) A product is tangible personal property distributed commercially for use or consumption.”).
2612 See Zollers, McMullin, Hurd & Shears, supra note 2603, at 774–775.
2614 938 F.2d 1033 (9th Cir. 1991).
2615 Winter v. G.P. Putnam’s Sons, 938 F.2d 1033, 1034 (9th Cir. 1991).
2616 See Brocklesby v. United States, 767 F.2d 1288, 1294–1295 (9th Cir. 1985); Winter v. G.P. Putnam’s Sons, 938 F.2d 1033, 1035 (9th Cir. 1991).
2617 Winter v. G.P. Putnam’s Sons, 938 F.2d 1033, 1035–1036 (9th Cir. 1991).
2618 Restatement (Third) of Torts: Products Liability § 19 cmt. d. (1998); Zollers, McMullin, Hurd & Shears, supra note 2603, at 774.
2619 Zollers, McMullin, Hurd & Shears, supra note 2603, at 766.
Unlike product liability, negligence can be applicable both to software products and cloud services, if (1) a transferor has a duty of care (2) that has been breached and (3) there is causation with (4) damages. Thus, there is a possibility of liability for negligence. Certain categories of professionals\(^{2620}\) have a certain standard of care, which makes disclaiming liability difficult, but software engineers/transferors do not fall within this exception.\(^{2621}\) Thus, it should be possible to disclaim liability, at least for ordinary negligence.\(^{2622}\)

However, provisions disclaiming damages for gross negligence may be unconscionable or caught under state public policy.\(^{2623}\) In *NMP Corp. v. Parametric Tech. Corp.*,\(^{2624}\) the court said that “under Oklahoma law, a party cannot contractually limit damages incurred as a result of it’s [sic] own gross negligence or fraud.”\(^{2625}\)

Germany

Generally, if the transferor is at fault, the transferor is responsible for intent and negligence.\(^{2626}\) Liability extends to consequential loss as well.\(^{2627}\) This also applies to leased software.\(^{2628}\) Liability to consequential damages means that the transferor may be liable for data loss caused by software defects.

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\(^{2620}\) That is, natural persons in a profession/occupation requiring “high level of training and proficiency.” *See Black's Law Dictionary* 1329 (9th ed. 2009).

\(^{2621}\) *See* Perlman, *supra* note 2610, at 395–397 (For example, doctors and architects have a special professional standard of care.).

\(^{2622}\) *See* Perlman, *supra* note 2610, at 397–398.

\(^{2623}\) *Principles of the Law of Software Contracts* § 1.10 ill. 1 (2009); Perlman, *supra* note 2610, at 397–398. Regarding software service contracts, *see* Nimmer, *supra* note 2056, at § 9:17; New Light Co., Inc. v. Wells Fargo Alarm Services, Div. of Baker Protective Services, Inc., 247 Neb. 57, 525 N.W.2d 25, 30–31 (Neb. 1994) (The defendant who had installed a fire alarm had disclaimed all liability. The court found that the liability clause could not release the defendant from liability for gross negligence, since the provision contravened public policy. The court also said that the evaluation of public policy is affected by risk to “human life and property.”).


\(^{2625}\) *NMP Corp. v. Parametric Tech. Corp.*, 958 F.Supp. 1536, 1543 (N.D. Okla. 1997) (But this would be possible for ordinary negligence.).

\(^{2626}\) *BGB* § 276(1) (Ger.).


\(^{2628}\) *BGB* § 536(a)(1) (Ger.). *See also* Markesinis, Unberath & Johnston, *supra* note 2173, at 539.
However, if the software is donated, the transferor comes in a better position. The donor is only liable for intent and gross negligence thus avoiding liability for ordinary negligence. A donor is only liable to damages for defects in the donated thing that the donor fraudulently concealed. Whether liability also extends to consequential damages, for example data loss, is disputable. However, it seems like the general relief of liability for gifts also extends to consequential damages.

Thus, a transferor may be liable for software defects, and that liability may extend to consequential loss, such as data loss. This creates an incentive for excluding liability. However, German law includes a number of limitations to liability exclusion. Liability for injury to life, limb and health, as well as intent and gross negligence cannot be excluded through provisions in standard-term agreements. Thus, provisions completely excluding all liability, and provisions excluding liability for intent and gross negligence are not valid under German law.

While there is an opening for exclusion of ordinary negligence, it is not certain that such exclusion is always permissible. Such provisions can be reviewed under the general clause. In *NJW 2002, 673*, the BGH...
examined a liability disclaimer in a tenant agreement, which disclaimed ordinary negligence. A leaking roof damaged the tenant’s furniture. The BGH examined whether this provision would erode a cardinal duty of the agreement, that is, a cardinal duty whose fulfillment the tenant could rely on. If so, this would be contrary to the requirement of good faith. The purpose of the agreement was to provide a living space for the tenant, and the tenant could not be expected to protect itself against construction defects; neither was insurance available to the tenant for such defects, but were for the landlord. Thus, the BGH found the provision to be invalid. The BGH has also refused to enforce other liability clauses that led to the erosion of cardinal duties. As with warranty disclaimers, it might not be possible to limit liability further than typically foreseeable damages arising from breach of a cardinal obligation.

Thus, if a liability disclaimer in a software license agreement would erode the cardinal duties, it could potentially be invalid. However, it can be difficult to decide what the cardinal duties are likely to be. For example, it is debated whether a software license agreement that excludes liability for data loss would erode the cardinal duties. To avoid problems with the definition of cardinal duties, it is common to accept liability for intent, gross and ordinary negligence, but to exclude all other liability. For donated software, it should be possible with more far-reaching disclaimers.

To summarize, German law may induce liability for transferors, including liability to consequential loss, such as data loss. If the software is donated, transferors are not liable for ordinary negligence, and are less likely to be liable for data loss. Liability for (a) life and health, and (b) intent and gross negligence cannot be excluded. It might be possible to exclude liability for ordinary negligence, but such provisions are not always likely to be valid. Especially for foreseeable damages relating to cardinal duties. To avoid this problem, it is common to accept liability for intent, gross and ordinary negligence. However, for donated software, it may not be necessary to accept liability for ordinary negligence.

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2639 Id. at paras. 18–27. See also Maxeiner, supra note 2581, at 155, fn. 288.
2640 See, e.g., BGH Feb. 23, 1984, NJW 1985, 3016 (Ger.); BGH Nov. 11, 1992, NJW 1993, 335 (Ger.).
2642 See Maxeiner, supra note 2581, at 168–170.
2643 See Id. at 169.
Comparison

Liability for software in relation to data loss and similar consequential damages is an uncertain but important field. It has not been completely clarified to what extent transferors are liable for direct and consequential loss, such as data loss. Liability might be more likely under German law, and may also extend to negligence, but probably not if the software is donated.

Neither German nor American law accepts disclaimers for gross negligence. Disclaimers for ordinary negligence might be invalid under both German and American law. However, such disclaimers are probably more likely to be problematic under German law, especially if they relate to typically foreseeable damages relating to cardinal obligations. To avoid the problem of defining such damages, it is common to accept liability for ordinary negligence.

This situation is slightly similar to warranty disclaimers, due to the uncertainty of liability. However, cross-national differences in validity of liability disclaimers are arguably smaller than for warranty disclaimers.

8.5 Summary

8.5.1 Negative Provisions

It is possible to prohibit all reverse engineering under American law, either through an explicit provision, or through a provision that dictates the sole use of the software that excludes reverse engineering. Under German law, such provisions are explicitly prohibited. Cross-nationally valid provisions can only prohibit reverse engineering for other purposes than interoperability. But law does already not permit such reverse engineering. Thus, it is necessary to weigh the added benefit of effectively prohibiting all reverse engineering under American law against the benefit of cross-national validity. Especially since the interoperability exception is quite limited under German law. For provisions that prohibit debugging, the outcome is likely the same, even though this question has been more uncertain under German law, and requires a slightly different analysis than provisions prohibiting reverse engineering. To avoid these differences between United States and Europe, especially regarding provisions prohibiting reverse engineering, transferors have tried different approaches. One solution would be to include an extra provision for European Union transferees. But that provision must not be so

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2644 See supra section 8.1.1.
2645 See supra section 8.1.2.
vague that it violates the German principle of transparency. Another potential issue with extra provisions for certain jurisdictions is the increased software license agreement length, which could increase the risk of incorporation failure of that and other provisions. A transferor must decide whether the benefit of being able to prohibit all reverse engineering under American outweighs a potentially increased risk of incorporation failure of other provisions.

There is a theoretical risk that provisions prohibiting reverse engineering might constitute a competition law violation. However, that risk is probably mostly theoretical, since: (1) Only very few programs can become relevant under an essential facilities doctrine examination; (2) most transferors disclose interoperability information, even if they prohibit reverse engineering; and (3) the doctrine is only likely under American law if a transferor changes its behavior by refusing information and prohibits reverse engineering. Thus, there is arguably only a very small risk that a competition law analysis will become relevant, but more likely in Europe than in the United States.

Hardware and software integration is becoming increasingly popular. Provisions that tie the software to hardware from a certain manufacturer, or to a certain computer with a specified CPU (CPU-clauses), might become increasingly important to uphold such business models. Both forms are generally valid under American law. The exception is when transferors try gaining copyright protection over non-protectable products, and when restraining the development of competing products. Under German law, the result is likely to be the opposite. The BGH has said that CPU-clauses can be justifiable if the software is complex, highly priced, and transferred against recurring fees. The BGH noted that perpetual, single payment transfers must be judged differently. Lower courts have found such clauses to be invalid

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2646 See supra section 4.4.2.
2647 See supra section 8.1.1.
2648 See supra section 8.1.4.
2650 See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 793–794 (5th Cir. 1999); Apple Inc. v. Psystar Corp., 658 F.3d 1150, 1160 (9th Cir. 2011).
Mapping Individual Provisions

If the software is transferred perpetually against a single payment.\textsuperscript{2652} While German case law and legal discussion has focused on CPU-clauses, the result is likely to be the same for provisions that merely ties the software to a certain manufacturer. The result is likely to be the same for OEM restrictions, which are valid under American law but invalid under German law.\textsuperscript{2653} For both questions, the question of whether software is licensed or sold is decisive for the outcome.\textsuperscript{2654}

Hardware restriction clauses could also be problematic under competition law. The clearest example is United States v. Microsoft Corp.,\textsuperscript{2655} which shows that OEM restrictions can be caught under Section 2 of the Sherman Act, but such restrictions may be justifiable in very specific situations to avoid drastic alterations of the transferor’s copyright.\textsuperscript{2656} Alcatel shows the importance of being able to define the relevant market under Section 2 of the Sherman Act.\textsuperscript{2657} Dickinson shows that it might be difficult to challenge OEM restrictions as conspiracies under Section 1 of the Sherman Act, since it is difficult to prove individual market power among OEMs.\textsuperscript{2658} The result under German law is more difficult to predict. Bundling can clearly be caught as technical tying, and it can be caught as contractual tying. It is uncertain whether OEM restrictions could be violative as collusion under German law.\textsuperscript{2659}

Provisions that restrict software use to certain transferees have been upheld under American law.\textsuperscript{2660} The general principle should be the same under German law, but such restrictions do not apply for troubleshooting purposes.\textsuperscript{2661} Still, for most purposes, such provisions should be valid under both German


\textsuperscript{2655} 253 F.3d 34 (D.C. Cir. 2001).

\textsuperscript{2656} United States v. Microsoft Corp., 253 F.3d 34, 63–64 (D.C. Cir. 2001).

\textsuperscript{2657} See Alcatel USA, Inc. v. DGI Techs, Inc., 166 F.3d 772, 781–784 (5th Cir. 1999).

\textsuperscript{2658} Dickson v. Microsoft Corp., 309 F.3d 193, 202–216 (4th Cir. 2002).

\textsuperscript{2659} See Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 29.


\textsuperscript{2661} BGH Feb. 24, 2000, NJW 2000, 3212 (Ger.).
and American law. The result is likely to be the same for provisions restricting software use to certain purposes. Under American law, breach of such provisions can be enforced both as copyright infringement and as breach of contract. Such provisions are not likely to create unreasonable disadvantages for the transferee under German law, and are not likely to conflict with intended use, if being described for certain use (for example, educational use), as long as this would not make the use economically impractical.

Provisions that prohibit software transfers or resale are likely to lead to very different results under German and American law. If the Vernor requirements are met, the software will be considered licensed and not sold within the Ninth Circuit’s jurisdiction. Still, if transferors fail to restrict transfers, this might exhaust copyright infringement claims but not necessarily breach of contract claims. However, there has to be some sort of contractual limitation that can be breached. If the Vernor requirements are not met, and the ownership of a copy is transferred, violation of transfer restrictions might only constitute a breach of contract, and not copyright infringement.

Under German law, transferees will be considered buyers, if the transfers are perpetual and paid with a lump sum. Thus, transfer restrictions have been

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2662 See supra section 8.1.5.
2663 See supra section 8.1.5 (See special case study.).
2665 Lowry’s Reports, Inc. v. Legg Mason, Inc., 271 F.Supp.2d 737, 756–757 (D Md. 2003) (However, in this case, the contract was lost or destroyed, and the motion for copyright infringement and breach of contract was dismissed). See also Nimmer, supra note 2056, at § 7:139.
2666 Cf. BGB § 307 (Ger.) (Regarding invalidity due to unreasonable disadvantages.).
2667 Cf. Martinek, Semler, Habermeier & Flohr, supra note 2281, at 12. § 47. II. 4(b), recital 32 (Regarding potential invalidity if conflicting with intended use or if unreasonable restrictions would make use economically impractical.).
2668 See supra section 8.1.6.
2669 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (That is, as long as the copyright owner: “(1) [S]pecifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”); MDY Indus. LLC v. Blizzard Entmt, Inc., 629 F.3d 928, 938 (9th Cir. 2010).
2672 See Nimmer, supra note 2056, at § 7:137.
8 Mapping Individual Provisions

Such provisions can also be considered invalid under the general clause (BGB § 307), since it creates an unreasonable disadvantage for the transferee. However, transfer restrictions of user accounts, especially non-perpetual and recurrently remunerated, might be enforceable.

8.5.2 Positive Provisions

The requirements for data collection are quite different between Germany and the United States. California law requires operators of web sites or web services to post data privacy policies for consumers located in California. In general, data privacy policies might create contractual issues, since: (1) They might conflict with contractual requirements, such as, of timing of disclosure, sufficient notice, time to review, and opportunity to accept the policy. And (2) they might not be a contract with offer and acceptance. For mobile applications, Amazon, Apple, Google, Microsoft, Research In Motion, and Hewlett-Packard have agreed that private data collection, use, and sharing should be disclosed to consumer transferees before downloading mobile applications (apps). Under German law, the major difference is the requirement for consent. German data privacy law will apply if relying on transferees located in Germany. This requirement is likely to be met if personal data is gathered in Germany. If German data privacy law is applicable, consent to data collection must generally be given, and consent can be given through a standard-form agreement. But if consent is given together with other written declarations, it must be distinguishable by

2675 OLG Frankfurt Jun. 25, 1996, NJW-RR 1997, 494 (Ger.).
2676 BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).
2677 See supra section 8.2.1.
2679 See Nimmer, supra note 2056, at § 17:68; BGB § 305 (Ger.).
2682 See supra section 7.1.3.
2683 Jotzo, supra note 2331, at 236 (Jotzo suggests that iTunes Genius, which analyses the transferee’s music preferences in order to give suggestions of music that the transferee might be interested in, might be an example of this.).
2684 BDSG § 4(1) (Ger.).
2685 See Leupold & Glossner, supra note 2147, at Teil 4. E. V. 5, recital 87.
Whether opt-in is required depends on whether the software falls within scope of the Telemediengesetz (German Tele Media Act). If so, a clear and deliberate act is required, which means opt-in through ticking a checkbox. If the Act applies, the consent must be recorded, transferees must be able to retrieve the contents of the agreement, and be able to revoke the consent at any time. If the Act does not apply, and the consent to data collection is clearly distinguishable, a separate signature is not needed, and an opt-out checkbox may be sufficient, except if personal data is collected for marketing purposes, where express consent is necessary. However, if the proposed European Union Data Protection Regulation will be adopted in its current form, opt-in will always be necessary. Even if consent has been given, it must withstand content control. A recent ruling by a German lower court shows that data privacy provisions can create unreasonable disadvantages to the transferee, and can thus become invalid under content control. Thus, both consent and substantive content can be problematic under German law.

Grant-back clauses are generally problematic under German and American competition law. Such provisions are generally unlikely to be found in software license agreements for standard software, but the GNU GPL share-
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like clause is a common exception. However, while grant-back clauses are generally problematic, this particular provision is not likely to cause problems under competition law, since: (1) The grant-back is non-exclusive; (2) the grant-back only concerns the licensed software, not an entire field or industry; (3) the software license agreement does not extend beyond copyright law; and (4) transferors using this kind of software license agreements often have a small market share. Finally, it is very unlikely that this kind of provision would affect competition in the market.

Some provisions, perhaps most famously the share-alike clause in the GNU GPL, dictate the software license agreement for future works based on the original program. Under American law, this provision has been examined as a conspiracy under Section 1 of the Sherman Act. The court could not find it to be restriction of trade, and could not find any effects on competition. The software license agreement set maximum prices, but the software did not pose threat to consumer welfare. German courts have touched upon the same provision and the same issues. In two cases, it has been argued that this infringed Article 101 TFEU or GWB § 1. The courts did not comment on this, but it is unlikely to be a problem. Thus, this kind of provision is not likely to be a problem under German or American law.

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2696 Free Software Foundation, GNU General Public License (GPL): Version 2, Section 2(b) (1991) (“You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.”).
2697 See supra section 8.2.2. Cf. Välimäki, supra note 2344, at 132–133 (Regarding argument 1 and 3 under European Union competition law.); Bergsten, supra note 2348, at 700–707 (Regarding factors to examine under American law.).
2698 See supra section 8.2.3.
2701 Wallace v. International Business Machines Corp., 467 F.3d 1104, 1105–1108 (7th Cir. 2006).
2700 See supra section 8.2.3.
2702 See Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 30.
2703 LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.); LG München I Jul. 12, 2007, CR 2008, 57 (Ger.). See also Kilian & Heussen, supra note 2216, at 1. Teil 6. III. 1(c), recital 31, fn. 36 (According to one unnamed source, the court apparently said at the hearing that a competition law analysis was unlikely to succeed.).
8.5.3 Procedural Provisions

Arbitration clauses are often likely to be valid under American law. Still, arbitration agreements against consumers can be found unconscionable, if the “place or manner” would be unreasonable. Arbitration clauses against consumers can be found unconscionable, if the “place or manner” would be unreasonable. Against consumers, unconscionability regarding arbitration clauses (and forum selection clauses and class action waivers) might be especially likely under the laws of California. Under German law, the formal requirements are especially likely to be problematic. Such provisions must be enclosed in a separate document, and be signed with a qualified electronic signature. Traditional arbitration clauses in click-wrap software license agreements will not meet these requirements.

Exclusive forum selection clauses are cross-nationally valid between business actors. However, exclusive forum selection clauses are prima facie invalid against consumers under German law, while such clauses are generally valid under American law. But there are exceptions under both American and German law. Under American law, the two main limitations are: (1) Lack of notice; and (2) public policy, mainly if lawsuits are likely to concern small claims or if the forum selection would lead to inconvenient results. In Germany, only permissive forum selection clauses are valid against consumers.

Class action waivers are more important under American law than under German law since American law allows for class action lawsuits, but not German law. Class action waivers can be found in arbitration agreements or forum selection agreements. The validity is likely to differ between the two under American law. Class action waivers in arbitration agreements should

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2704 See supra section 8.3.1.
2706 Beheshti, supra note 2396, at 57–60.
2707 ZPO § 1031(5) (Ger.); BGB § 126(a)(1) (Ger). See also Leupold & Glossner, supra note 2147, at Teil 5. H. III, recital 421–422.
2708 Cordera, supra note 2425, at 244; Tang, supra note 2457, at 256.
2711 Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 17(2). See also Tang, supra note 2457, at 256.
2712 See supra section 8.3.3.
generally be enforceable, and any state law obstacles can be preempted.\textsuperscript{2713} Still, such provisions can be invalid if unconscionable.\textsuperscript{2714} Class action waivers in forum selection clauses might also be unenforceable on public policy grounds.\textsuperscript{2715} In Germany, this is not an important question, but such provisions are not likely to be invalid, since the right to class action would not have existed in the absence of agreement. Thus, class action waivers in arbitration agreements are generally likely to be unproblematic, but arbitration clauses are generally problematic under German law. Class action waivers in forum selection agreements may however be invalid under American law.

Choice-of-law clauses between business actors are likely to be cross-nationally valid.\textsuperscript{2716} Basic contract law requirements regarding incorporation apply to both consumers and business actors.\textsuperscript{2717} The main rule under American law is that choice-of-law clauses are also enforceable against consumers,\textsuperscript{2718} with some exceptions.\textsuperscript{2719} Under German law, the main rule is that mandatory

\textsuperscript{2713} AT&T Mobility v. Concepcion, 131 S.Ct. 1740, 1753 (2011).
\textsuperscript{2714} Trujillo v. Apple Computer, Inc., 578 F.Supp.2d 979, 989–990, 992–995 (N.D. Ill. 2008) (The agreement was not available before purchase, which made the agreement so procedurally unconscionable that the arbitration agreement became unconscionable.).
\textsuperscript{2716} See supra section 8.3.4. See Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Article 3(1); Restatement (Second) of Conflict of Laws § 187 (1971).
\textsuperscript{2717} Regarding consumers, see BGB § 305(c) (Ger.); Leupold & Glossner, supra note 2147, at Teil 5. E. I. 2(c), recital 244 (Requiring an examination of whether: (1) The provision was hidden; (2) if the transferee could expect a choice-of-law clause; or (3) whether it was recognizable that a foreign relationship had been entered.); Milanovich v. Costa Crociere, S.p.A., 954 F.2d 763, 768, fn. 9 (D.C. Cir. 1992) (The requirement of being “reasonably communicated” in order to become incorporated.).
\textsuperscript{2719} Milanovich v. Costa Crociere, S.p.A., 954 F.2d 763, 765–769 (D.C. Cir. 1992); McKee v. AT&T Corp., 191 P.3d 845, 852 (Wash. 2008); CS-Lakeview at Gwinnett, Inc. v. Simon Property Group, Inc., 659 S.E.2d 359, 361–362 (Ga. 2008) (If (a) enforcement would be “unreasonable and unjust”; (b) there were contractual impurities, such as fraud, bad faith, or overreaching; (c) contravening strong public policies of the forum; or (d) if an effective choice-of-law clause would lead to the result of completely invalidating a contract.).
consumer protection applies even with a choice-of-law clause.\textsuperscript{2720} However, this only applies when a transferor directs commercial or professional activities to the country of the transferee’s habitual residence (Germany).\textsuperscript{2721} This has to be established based on the requirements in \textit{Alpenhof},\textsuperscript{2722} and it is likely that the requirements of directing activities are not met for certain Internet transactions. Thus, while the basic approach against choice-of-law clauses against consumers is different under American and German law, the result may sometimes be the same in practice.

Thus, there is a difference between forum selection clauses and choice-of-law clauses against consumers under German law. Being forced to litigate in another jurisdiction is considered more problematic than being forced to litigate under the laws of another jurisdiction. In many situations, consumers will have access to their own consumer protection, since choice-of-law clauses cannot deprive consumers of mandatory protection that would have applied in the absence of a contract.\textsuperscript{2723} But, based on \textit{Alpenhof},\textsuperscript{2724} it is not always certain that the consumer’s law will apply to Internet agreements.\textsuperscript{2725} Thus, there are situations when mandatory consumer protection will not apply to software license agreements.

\textbf{8.5.4 Liability Provisions}

Warranty disclaimers are generally valid under American law.\textsuperscript{2726} However, it is uncertain whether there are any implied warranties for software to disclaim.\textsuperscript{2727} Thus, the necessity of warranty disclaimers could be questioned, especially if they bury other provisions.\textsuperscript{2728} From a German perspective, liability for defects is more likely. However, warranty disclaimers that limit liability

\begin{footnotes}
\textsuperscript{2720} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“\textit{Rome I}”), 2008 O.J. (L 177) 6 (EC), Article 6(2).
\textsuperscript{2721} \textit{Id.} at Article 6(1). \textit{See also} LEUPOLD & GLOSSNER, supra note 2147, at Teil 5. E. I. 2(c) (aa), recital 245.
\textsuperscript{2722} \textit{Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller}, 2010 E.C.R. I-12527, paras. 76–85, 93. \textit{See supra} section 3.4.2.
\textsuperscript{2723} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (“\textit{Rome I}”), 2008 O.J. (L 177) 6 (EC), Article 6(2).
\textsuperscript{2724} \textit{Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller}, 2010 E.C.R. I-12527, paras. 76–85, 93. \textit{See supra} section 3.4.2.
\textsuperscript{2725} \textit{See supra} section 8.4.1; \textit{NIMMER, supra} note 2056, at § 7:132.
\textsuperscript{2726} \textit{See Gomulkiewicz, supra} note 2542, at 397–398; Gomulkiewicz, \textit{supra} note 2550, at 698, fn. 58.
\textsuperscript{2727} \textit{See supra} section 4.4.2 (Regarding problems with long software license agreements.).
\end{footnotes}
to a period shorter than two years are invalid against consumers.\textsuperscript{2729} Also, complete warranty disclaimers are not valid against consumers or business actors.\textsuperscript{2730} Selective warranty disclaimers, even between business actors, can become invalid,\textsuperscript{2731} but not all warranty disclaimers are likely to be invalid. Thus, transferors must decide between risk for liability and risk of unenforceability of warranty disclaimers.

Liability disclaimers, provisions that limit liability for damages caused by software defects, for example data loss, are quite common.\textsuperscript{2732} However, there is some uncertainty to what extent transferors are liable. It is possible that transferors are more likely to be liable under German law, but this liability is probably not extended to data loss for donated software. Neither German nor American law will accept disclaimers for gross negligence. Disclaimers for ordinary negligence could be valid, but may under certain circumstances be invalid under German and American law. Such disclaimers are, however, probably more likely to be invalid under German law, if they, for example, limit liability for typically foreseeable damages relating to cardinal duties. Whether this would invalidate provisions disclaiming liability for data loss is uncertain. To be on the safe side, it is common to accept liability even for ordinary negligence under German law.

### 8.5.5 Other Provisions

This mapping has not tried to be exhaustive, but have tried to examine different kinds of provisions that might lead to different issues. Other provisions and practices might also lead to issues, and other issues are likely to be relevant for specialized software.

As seen, it is sometimes difficult to predict applicable law, since the judiciary has not examined every issue, and old principles, doctrines, and precedents are not always clearly applicable to these situations. Still, transferors can limit their risk in such situations by avoiding provisions and practices that might create unnecessary risk.

\textsuperscript{2729} BGB §§ 475(2), 438(1)(3) (Ger.).
\textsuperscript{2730} Id. at §§ 309(8)(b)(aa), 307(2); BGH Oct. 29, 1997, NJW 1998, 677 (Ger.). See also Säcker & Rixecker, supra note 2123, at Buch 2. Abschnitt 2. § 309(8). 5(a, d), recital 23–26, 32; Jauernig, supra note 2581, at Buch 2. Abschnitt 2. § 310, recital 2.
\textsuperscript{2732} See supra section 8.4.2.
PART IV

UNDERSTANDING INVALIDITY AND MAKING IMPROVEMENTS

The Confidence-Man: Barber and Cosmopolitan, Trust or Contract?

“Agreement

“Between

“Frank Goodman, Philanthropist, and Citizen of the World,

“and

“William Cream, Barber of the Mississippi steamer, Fidèle.

“The first hereby agrees to make good to the last any loss that may come from his trusting mankind, in the way of his vocation, for the residue of the present trip; provided that William Cream keep out of sight, for the given term, his notification of ‘No Trust,’ and by no other mode convey any, the least hint or intimation, tending to discourage men from soliciting trust from him, in the way of his vocation, for the time above specified; but, on the contrary, he do, by all proper and reasonable words, gestures, manners, and looks, evince a perfect confidence in all men, especially strangers; otherwise, this agreement to be void.

“Done, in good faith, this 1st day of April 18--, at a quarter to twelve o’clock, p. m., in the shop of said William Cream, on board the said boat, Fidèle.”

This part will attempt to answer four questions: (1) What types of problems and which levels of validity currently exist? (2) Why are software license agreements currently cross-nationally invalid? (3) What are the consequences of invalidity? And (4) can we avoid cross-national invalidity?

9 Types of Problems and Levels of Cross-National Validity

This chapter aims to summarize different types of problems and describe different levels of cross-national validity. This creates the foundation for analyzing reasons for invalidity, consequences of invalidity, and ways to avoid cross-national validity.

Most problems with software license agreement validity can be divided into three types: (a) Consent; (b) content; or (c) interpretation problems. These different sources of invalidity will be examined.

There are also different levels of cross-national validity: (a) Complete validity; (b) complete invalidity; and (c) asymmetrical validity. This will be examined, as well as the importance of private international law for asymmetrical validity.

9.1 Types of Problems

9.1.1 Consent

As seen, there are many potential issues with consent to software license agreements. Such issues can be described as general contract formation issues for software license agreements. Beyond these issues, there may also be special consent issues and requirements for specific provisions and practices in software license agreements.

There are some issues that might create concern, at least theoretically. For example: (1) Failure to meet the requirements of a sufficiently defined offer; and (2) failure to meet the requirements of consideration. Neither should be insurmountable in practice. Granted, if a data privacy policy is mere information, it will not meet the requirements of an agreement, but this is not likely to be a problem for software license agreements (which might include personal data collection consent). The second issue should almost never be a practical problem, since the requirement is mostly of symbolic nature.

Still, there might be some concern when transferors do not receive monetary

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2734 See supra section 4.5.
2735 See supra section 4.1.1.
compensation. However, this should not be a problem, since transferors can almost always be argued to benefit by generating market share or improving their reputation by providing software free of charge.2737

Assent mechanisms have probably been the most discussed aspect of software license agreements for more than 25 years. This is not unexpected since such mechanisms deviate from many established ways of contract formation. The most common methods are shrink-wrap, click-wrap (web-wrap), and browse-wrap license agreements. From a cross-national perspective, click-wrap and web-wrap mechanisms are preferable since they are not likely to create problems if other consent requirements are met. Neither browse-wrap nor shrink-wrap are likely to be cross-nationally valid,2738 and browse-wrap is very seldom likely to be even asymmetrically valid against consumers. Thus, both shrink-wrap2739 and browse-wrap are problematic and should be avoided.

Other consent issues include: (1) Notice of provisions; (2) time of disclosure; (3) language in software license agreements used against consumers; (4) length of software license agreements; (5) issues related to modification of software license agreements; and (6) issues related to severability of software license agreements.2740

The transferee must be given sufficient notice of the software license agreement. This might cause problems if: (a) The software license agreement is displayed on a small screen;2741 (b) the transferee has to scroll repeatedly vertically or horizontally to read the agreement; (c) there is a risk that a web-wrap agreement is blocked by a pop-up blocker;2742 or (d) hyperlinks are not sufficiently clear.

2738 See LG Hamburg Sep. 28, 2007, 324 O 871/06 (“Half-Life 2”) (Ger.) (A modified version of shrink-wrap might be valid if: (1) There is a notice stating that the transferee has to register online and agree to a software license agreement, not that the transferee becomes bound by tearing the plastic; and (2) the software license agreement is also available online and not only inside the box.).
2739 Including versions more applicable to modern software distribution. See BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).
2740 See supra section 4.5.
2741 See Peter Rott, Germany, in DIGITAL CONTENT SERVICES FOR CONSUMERS; REPORT 1: COUNTRY REPORTS 85, 94 (University of Amsterdam: Centre for the Study of European Contract Law (CSECL): Institute for Information Law (IViR) 2010).
Timing of disclosure is likely to be a practical issue for many transferors under German law.\textsuperscript{2743} The software license agreement must be available prior to the conclusion of the agreement, for example before the final acceptance of a payment form.\textsuperscript{2744}

Software license agreements only written in English might be a problem, since such provisions are not likely to be incorporated in an agreement with a German consumer. German doctrine therefore recommends translation of software license agreements to German for software aimed at German consumers.\textsuperscript{2745}

Many software license agreements and provisions are very long. Long software license agreements might bury important provisions and adversely affect their incorporation.\textsuperscript{2746} The German consumer association vzbv has highlighted the iTunes software license agreement as a problematic example. It was 21 A4-pages long, almost without numbering, and written in 9 pt. size.\textsuperscript{2747}

Modification of software license agreements might also cause problems.\textsuperscript{2748} For example if: (a) The transferee is shown another software license agreement with additional provisions at the final confirmation; (b) the transferee is sent a confirmation e-mail with additional provisions; or (c) transferors use modification clauses, which allow transferors to unilaterally change software license agreements. The last example is quite common, but is often likely to cause problem under both German and American law. A better solution would therefore be to issue a new software license agreement when the transferee installs an update or logs in to the service.

\textsuperscript{2743} Since: (1) it is not legally valid under German law (or under the ALI Principles). See BGB \S 305(2)(1) (Ger.); \textsc{Principles of the Law of Software Contracts} \S 2.02(c) cmt. c (2009). And (2) delayed disclosure is likely to be a common practice. See Jean Braucher, \textit{Delayed Disclosure in Consumer E-Commerce as an Unfair and Deceptive Practice}, 46 Wayne L. Rev. 1805, 1806–1807, 1860–1862 (2000) (Regarding the incidence of delayed disclosure at the time.).

\textsuperscript{2744} \textit{Cf.} \textsc{Principles of the Law of Software Contracts} \S 2.02(c)(2) cmt. c (2009) (Under these safe harbor rules, the transferee is considered to have adopted the standard-form agreement, if having “reasonable notice and access to the standard terms before payment.”).

\textsuperscript{2745} See supra section 4.4.1 (Regarding language barriers.).

\textsuperscript{2746} See supra section 4.4.2.


\textsuperscript{2748} See supra section 4.3.
Invalidity of one provision will usually lead to severing of that provision. Invalidity of the entire agreement is likely to be uncommon. It is sometimes recommended to include severability clauses, but this is not a very simple choice, since: (a) severability is the main principle and will be applied even without such provisions. If unnecessary, such provisions can bury other provisions. And (b) a provision that is followed with a general severability clause, stating that contractual provisions apply “to the extent permitted by law,” are likely to fail the requirement of transparency under German law, and the entire provision will not become incorporated. Thus, transferors have to think twice before using severability clauses.

Many of these requirements apply primarily to consumer transferees. Thus, transferors only dealing with business actors are less likely to be affected by these problems. However: (1) it is difficult for a transferor to know whether a transferor is a consumer or business actor, and many programs are aimed at both consumers and business actors; and (2) the line between consumer and enterprise software is becoming increasingly unclear, as consumer technology is arguably currently driving innovation and finding its way into enterprises, especially through policies such as “Bring your own device” (BYOD). Thus, many transferors must likely meet the consumer requirements for all transferees.

More specific consent requirements may apply for certain provisions and practices. Two such examples relate to data collection consent and arbitration agreement assent.

For data privacy consent under German law, special consent requirements will apply. If data collection consent is given in a software license agreement with other provisions, it must be distinguishable by appearance. Normally, implicit consent is sufficient, that is, an opt-out checkbox may be sufficient. There are two exceptions to this: (1) If data is collected for mar-

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2749 See supra section 4.4.3.
2750 See Rebecca K. Lively, Microsoft Windows Vista: The Beginning or the End of End-User License Agreements as We Know Them?, 39 St. Mary’s L.J. 339, 368 (2007).
2753 BDSG § 4(a)(1) (Ger.).
2754 See BGH Jul. 16, 2008, NJW 2008, 3055 (“Payback”), paras. 28–35 (Ger.). See also BGH Nov. 11, 2009, NJW 2010, 864 (“Happy Digits”) (Ger.); Andreas Leupold & Silke
keting purposes, which requires express consent (opt-in); or (2) if software falls within the scope of the *Telemedia-Gesetz* (German Tele Media Act), express consent (opt-in) will also be necessary. However, if the proposed European Union Data Protection Regulation will be adopted in its current form, opt-in will always be necessary. These special consent requirements are likely to currently cause problems for many transferors.

Arbitration agreements have very strict formal requirements under German law. An arbitration agreement must be found in a signed document, or a form of telecommunication that keeps a permanent record. A consumer must personally sign an arbitration agreement, and the agreement cannot contain anything but matters relating to the arbitration. For Internet contracts, the signing must meet the requirements of the Electronic Signature Act (*Signaturgesetz*). This requires a qualified electronic signature, which makes current software license agreement assent mechanisms insufficient. In practice, this will require a mechanism where a transferee has a certificate, a password for that certificate, and a device for signing the certificate. Thus, unless transferors implement such mechanisms, arbitration agreements are likely to fail due to consent failure.

Thus, it is likely that many transferors must make significant changes to make consent to software license agreements cross-nationally valid.

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2755 UWG § 7 (Ger.). See BGH Jul. 16, 2008, NJW 2008, 3055 ("Payback"), paras. 36–44 (Ger.).

2756 This would include, for example, software distribution channels, shopping applications, and video on-demand applications.

2757 See LeuPold & Glossner, *supra* note 2754, at Teil 4. E. V. 5, recital 87 (Requiring a clear and deliberate act.).

2758 Proposal for a Regulation of the European Parliament and the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM (2012) 11 final (January 25, 2012), 2012 O.J. (C 102) 24, Preamble 8.

2759 ZPO § 1031(1) (Ger.).

2760 *Id.* at § 1031(5); BGB § 126(a)(1) (Ger.). See also LeuPold & Glossner, *supra* note 2754, at Teil 5. H. III, recital 421–422.

2761 See BGB § 126(a)(1) (Ger.).
9 Types of Problems and Levels of Cross-National Validity

9.1.2 Content

As seen, there are many potential issues with software license agreement content, that is, invalidity of individual provisions.\(^{2762}\)

Among negative provisions, provisions prohibiting all reverse engineering, including reverse engineering for interoperability purposes, are invalid under German law. Reverse engineering for other purposes can be prohibited, but is already not permitted under law. There is also a theoretical risk that provisions prohibiting all reverse engineering might become problematic under, especially European Union, competition law, but that is unlikely in practice. Hardware restrictions, including CPU-clauses, and OEM restrictions are likely to be invalid under German law, and at least OEM restrictions are also likely to violate competition law. OEM restrictions are likely to be problematic under American competition law, but hardware restrictions are otherwise not likely to be problematic under American law. Provisions that prohibit software resale are likely to be valid under American law if the Vernor requirements are met, but are not valid under German law for software transferred perpetually against a single payment. Among positive provisions, it is primarily provisions that obtain consent for data collection that are likely to be problematic. As seen above, such provisions require special consent. Even if consent is obtained, such provisions must withstand content control.\(^{2763}\)

A recent ruling by a German lower court shows that such provisions can be invalid when they create unreasonable disadvantages to the transferee.\(^{2764}\)

Among procedural provisions, arbitration clauses are unlikely to meet the consent requirements under German law. And if these requirements are met, they might still be deemed invalid under German law. Arbitration clauses are often valid under American law, but might sometimes be found unconscionable against consumers. Exclusive forum selection clauses are generally valid under American law, but prima facie invalid against German consumers. However, forum selection clauses can be invalid under American law, due to lack of notice, or due to public policy if lawsuits would concern small claims or if the result would be inconvenient. Class action waivers are generally valid in arbitration agreements under American law, but can sometimes be invalid in forum selection agreements, if unconscionable or violating public policy. Class action is not available under German law, and class action waivers are

\(^{2762}\) See supra section 8.5.
\(^{2763}\) BGB § 307 (Ger.). See also Leupold & Glossner, supra note 2754, at Teil 4. E. V. 5, recital 87.
\(^{2764}\) LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.).
not likely to be invalid. Choice-of-law clauses are likely to be valid against consumers under American law, but are prima facie invalid under German law. However, if the Alpenhof requirements are not met, such provisions can be effective against German consumers.

Among liability provisions, it is not certain to what extent transferors are liable under American law, but transferors are more likely to be liable under German law. Complete warranty disclaimers are not valid under German law, but such provisions are generally valid under American law. Even selective warranty disclaimers can be invalid under German law, and even between business actors. Liability disclaimers, which limit liability for damages caused by software defects, for example data loss, are quite common. It is not certain to what extent transferors are liable for such damages, but liability might be more likely under German law, except for donated software, that is, software available at no cost. Neither American nor German law allows disclaimers for gross negligence. Disclaimers for normal negligence could in certain circumstances also be invalid under German and American law, but invalidity might be more likely under German law if a provision limits liability for typically foreseeable damages relating to cardinal duties. To be on the safe side, it is common to accept liability even for normal negligence under German law.

It should be noted that the mapping has not tried to be exhaustive. Other provisions and practices might also lead to cross-national issues.

9.1.3 Interpretation

Like with other agreements, questions relating to interpretation might become relevant to software license agreements. The need for interpretation might lead to uncertainty and unwanted results. In *Altera Corp. v. Clear Logic, Inc.*, the software license agreement allowed transferees to “use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by ALTERA or its authorized distributors.” The Ninth Circuit interpreted this to include reverse engineering. The need for interpretation created some unnecessary uncertainty about the parties’ rights and obligations, as well as the enforceability of the software license agreement. In *Overlap, Inc. v. Alliance Bernstein Investments*, the software license agreement stated: “This version of Overlap is licensed in a single use

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2765 424 F.3d 1079 (9th Cir. 2005).
only environment. To obtain licensing for multiple use environments, including networks and multiple installations, call 1 800 OVERLAP … This copy is to be used by only a single user and will be used to the benefit of said single user.” The court could not “conclude as a matter of law whether and how the use of the software’s outputs was limited,” since the software license agreement was not sufficiently specific. Thus, the need for interpretation might affect the enforceability of certain provisions.

There might be additional problems with interpretation on a cross-national level. Certain provisions might borrow terminology from national law. Such terms may be difficult to interpret on a national level, but may cause even greater difficulties when strictly national terms have to be interpreted on a cross-national level. But while there might be cross-national problems associated with interpretation, unclear provisions are more likely to cause problems, and the result is likely to be similar in different legal systems.

9.2 Different Levels of Cross-National Validity

Cross-national validity of software license agreements can be divided into: (a) Complete validity; (b) complete invalidity; or (c) asymmetrical validity.

9.2.1 Complete Validity

The first level, complete validity, simply means that a software license agreement or specific provision is cross-nationally valid. That is, such software license agreements or provisions can be predicted to be valid if examined under German or American law. Completely cross-nationally valid software license agreements would reduce legal issues within the single software market, which

2768 Overlap, Inc. v. Alliance Bernstein Investments, 2007 WL 4373975 (W.D. Mo. Dec. 14, 2007) ((1) There was no definition of the term “single use environment”; (2) it was not clear whether “user” referred to the transferee (the company), or an employee that accepted the software license agreement when the software was loaded unto the employee’s computer; and (3) the term “benefit” was not clear either.).

2769 Free Software Foundation, GNU General Public License (GPL): Version 2, Section 0 (1991) (“[A] ‘work based on the Program’ means either the Program or any derivative work under copyright law.”). Regarding “derivate work,” see 17 USC § 101.


2771 See Mikko Välimäki, GNU General Public License and the Distribution of Derivate Works, 2005(1) J. INFO. L & TECH. (2005) (Regarding confusion how to interpret the strictly American concept of “derivative works” in Europe.).
would increase certainty and improve efficiency,\textsuperscript{2772} and in the longer perspective promote trade within the single software market. However, as seen, few software license agreements are likely to be completely cross-nationally valid, even though some provisions could be completely cross-nationally valid. Thus, most transferors can improve aspects of cross-national validity.

9.2.2 Complete Invalidity
The second level, complete invalidity, simply means the opposite: A software license agreement or specific provision that is cross-nationally invalid. That is, it would be probably be invalid if examined either under German or American law. As seen, certain provisions are likely to be completely cross-nationally invalid. Some software license agreements are also likely to be completely cross-nationally invalid. This is probably most likely when software license agreement formation has failed. A browse-wrap software license agreement is one example that is likely to be completely cross-nationally invalid against consumers.\textsuperscript{2773} Thus, complete cross-national invalidity may also exist, but is probably only likely in very special situations.

9.2.3 Asymmetrical Validity
The third level, asymmetrical validity, is perhaps the most common. That is, a software license agreement or provision is likely to be valid in one jurisdiction, but invalid in another jurisdiction. As seen, many software license agreements or provisions are likely to be asymmetrically valid, due to asymmetrically valid contract formation/modification or asymmetrically valid substantive content. This means that a software license agreement or provision can be invalid and unenforceable in one jurisdiction, but, at least partially, valid and enforceable in another jurisdiction. When software license agreements are asymmetrically valid, the question of applicable law becomes important, since it decides the validity of a software license agreement in a specific software transfer.

As we will see, the level of validity is likely to be important for transferors, since different levels of invalidity create different incentives for improvements. Complete invalidity might create stronger incentives than asymmetrical validity, and the incentives to improve asymmetrical validity might vary between different situations.

\textsuperscript{2772} Unless the process of making software license agreements cross-nationally valid would increase transaction costs.
\textsuperscript{2773} See supra section 4.
9.2.4 Asymmetrical Validity and the Importance of Private International Law

As seen, many software license agreements or provisions are likely to be asymmetrically valid. This means that the software license agreement or provision can be valid or invalid in different situations, depending on which law will be applied to the software license agreement. Thus, the question of applicable law will in many situations be very decisive for the practical question of software license agreement validity for a specific software transfer. Since software license agreements or provisions are generally more likely to be valid under American law, the most important question is when German law is likely to apply.

Granted, there might be an effective choice-of-law clause, pointing to German law, but since most standard software transferors are American undertakings, this is not very likely. Such clauses are more likely to point out American law. The main rule is that the parties are free to choose applicable law, but as seen such clauses are not always effective against consumers, especially German consumers.

Unless there is an effective choice-of-law clause, applicable law has to be settled using principles of private international law. As seen, the principles for deciding applicable law under German and American law have similarities, but the German rules are less flexible and give simpler answers than the American rules. The outcome will vary depending on were a lawsuit is initiated.

If a lawsuit is initiated in an American court, it seems likely that American law will apply, based on: (1) If the court applies lex fori when it can be applied and not examine other options;2775 (2) if the court applies the defendant’s law, when the transferor allegedly committed a tortious act;2776 or (3) using Specht, the law of the state where it (a) has been designed, (b) downloaded from a site maintained there, and (c) if the state has some interest in the question at stake.2777 But it is not certain that an American court will apply American, perhaps California law in every situation.

2774 See supra section 3.4.2 (Regarding applicable law in the absence of contractual provisions.).
2776 CRS Recovery, Inc. v. Laxton, 600 F.3d 1138, 1142–1144 (9th Cir. 2010).
When a German court applies its choice-of-law rules, German law is likely to be applicable in the following situations:

Between business actors, the transferor’s law is likely to be applicable in most situations, based either on the presumptions or the more flexible rules of the Rome I Regulation. The obligation to provide a software product or service should be primary, pointing to the presumptions for goods or services. German courts apply sales law to physical and digital software transfers, and considers software license agreements for perpetual software transfers to be sales contracts, further suggests this. And if the contract is interpreted as a license agreement, the transferor’s law will also apply.

Special protection applies to consumers, as long as a transferor directs commercial activities to Germany. For Internet activities, this can be decided using the Alpenhof requirements. Those requirements are more likely to be met if the transferor is a major transferor that might have: (1) Paid a search engine operator for improved visibility in Germany; (2) presented its telephone number with land-codes; (3) used top-level domains that belongs to other countries, such as “.de,” or neutral domains such as “.com”; or (4) allowed the transferee to use a site in another language and with another currency, for example German and Euro. Major transferors are likely to meet almost all of these indications, and almost all transferors are likely to meet at least one or two indications.

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2779 See BGH Nov. 15, 2006, NJW 2007, 2394, paras. 18–19 (Ger.) (And the listed cases confirming this.). See also Leupold & Glossner, supra note 2754, at Teil 1. B. II, recital 43.


2784 Id. at paras. 76–85, 93.
If these requirements are not met, applicable law will be determined using the principles applicable between business actors.\textsuperscript{2785} If the transferor has a branch within the European Union, the consequences would be negligible, since consumer protection is harmonized. However, if the transferor does not have a branch or agency within the European Union, European Union consumer protection might not necessarily apply.

If there is a tort lawsuit regarding use of disapproved provisions, the law of the country where the damage occurs will be applied.\textsuperscript{2786} This is the place where the contractual provisions, which the legal order disapproves of, have been or are likely to be used, affecting the legally protected collective interest of consumers.\textsuperscript{2787} Thus, German law is likely to be applicable in such situations.

To summarize, German law will likely be applicable when: (1) The transferee is a consumer, and the \textit{Alpenhof} requirements are met;\textsuperscript{2788} and (2) in a tort litigation concerning use of standard-terms, disapproved by the legal order, against consumers.\textsuperscript{2789} And similar harmonized European Union consumer protection might apply against German transferees if a transferor has an agency or branch in a Member States. German law is less likely to apply in other situations. These elements are likely to decide the fate of software license agreements in many situations. For many major transferors, German law is relatively likely to apply, but it is less certain for minor transferors if relying on the \textit{Alpenhof} requirements.

Thus, German law is likely to be applicable in certain situations, and when German law is applicable, software license agreements are likely to be, at least partially, invalid.

\textsuperscript{2785} Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 6(3).
\textsuperscript{2787} BGH May 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.).
\textsuperscript{2788} See Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller, 2010 e.C.R. i-12527, para. 93.
\textsuperscript{2789} BGH May 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.).
9.3 Summary

Invalidity is probable in a number of situations, especially associated with consent to and content of standard software license agreements.

On a cross-national level, this might lead to different levels of validity, and asymmetrical validity is most likely for the studied examples. And asymmetrical validity might be invalidity in a specific software transfer when German law is applicable. As seen, this is likely in a number of situations, especially when the transferee is a consumer, since a German court is likely to apply German law to German consumers in many, if not most, situations.
10 Understanding Software License Agreement Invalidity

Clearly, a number of current conflicts exist between cross-nationally applied software license agreements and applicable German and American law. First, software license agreements conflict with a number of different areas of law, such as contract law, copyright law, competition law, and data privacy law.2790 Second, there are clearly a number of significant differences between relevant German and American law.2791 In order to realize a single software market,2792 these conflicts must be analyzed and overcome.

Since transferors claim that software license agreements are important,2793 it can be assumed that they consider invalidity to be a problem, even though the significance of problems can vary.2794 Thus, it becomes relevant to analyze invalidity problems and seek improvements.

This chapter will attempt to analyze reasons for invalidity related to: (1) Inherent limits of law; (2) fundamental differences between German and American law; and (3) reasons associated with the actors.

10.1 Reasons I: The Inherent Limits of Law

This chapter will focus on the inherent limits of law that might affect cross-national validity. These include: (1) The long arm of the law, that is, the application of national law to foreign transferors and transferees; (2) legal development, inertia, and direction; and (3) difficulties associated with predicting and combining relevant rules.

2790 This made a system approach suitable for this thesis. See supra section 1.2.7. If the aim of this thesis had been to study software transfers and not only software license agreements, additional problems in additional areas of law would have been found.
2791 And sometimes also between the States of the United States.
2792 See supra section 1.1.4.
2793 Appellant’s Opening Brief at 47, Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010) No. 09-35969, 2010 WL 894736, at *47 (Arguing that if transferees would not be bound by software license agreements, transferors would, inter alia, face “considerable additional liability,” which would force them to “raise their prices to compensate for this additional exposure.”).
2794 Legal and practical consequences of cross-national invalidity will be examined below, including challenges to the practical significance of invalidity.
10.1.1 The Long Arm of the Law

Digital software distribution and Internet access allow transferors to easily export software. These two elements also allow transferees to access software stored on “foreign” networks. Territorial boundaries have arguably become obsolete, at least from a technical and business perspective. However, from a legal perspective, such boundaries matter. As we have seen, the outcome will be very different if German or American law is applicable.

When a natural or legal person performs activities in another country in the physical world, that person should be able to anticipate being subject to the laws of that country. However, this becomes more difficult on the Internet. In theory, it is possible to perform activities in any country through the Internet. But should every activity in other countries create jurisdiction and make the laws of that state applicable?

Unless there is an effective choice-of-law clause, applicable law has to be settled using principles of private international law. Generally, courts are hesitant to grant themselves jurisdiction over foreigners, even for Internet activities.

There are exceptions, for example if a European consumer transferee sues a transferor in a court in the transferee’s legal system and the Alpenhof analysis applies. The same analysis will be relevant for the question of applicable law. Under this analysis, a transferor’s Internet activities become relevant. Based on this, large transferors might be more likely to become subject to the

2796 See David R. Johnson & David Post, Law and Borders–The Rise of Law in Cyberspace, 48 STAN. L. REV. 1367, 1369–1376 (1995) (Regarding the relationship between effects and proximity in the physical world, the function of physical boundaries to give notice that rules change as the border is crossed, and how this is undermined in cyberspace.).
2797 See supra section 3.4.2 (Regarding applicable law in the absence of contractual provisions.).
2798 Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller, 2010 E.C.R. I-12527, paras. 76–85, 93. See also Case C-190/11, Daniela Mühlleitner v. Ahmad Yusufi & Wadat Yusufi, judgment of 6 September 2012, not yet reported, paras. 43–45.
2799 Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller, 2010 E.C.R. I-12527, paras. 76–85, 93 (For example, if: (1) The transferor has paid a search engine operator to improve visibility in Germany; (2) if the transferor presents its telephone with land codes; (3) uses a neutral top-level domain such as “.com”; and (4) allows the customer to use other currencies or languages than used in the transferor’s country.).
transferee's laws than minor transferors. As seen, it is likely that a transferor has to translate software license agreements into German (and perhaps also other languages for other countries).2800 But a software license agreement written in German should not single-handedly be sufficient to make German law applicable. In *Alpenhof*, the CJEU said that the use of another language than the one used in the trader's Member State could be one indicator of directing activities to another Member State,2801 but the court also said that the mere use of another language is insufficient.2802 Under a tort evaluation, regarding tortious use of disapproved provisions, a German court will have jurisdiction if the plaintiff claims that the defendant used a standard-terms agreement, which the legal order disapproves of, inside the country.2803 These examples show that the reach of national law and courts may extend far beyond national borders. And if German law would become applicable under the *Alpenhof* analysis, choice-of-law clauses will be at least partly ineffective.2804 But if the transferee is a business actor, or if German law would not become applicable under the *Alpenhof* analysis, the transferor's law is more likely to apply in the absence of choice, and choice-of-law clauses are more likely to be valid. This analysis is likely to be of major importance for cross-national validity.

The application of foreign law may sometimes be anticipated in the physical world, for example when physical goods are delivered. In the digital world, this might arguably be more difficult to anticipate. Some elements of the *Alpenhof* analysis, for example neutral top-level domains such as “.com,” telephone numbers with land codes, are more ambiguous than delivery of goods to a country. This is likely one reason behind cross-national invalidity.

### 10.1.2 Legal Development, Inertia, and Direction

The law applicable to software license agreements is still developing. A number of problems can be traced to legal development: (1) The speed of legal development, inertia, and direction.

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2800 *See supra* section 4.4.1.


2802 *Id.* at para. 94 (“On the other hand, the mere accessibility of the trader’s or the intermediary’s website in the Member State in which the consumer is domiciled is insufficient. The same is true of mention of an email address and of other contact details, or of use of a language or a currency which are the language and/or currency generally used in the Member State in which the trader is established.”).

2803 BGH May 20, 2010, NJW 2010, 2719, paras. 20, 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, paras. 17, 22 (Ger.) (And German law will apply if the damage occurs, or is likely to occur, in Germany.).

2804 *See supra* section 8.3.4 (Regarding choice-of-law clauses under German law.).
development; (2) the inertia of law in relationship to technology; and (3) the direction of legal development.

Many important or potentially game-changing cases have been laid down since I started working on this book in late 2009. For example, Vernor,2805 UsedSoft v. Oracle,2806 Alpenhof,2807 “Steam,”2808 and NJW 2013, 2605.2809 These cases have redefined, or may redefine, the playing field for transferors. Other recent cases, such as Jacobsen v. Katzer,2810 Bragg v. Linden Research, Inc.,2811 Apple Inc. v. Psystar Corp.,2812 AT&T Mobility LLC v. Concepcion,2813 and a number of other cases have also clarified or changed the playing field for software license agreements. The timespan of legal history in this field is limited. The early landmark case ProCD v. Zeidenberg was laid down in the summer of 1996.2814 Thus: (1) This area of law is still relatively new; and (2) law is constantly evolving, even though some may argue that development is too slow. It is very likely that transferors have not been able to keep up with this development, especially when basing software license agreements on pre-existing software license agreements and only making necessary changes.2815

Inability to keep up with legal development could thus be one candidate for cross-national invalidity.

The future is always uncertain. What is considered acceptable today may not be acceptable in the future and vice versa. Change is the only constant, and relevant rules might change due to, for example, deeper market integration,2816

2805 See Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010).
2808 BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).
2809 LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.) (Which could redefine the playing field for transferors if this view would be repeated by higher German courts.).
2810 535 F.3d 1373 (Fed. Cir. 2008).
2812 658 F.3d 1150 (9th Cir. 2011).
2814 ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).
more consumer protection regulation, reassessments of existing doctrines, and the emergence of new doctrines and new case law. Another potential reason for change could be if American courts would adopt the ALI Principles, which would change the relevant rules in some situations, and make several currently valid provisions and practices invalid under American law.2817 Certain areas of law might be more prone to change, such as data privacy law, consumer protection law, and competition law. Currently there is a substantial amount of focus on data privacy both in Europe and in the United States. This might result in new requirements that transferors must take into account. Failing to do so will inevitably lead to cross-national invalidity.

The (relative) inertia of law in relationship to technology can arguably also create problems. For a very long time, technology has been an important component of globalization and legal change.2818 However, technological change has not always been quickly followed by legal changes. In fact, law is often seen as a slow adopter to technological change.2819 In this context, governance by contracts becomes understandable, since changes can be implemented quickly.2820 But contracts are more or less dependent on law,2821 so contracts cannot completely outrun law.


2820 See John Flood, Globalisation and Law, in An Introduction to Law and Social Theory 311, 313 (Reza Banakar & Max Travers eds., Hart Publishing: Oxford 2002).

Software license agreements were created to keep up with technology, and created protection for software when legal protection was uncertain. This aspect of software license agreements give them a raison d’être when new issues arise, since publicly made law might be slow to adapt to, or even protract, such development. However, when software license agreements become trailblazers, transferors cannot expect that law and the judiciary will quickly accept, or ever accept, enforcement. We must remember that software license agreements, in the form of shrink-wrap, were used for many years before the Seventh Circuit chose to enforce them in ProCD v. Zeidenberg, in 1996. And software license agreements did not become a relatively dependable tool for software governance until the emergence of click-wrap license agreements. So while software license agreements can theoretically keep up with technology, the former are still subject to the inertia of law.

Finally, transferors cannot expect legal development in a certain direction. Law arguably “caught up” with shrink-wrap license agreements in ProCD, but it is equally likely that law moves in a completely different direction, and the result might vary between different legal systems, further complicating things for transferors.

Thus, software license agreements must not only be adapted to developments in technology, business models, and society, but also adapt to new developments in law, which may vary between jurisdictions. Keeping up with all these parameters can be very demanding.

### 10.1.3 Predicting and Combining the Applicable Law

One reason for invalidity is probably difficulties to learn the applicable laws to software license agreements. As seen, it can be difficult to learn the applicable law when law is decentralized and substantive laws vary between decentralized entities of a federation. However, it is still the same legal system, the same language, and the same legal culture. Learning the applicable law in

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2823 See supra section 4.2.1.
2824 86 F.3d 1447 (7th Cir. 1996).
2825 See supra section 4.2.2.
2826 See Lucille M. Ponte, Getting a Bad Rap? Unconscionability in Clickwrap Dispute Resolution Clauses and a Proposal For Improving the Quality of These Online Consumer “Products”, 26 Ohio St. J. on Disp. Resol. 119, 154 (2011).
other legal systems is likely to be more difficult due to, for example, language or cultural barriers.

Beyond this, difficulties to learn the law applicable to software license agreements may be attributable to, for example: (1) This is a relatively new area that is constantly developing; (2) applicable law is not known for all issues; (3) relevant case law has not always been confirmed by the highest judicial branches; (4) lawyers and legal scholars may sometimes give contradictory advice; (5) certain areas of law are very open-ended, requiring courts to examine everything, making the law less predictable; and (6) certain areas of law, such as European Union law, tends to show up in unexpected places. Such difficulties may attribute for some reasons why software license agreements currently fail to overcome differences between legal systems.

A related issue is that drafting software license agreements require knowledge of several different areas of law, which may be difficult, especially when different areas of law conflict.

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2829 See supra section 1.2.7 (On why a system approach.).

2830 See Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 Berkeley Tech. L.J. 891, 892 (1998) (“Licensing law can be chaotic for both licensors and licensees. To draft a license agreement for software or an information product, a lawyer must be conversant in numerous areas of law, including the common law of contracts, Uniform Commercial Code Article 2, state and federal intellectual property rules and overlays, bankruptcy law, and competition law, not to mention various electronic commerce, data privacy, and digital signature statutes.”).

In real-world practice, it is not even certain that transferors take the time to learn the applicable law themselves. When basing their agreements on existing software license agreements, transferors trust that someone else has learned the applicable law and hope that it has not changed since. This is not advisable due to the nature of this area of law. Earlier mistakes will find its way into new software license agreements, and software license agreements may become affected by the proverbial “sins of the Father.”

10.2 Reasons II: Fundamental Differences Between German and American Law

As seen, most examples of cross-national invalidity are asymmetrically valid software license agreements, where provisions are likely to be invalid under either German or American law. Such differences regarding validity under German and American law can be explained by fundamental differences between German and American law. Such differences have been found in almost all preceding chapters. That is: (1) Different views on the questions examined in chapter three; (2) contract formation, modification, and severability in chapter four; (3) mandatory private law in chapter five; (4) competition law in chapter six; (5) public policies in chapter seven; and (6) failure to overcome differences in chapter eight.

Failing to overcome such differences can explain many, if not most, cross-national validity problems. Such differences include: (1) Whether software is licensed or sold; (2) legal mechanisms to prevent use of invalid provisions; (3) whether law can only be used as a shield or also as a sword; (4) flexibility vs. predictability; (5) centralized vs. decentralized laws; (6) different lawmaking cultures; and (7) differences in legal infrastructure and use of such infrastructure, and differences regarding legal actors and approaches to legal reasoning.

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Berkeley Tech. L.J. 355 (2007) (Regarding the relationship and tension between copyright and contract.).

2832 See Gomulkiewicz, supra note 2815, at 692–694.

2833 That is: (1) Whether software is licensed or sold; (2) applicable laws to software transfers; (3) legal categorization of software license agreements and individual provisions; (4) copyright protection in the absence of software license agreements; (5) applicable law and forum in the absence of specific provisions; and (6) the relationship between different levels of law.
10 Understanding Software License Agreement Invalidity

10.2.1 Licensed or Sold?

It is hardly an exaggeration that the question of whether software is licensed or sold is among the most important questions for cross-national validity.\textsuperscript{2834} This question affects: (1) The validity of post-transfer use restrictions in software license agreements,\textsuperscript{2835} for example, ability to create an enforcement mechanism against downstream user proliferation and substitution;\textsuperscript{2836} (2) applicable laws to software transfers and software license agreements, which affects the legal rights and remedies that are available to transferors and transferees;\textsuperscript{2837} and (3) the rights of intermediaries and subsequent transferees.\textsuperscript{2838}

As seen, there are fundamental differences between Germany (including the European Union) and the United States regarding the legal classification of perpetual software transfers against lump sum payment.\textsuperscript{2839} Perpetually transferred software is considered sold under German law,\textsuperscript{2840} and should also be considered a sale for the purpose of copyright exhaustion under the laws of the other Member States of the European Union,\textsuperscript{2841} but is likely licensed in the United States as long as the \textit{Vernor} requirements are met.\textsuperscript{2842}

Among many transferors, it is assumed that software is licensed and not sold.

\textsuperscript{2834} See supra section 3.1.1.


\textsuperscript{2837} See supra section 3.1.2 (Sales law will be applicable under German law for perpetual software transfers against a lump sum, but sales law (UCC) will not be applicable under American law if the Vernor requirements are met.); John A. Rothchild, \textit{The Incredible Shrinking First-Sale Rule: Are Software Resale Limits Lawful?}, 57 Rutgers L. Rev. 1, 2–3, 16–22 (2004); Elizabeth I. Winston, \textit{Why Sell What You Can License? Contracting Around Statutory Protection of Intellectual Property}, 14 Geo. Mason L. Rev. 93, 95–102 (2006).


\textsuperscript{2839} See supra section 3.1.1.

\textsuperscript{2840} BGH Nov. 4, 1987, NJW 1988, 406 (Ger.); BGH Jul. 14, 1993, NJW 1993, 2436 (Ger.).


\textsuperscript{2842} Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (That is, as long as the copyright owner: “(1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”); MDY Indus. LLC v. Blizzard Entmt, Inc., 629 F.3d 928, 938 (9th Cir. 2010).
Software license agreements claim ownership over intellectual property, and also over software copies. As seen, if a court does not accept this view, this will lead to validity issues regarding for example: (1) Hardware restrictions; (2) restrictions to certain transferees; and (3) restrictions to further transfers.

Since use restrictions can be more feasible under German law if the software is considered leased, it might be possible to enforce certain use restrictions if the software is considered leased. And certain software will be considered leased under German law. Time is an important factor. Software transfers that are limited in time are considered leases. Another factor is remuneration. Payment in a lump sum is a sign of a sale. But whether the software is transferred in physical or digital form is not important. Thus, software transfers that are limited in time and require recurrent fees may avoid the classification of a sale. Software license agreements for such software are also more likely to be cross-nationally valid. It will be interesting to see if UsedSoft and the German cases will lead to such changes in business models to escape the assessment of being a sale, or if transferors will make other technical and business changes to avoid downstream user proliferation.

10.2.2 Legal Mechanisms Preventing Use of Invalid Provisions

The European Union Unfair Terms Directive requires Member States to prevent continued use of unfair contract terms. Thus, not only refuse to enforce them, but also to prevent them from being used. In order “to prevent

2843 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 1 (2013) (“The Apple software…[is] licensed, not sold, to you…”). See also Id. at Section 6 (“This License is effective until terminated. Your rights under this License will terminate automatically or otherwise cease to be effective without notice from Apple if you fail to comply with any term(s) of this License.”). See also Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 8 (2009) (“The software is licensed, not sold. This agreement only gives you some rights to use the features included in the software edition you licensed. Microsoft reserves all other rights.”).

2844 See Apple, Software License Agreement for OS X Mavericks [10.9], Section 2(H) (2013) (“You may not rent, lease, lend, sell, redistribute or sublicense the Apple Software.”).

2845 Martinek, Semler, Habermeier & Flohr, supra note 2835, at 12. § 47. ii. 4(b), recital 30.


2847 Cf. PassKit, PassKit Terms & Conditions (as of Feb. 9, 2014), Section 9.1 (“The Term of this Agreement shall extend until the one (1) year anniversary of the original activation date of Your subscription account (‘Effective Date’). Thereafter, subject to Your compliance with the terms of this Agreement, the Term will automatically renew for successive one (1) year terms, unless sooner terminated in accordance with this Agreement.”).

continued use” of unfair contract terms, consumer associations shall have a right to bring actions, which can be directed at a collective of sellers.\footnote{2849 See Id. at Article 7(2–3); Joined Cases C-240/98 to C-244/98, Océano Grupo Editorial SA v. Roció Muciano Quintero and Salvat Editores SA v. José M. Sánchez Alcón Prades, José Luis Copano Bacillo, Mohammed Berroane and Emilio Vinas Feliú, 2000 E.C.R. I-4941, para. 27 (Implementing adequate and effective means “include allowing authorised consumer associations to take action in order to obtain a decision as to whether contractual terms drawn up for general use are unfair and, if need be, to have them prohibited, even if they have not been used in specific contracts.”).}

This is arguably important from a European perspective, since it means that transferors cannot rely on the fact that few transferees are likely to challenge software license agreements.\footnote{2850 See Braucher, supra note 2817, at 361–362.}

If a consumer association brings suit under German law — a Verbandsklage (group action) — and a provision is found invalid, that provision will be invalid against all customers.\footnote{2851 UklAG § 11 (Ger.). Failing to cease and desist with such terms may result in fines for up to 250,000 Euros and two years of imprisonment. See ZPO § 890(1) (Ger.). See also James R. Maxeiner, Standard-Terms Contracting in the Global Electronic Age: European Alternatives, 28 Yale J. Int’L L. 109, 158–159 (2003).} German law also allows consumer associations to achieve the same result without litigation through the Abmahnung (warning) procedure. A consumer association may send a cease and desist letter, including a contractual penalty, to a transferor, pointing out the invalid terms and grounds for invalidity. If the transferor accepts this demand, it becomes legally obliged to cease and desist. If the transferor rejects this demand, the consumer association may sue and recover the cost of the suit if successful.\footnote{2852 UklAG § 5 (Ger.); UWG § 12 (Ger.). See also Maxeiner, supra note 2851, at 158.}

Under American law, use of invalid provisions is practically risk-free. Even if a provision ends up in court and a court declares it invalid, there will be few implications beyond the individual case.\footnote{2853 See Maxeiner, supra note 2851, at 121, 173–174 (“If one party uses the term and the other party does nothing, one wins. If the other party has the wherewithal to challenge the term, if the challenge is unsuccessful, the party using the term wins. If, on the other hand, the party challenging the term wins, the user is no worse off than if he or she had never used the term at all. He or she can now redraft the term in slightly different language and use it again.”).}

Thus, American law is reliant on litigation for legal development and dispute resolution. In Germany and the entire European Union, there is less reliance on individual litigation, and more reliance on regulation and institu-
tional support from consumer associations and agencies. This difference between German and American law is likely to be of practical importance for cross-national validity. The German mechanism creates strong incentives to abide by German law, and will likely improve cross-national validity.

10.2.3 Law as a Shield or a Sword?
Legal rules may be used in different ways to invalidate software license agreements: As a sword to directly strike down invalid provisions, or as a shield to prevent the enforcement of a software license agreement against, for example, an alleged copyright infringement.

Under American law, many legal rules applicable to software license agreements would fall into the second category, only to be used as a shield, not a sword. For example, this applies to a number of doctrines against copyright overprotection. The primary consequence is that such doctrines cannot be used to directly challenge software license agreements, only indirectly as a defense against copyright infringement.

The doctrine of unconscionability is similar; it is primarily a defensive remedy. Granted, it might sometimes be possible to use it as a sword. Under the California Consumer Legal Remedies Act, inclusion of unconscionable provisions in a contract is considered a deceptive practice. But under the Act, a consumer must suffer damage, such as increased costs, for example transaction costs or opportunity costs. And most importantly, software is

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2855 See Cory Tadlock, Copyright Misuses, Fair Use, and Abuse: How Sports and Media Companies are Overreaching Their Copyright Protections, 7 J. MARSHALL REV. INT’L PROP. L. 621, 625 (2008) (Fair use, idea/expression, and copyright misuse can be invoked against “copyright misrepresentation and overprotection.” But they are all “a defense to copyright infringement.”). See also supra section 5.1.5.

2856 See Id. at 639–640 (“Like fair use or copyright misuse, collateral estoppel requires legal pleading and answering infringement charges. Such affirmative defenses do not directly redress the copyright imbalance between large media copyright holders and consumers. After all, the assurance of a successful legal strategy does not necessarily make a user less apprehensive about making questionable use of protected material. The time and expense involved in defending a copyright case could still be a powerful incentive to not risk stepping over the infringement line. For this reason, a bright-line agency or statutory solution remains optimal.”).


not considered a tangible good or service within the purpose of the Act. Thus, software is excluded from the Act. The doctrine will therefore primarily be a shield.

German law, on the other hand, relies less on affirmative defenses in order to invalidate software license agreements. However, this does not mean that plaintiffs can file frivolous declaratory complaints, and expect them to be honored. A declaratory complaint [Feststellungsantrag] can be filed to establish whether a legal relationship exists or do not exist. This relationship, which must exist at the time of the complaint, can concern rights and duties in a contract. However, to avoid harassment through negative declaratory complaints, the plaintiff must have a personal legal interest in the judgment. A personal legal interest cannot only be economic, academic, emotional, or non-material in nature. The requirement of personal legal interest is met if there is an actual threat of uncertainty, and a declaratory judgment can eliminate that uncertainty. That risk can be assumed if the defendant has raised a claim against the plaintiff, or if the defendant seriously denies the legal position. Thus, unless there is some uncertainty arising from the legal relationship, a transferee might not be able to seek a negative declaratory judgment. All situations when a provision is likely to be invalid might therefore not be possible to automatically challenge through a negative declaratory judgment.

These limitations affect how a transferee can challenge a software license agreement. It is arguably more complex to challenge a software license agree-

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2861 ZPO § 256 (Ger.).
2863 See Id. at Buch 2. Abschnitt 1. Titel 1. § 256. III. 1, recital 7.
2864 See Id. at Buch 2. Abschnitt 1. Titel 1. § 256. III. 2(a), recital 8.
2865 BGH Jan. 13, 2010, NJW 2010, 1877, 1878 (Ger.).
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ment under American law, since affirmative defenses play a more important role. But both American and German law limits the possibility of declaratory judgments against software license agreements.

These limitations and differences between Germany and the United States whether law can be used as a shield or sword will likely affect the practical risk of invalidity. As was described in the introductory chapter, my main method is to predict how courts in Germany and the United States would assess the validity of certain software license agreements. This assumes that a software license agreement ends up in court. If the main legal argument against software license agreement validity requires a complicated process, it is far from certain that such software license agreements will be challenged and invalidated in practice through active litigation by private parties. It also means that indirect challenges to software license agreements might be important in practice. That is to say, software license agreements may often be indirectly challenged in a copyright infringement lawsuit initiated by the transferor.

As seen, there are clear differences in predicted substantive validity under German and American law. Generally, the risk of invalidity is greater under German law. And if challenging software license agreements is more complicated in the United States than in Germany, the differences in risk of invalidity may become even greater in practice.

10.2.4 Flexibility vs. Predictability

The two chief defects in American law are its uncertainty and its complexity.

Throughout this thesis, the flexibility of the American regulation applicable to software license agreements has become apparent. Different scholars have also pointed out this flexibility. From a German perspective, the applicable regulation is clearly less flexible, but is, on the other side, more predictable. It is often more difficult to give simple answers under American law, since the outcome is very dependent on specific circumstances. When answers can be found under German law they are often more clear-cut.

2867 See supra section 1.4.1.
2868 See infra section 11.2.4.
2870 However, it is arguably simpler to find answers for more questions under American law, even if these answers are not always clear-cut and predictable.
This is consistent with MERRYMAN’s notion that civil law systems, such as Germany, emphasize on certainty and sacrifices flexibility, while common law systems, such as the United States, tries to balance certainty and flexibility.2871 LUNDMARK argues that Germany is much more focused on predictability than the American legal system.2872 Flexibility and predictability are opposing entities,2873 and they have their different advantages and disadvantages in different situations. Flexibility can promote individual justice, but increases uncertainty and complexity, which can impede justice as well. Predictability decreases uncertainty and complexity, but may have other disadvantages, such as uncertainty about the precise boundaries of law.2874 The latter can be seen in German law where central questions are easy to answer, but the exact boundaries of law regarding details may be less explored than under American law, which makes such questions difficult to answer.

American law’s unpredictability in adjudication has been explored before. Granted, conflicts that end up in adjudication will normally involve some uncertainty. But according to KAGAN, adjudication is more unpredictable in the United States, due to its decentralized legal system that is “constantly being shaped and reshaped by adversarial argument.”2875 Adjudication might go in either direction: The direction that either of the party had hoped for, or the result might be likened to opening Pandora’s box (or rather Pandora’s pithos — a storage jar as high as a man), leading to results that no party had hoped for.

American law’s uncertainty has become clear throughout this thesis. There are several examples of how law and the judiciary have struggled with software license agreements.2876 Examples of problematic situations include:

(1) Software license agreements were, at least partly, created to close a legal

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2873 See Id. at 75 (“Legal predictability means an absence of flexibility.”).
2874 Id. at 75 (“Predictability in law does, however, come at a cost. Legal predictability discourages people for questioning and testing the boundaries of the law. It can lead to acquiescence, lack of interest, and even resignation.” “Individual justice might sometimes need to be sacrificed to protect certainty in the law.”).
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loophole in the first-sale doctrine, and to overcome the fear that intellectual property law would not protect software; (2) uncertainty whether software is licensed or sold; (3) uncertainty regarding whether the UCC is applicable to software license agreements; and (4) uncertainty regarding the requirement of consideration for business models that do not require compensation.

These examples have arguably created uncertainty in the market, and uncertainty makes the market less efficient. The market has tried to overcome such uncertainty through more or less credible ideas. When such ideas are based on wrong assumptions, this might complicate matters further if it causes new legal problems. And uncertainty remains, even if recent case law might have reduced some uncertainty in some jurisdictions, for example whether software is considered to be licensed or sold within the Ninth Circuit's jurisdiction.

Another form of uncertainty is the question of potential approaches to a factual situation under German and American law. In Germany, law students learn that there is one right rule for a factual situation, while American law students may learn that several rules may be applicable to the same factual situation. This difference has become clear in this thesis. Under American law, there may be three or four potential approaches to a certain provision, while there are often only one or two approaches under German law. If we take provisions prohibiting reverse engineering as an example, there is one very clear answer under German law, while at least three approaches have been suggested under American law (and no approach is clearly successful). This

2877 See Step-Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 96 fn. 7 (3d Cir. 1991).
2878 O'Rourke, supra note 2822, at 927–930.
2879 See supra section 3.1.1.
2880 See supra section 3.1.2.
2881 See supra section 3.2.2; Robert W. Gomulkiewicz, Conditions and Covenants in License Contracts: Tales From a Test of the Artistic License 17 Tex. Intell. Prop. L.J. 335, 345–346 (2009). This uncertainty has recently been resolved. See Jacobsen v. Katzer, 535 F.3d 1373, 1379 (Fed. Cir. 2008).
2882 See Uniform Computer Information Transactions Act Prefatory Note (Westlaw through 2013) (“[L]egal rules that are not relevant to commercial practice or that are uncertain in application inhibit contracting or raise transaction costs.”).
2883 See supra section 3.2.2 (Regarding the idea of “pure licenses.”).
2884 Cf. Lundmark, supra note 2872, at 117 (“Many [German] students are shocked to learn, for example, that many prominent cases [in American constitutional law] can be properly decided either under the equal protection clause, which protects certain discrete groups, or under the due process clause, which protects fundamental constitutional rights.”).
2885 See supra section 8.1.1.
difference in potential approaches makes it more difficult to predict American law than German law in many instances.

Still, while the German legal system is arguably more predictable than the American legal system, other reasons for uncertainty exist in German law. For example, relevant American case law may be sprawling in different directions, but most questions have been tried in court and there is at least some sort of answer for almost all questions, which can provide some guidance. In Germany, some questions are clear-cut, but other questions have not been tried in court, and there is uncertainty in doctrine how such questions should be answered. Thus, there are gaps in our knowledge about German law, which also creates uncertainty. Another example is the rigidness of bright-line rules in German law. In many situations, such rules simplify matters and improve predictability. But in less conventional situations, such as digital software transfers and software license agreements, the rigidness of such rules may cause uncertainty. These matters may sometimes be outside the scope of such bright-line rules, or such rules may contain elements that are difficult to apply to the digital world. Still, there are often more flexibility rules to fall back on.\footnote{2886}

American law's unpredictability might seem counterintuitive, since statutes in Germany are often abstract, while statutes in the United States are often very detailed.\footnote{2887} But for the law applicable to software license agreements, statutes are not that important under American law. Many relevant aspects have not been codified, and the failure of the UCITA serves as an example about the difficulties of codification in American law.\footnote{2888} Since the law as it stands in the United States is almost solely the product of judicial activity, this may contribute to less uniformity and more unpredictability.

Whether law is considered to be autonomous or interdisciplinary could also be important. In Germany, law is considered to be autonomous, and the range of acceptable arguments is limited, making the law more predictable. Exceptions and emotional appeals are best avoided. In the United States, the law is considered to be less autonomous; a wider range of arguments is allowed, including emotional appeals. Both courts and legal actors have relatively free roles. All courts at all levels may declare a statute to be unconstitu-

\footnote{2886} See supra section 3.4 (Regarding application of the Brussels I Regulation, the Rome I Regulation, and German national law to digital software transfers and software license agreements.).
\footnote{2887} See Lundmark, supra note 2872, at 210 (Statutes in the United States "tend to be very detailed," while statutes in Germany "tend to be broadly written.").
\footnote{2888} See supra section 3.1.2 (Regarding the failure of the UCITA.).
tional, and Lundmark argues that “there is at least a tendency to view statutes as mere guidelines.” Lawyers include policy arguments from various fields to influence the construing of statutes in the desired direction. This is likely to influence German law’s predictability and American law’s flexibility.

Differences in legal scholarship and differences in quality and application of secondary sources may also influence predictability. American scholars often take a public policy role. German scholars, on the other hand, often take a doctrinal role. German scholars are traditionally more focused on analyzing and systematizing existing law, than discussing how law should be. This may be one explanation why secondary sources are considered more important under German law than under American law. When courts commonly apply commentaries, such as in Germany, this will increase uniformity and predictability.

It can be argued that common law systems try to strike a balance between flexibility and predictability. It can also be argued that too much focus on predictability is not desirable. Thus, it can be argued that the American level of uncertainty has to be accepted in order to allow flexibility and a possibility to create a fair result. This latter aspect is an integral aspect of law that separates it from the mechanical architecture of, for example, source code.

2889 See Id. at 124–125.
2892 Lundmark, supra note 2872, at 124–125 (Arguing that “Germany has reliable, accurate, and up-to-date secondary materials.” And that “there is a marked tendency [among German courts] to apply the rules found in commentaries in a literal fashion.” But “secondary authorities are accorded much less weight than case law in the United States.”).
2893 See Merrymen & Pérez-Perdomo, supra note 2871, at 50.
2894 See Lundmark, supra note 2872, at 75.
Thus, it is difficult to argue that there should be no flexibility in order to create perfect certainty. But flexibility is arguably more important in court, and predictability outside court. Predictability allows transferors to plan their actions and software license agreements to avoid legal problems and end up in court. From this perspective, the relative American focus on flexibility is problematic from the perspective of cross-national validity of software license agreements, since it makes drafting cross-nationally valid software license agreements more difficult.

Thus, to summarize, there are many explanations why German law can be more predictable than American law; and why American law can be more flexible than German law.

10.2.5 Centralized vs. Decentralized Regulation

Laws applicable to software license agreements can either be centralized or decentralized. As seen, most of the relevant German laws are centralized (federal law). Additionally, some areas of law are being further centralized with the European Union. Such “Europeanization” can be seen regarding, for example, choice-of-law,2896 and there is a proposal for a new data privacy regulation.2897 Such Europeanization can be described as European Union federalization, and some argue that the European Union will be further federalized.2898

Under American law, software license agreement validity is dependent on both state and federal law.2899 But as seen, many applicable laws are decentralized,2900 and even federal doctrines, such as the copyright misuse doctrine, may vary between jurisdictions.

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2898 See Bruno Waterfield, Federal Europe will be ‘a reality in a few years’, says Jose Manuel Barroso, Daily Telegraph May 7, 2012.
Certain states such as California are actively pursing legislation and industry self-regulation in certain areas of law.\textsuperscript{2901} Also, courts in certain states, for example, California and Washington, have arguably been quite active in striking down provisions as unconscionable or violative of state public policy.\textsuperscript{2902} While the federal structure can limit certain forms of fragmentation,\textsuperscript{2903} this only applies to matters related to federal law.

When law is decentralized, the law applicable to software license agreements varies between jurisdictions, and transferors must also overcome differences between the States.\textsuperscript{2904} The common approach to overcoming differences between the States, in various situations, is to use forum selection clauses, choice-of-law clauses, or dispute resolution clauses to avoid the law of a jurisdiction where a provision would be invalid. However, such clauses are not always valid and effective, meaning that standard-form agreements, such as software license agreements, might have to be evaluated under the law of a jurisdiction where that agreement would be invalid.

Since \textit{Comb v. PayPal, Inc.},\textsuperscript{2905} and \textit{Bragg v. Linden Research, Inc.},\textsuperscript{2906} PayPal and Linden Research (Second Life) have revised their arbitration clauses to comply with the rulings. The undertakings supply customers with several options: The customer may choose to litigate or arbitrate, and if arbitration is chosen, the customer will not be required to appear for the arbitration. The undertakings have also removed clauses that preclude class action lawsuits. But all undertakings have not followed PayPal and Second Life. As Ponte notes, it is difficult for undertakings to know what they are allowed to do and not to do when applicable law varies between the States.\textsuperscript{2907}

This arguably means two things: (1) Differences regarding substantive law, uncertainty caused by this, and the need to overcome such differences exist

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\textsuperscript{2901} See supra section 7.1 (Regarding data collection disclosure for mobile applications and on the Web for consumers in California.).
\textsuperscript{2902} Cf. Beheshti, supra note 2854, at 57–60 (Regarding California courts striking down, \textit{inter alia}, arbitration clauses, forum selection clauses, and class action waivers as unconscionable.).
\textsuperscript{2903} AT&T Mobility v. Concepcion, 131 S.Ct. 1740, 1753 (2011) \textit{Citing} Hines v. Davidowitz, 312 U.S. 52, 67–68 (1941). (The Supreme Court held that states (read: California) must enforce class action waivers, and cannot "require a procedure that is inconsistent with the FAA, even if it is desirable for unrelated reasons.").
\textsuperscript{2904} Cf. Ponte, supra note 2826, at 154 ("The disagreement between courts on issues of unconscionability and public policy makes it difficult for online businesses to uniformly and efficiently process online consumer transactions across state borders.").
\textsuperscript{2905} 218 F.Supp.2d 1165 (N.D. Cal. 2002).
\textsuperscript{2906} 487 F.Supp.2d 593 (E.D. Pa. 2007).
\textsuperscript{2907} See Ponte, supra note 2826, at 152–154.
both on a cross-national and interstate level; and (2) this means that American transferors must already put a lot of energy into understanding and overcoming interstate differences. It is very likely that this will affect their ability to spend time and resources on achieving cross-national validity. If law on the other hand would have been more centralized, transferors could have focused less on interstate conflicts and more on cross-national validity.

This problem also applies to transferors from other legal systems. As seen the choice of comparandum, certain jurisdictions within the United States had to be chosen.\textsuperscript{2908} The same applies to transferors from other countries than the United States that wishes to achieve cross-national validity. Thus, it becomes necessary to focus on validity in certain American jurisdictions. There are at least two approaches to this: (1) Focus on the states with most actual or potential transferees; or (2) focus on the American jurisdiction with the most stringent requirements to meet the requirements for all states. Under either approach, California/Ninth Circuit’s jurisdiction is a good contender. Still, it is not certain that this approach will avoid all issues under American law. Thus, decentralized lawmaking can be an obstacle for cross-national validity.

10.2.6 Different Lawmaking Approaches

German and American law often takes very different approaches to lawmaking. If we expand Germany to the European Union this becomes even clearer. There are certain themes that are recurring in several areas of law: (1) Harmonization vs. diversity: German/European regulation is sometimes harmonized, while the corresponding regulation the United States can be regulated on a state level, with varying regulation between states. (2) Generalization vs. Specification: German/European regulation is sometimes very abstract and can apply to many different situations, while corresponding regulation in the United States is very specific and targets specific transactions and sectors.\textsuperscript{2909} And (3) Procedure vs. Substance: German/European and American regulation both consider procedural and substantive aspects, but there might be a stronger focus on procedure in the United States compared to Germany and the European Union. Beyond these differences, there might also be additional

\textsuperscript{2908} See \textit{ supra} section 1.4.3.

\textsuperscript{2909} See \textit{Lundmark, supra} note 2872, at 210 (Statutes in the United States “tend to be very detailed,” while statutes in Germany “tend to be broadly written.”).
deep differences in certain areas of law. For example, industry self-regulation can sometimes be more common in the United States.\textsuperscript{2910}

The themes mentioned above can for example be seen in consumer protection law. European consumer protection law is harmonized through directives, while American consumer regulation is found on a state level,\textsuperscript{2911} with varying protection between states.\textsuperscript{2912} Certain American consumer protection law targets specific transactions and specific sectors,\textsuperscript{2913} sometimes very specific sectors,\textsuperscript{2914} with limited scope. Granted, consumer protection also exists within the European Union for more specific sectors.\textsuperscript{2915} But broader consumer protection laws, such as the Unfair Terms Directive have a very broad scope from an American perspective.\textsuperscript{2916} By looking at these examples, certain American consumer protection seems almost casuistic to its nature compared with German/European Union consumer protection, which is much more abstract to its nature. And the specific nature of certain American law does not only apply to consumer law.\textsuperscript{2917}

German/European Union consumer protection protects both procedural and substantive sides of unfairness. The substantive side is not neglected in the

\textsuperscript{2910} An explanation to this has been that Americans tend to trust corporations more than governments, while the opposite is true in Europe. See Yesha Yadav, \textit{Separated by a Common Language - An Examination of the Transatlantic Dialogue on Data Privacy Law and Policy in the Fight against Terrorism}, 36 Rutgers Computer & Tech. L.J. 73, 85 (2009).


\textsuperscript{2912} See Leon E. Trakman, \textit{The Boundaries of Contract Law in Cyberspace}, 38 Pub. Cont. L.J. 187, 219 (2008) (Some states are considered to have consumer-friendly laws, such as California, while other states are considered to have laws that are “not consumer-friendly,” such as New York.).


\textsuperscript{2916} See Budnitz, \textit{supra} note 2913, at 675.

\textsuperscript{2917} According to Farnsworth, this applies to “codes” in general. Codes in the United States are seldom unitary, but often collections of separate statutes. See E. Allan Farnsworth, \textit{An Introduction to the Legal System of the United States} 74 (3rd ed., Oceana Publications, Inc.: New York 1996). Kagan argues that American laws are generally more detailed, complicated, and prescriptive than laws in other legal systems. See Kagan, \textit{supra} note 2875, at 3.
United States, but there is a stronger focus on procedural rights of consumers. Questions such as personal jurisdiction, forum selection, or the availability of class action suits are examples of consumer protection questions that legal scholars and case law are concerned with. Another example is the doctrine of unconscionability, which has a stronger focus on procedural unfairness and the opportunity to read than the German regulation against unfair contract terms.

Different explanations for differences in lawmaking culture have been brought forward. For example: Posner argues that it is extremely difficult to pass laws in the United States compared to other legal systems, since the American system is so decentralized. This decentralization also deters the enactment of clearly worded laws, since it is easier to reach agreement concerning unclearly worded laws than clearly worded laws. Kagan argues that the American legal system is distinctive from other legal systems when it comes to creating and implementing public policy, and resolving disputes. This is argued to be manifestations of “adversarial legalism,” and can be associated with institutions where “authority is fragmented” and “hierarchical control is relatively weak.”

Different approaches to lawmaking will have consequences for software license agreement validity. Detailed regulation can create gaps and loopholes, while abstract regulation will lead to fewer gaps. On the other hand, abstract regulation will give more leeway for judges, but German judges will not create law unless absolutely necessary. Detailed and decentralized regulation might be possible to contract around with choice-of-law clauses and legal loopholes. And procedural requirements can be met without focusing on

2918 See deLisle & Trujillo, supra note 2911, at 135 (From a European perspective, the description of consumer protection in this article focuses almost exclusively on procedural consumer protection.).
2919 See supra section 5.2.5 (Regarding ex ante and ex post reviews of contract provisions in the U.S. and Germany.).
2921 Kagan, supra note 2875, at 7 ((1) More complex bodies of legal rules; (2) more formal, adversarial procedures for resolving political and scientific disputes; (3) more costly forms of legal contestation; (4) stronger, more punitive legal sanctions; (5) more frequent judicial review of and intervention into administrative decisions and processes; (6) more political controversy about legal rules and institutions; (7) more politically fragmented, less closely coordinated decision-making systems; and (8) more legal uncertainty and instability.).
2922 Id. at 15 (Furthermore, structurally fragmented states, such as the United States, are argued to be “especially open to popular and interest group demands.”).
2923 See Lundmark, supra note 2872, at 210–211.
substantive content. This might not always be possible with European regulation that is more harmonized and generalized, and focus more on substantive content. Thus, transferors used with American laws might have certain difficulties to adapt to German/European regulation. Distinctions of American law suggested by Posner and Kagan, such as unclearly worded laws, more complex bodies of rules, and more legal uncertainty, will also affect cross-national validity, by making it more difficult for transferors to learn the American applicable law.

10.2.7 Legal Culture, Actors, and Institutions
Differences in legal infrastructure, actors, approaches to legal reasoning, and use of legal infrastructure are likely to explain some differences between German and American law. While it is difficult to define legal culture, all the above examples are related to legal culture if we use a broad definition.

How can we, for example, explain that: (1) American law in certain jurisdictions developed to include the copyright misuse doctrine; (2) courts changed their views and started viewing shrink-wrap license agreements as legally binding; and (3) courts changed their views and started viewing perpetually transferred software as licensed instead of sold? Can explanations be found in the legal culture? Lundmark considers the American legal culture to favor novel approaches in contrast to the German legal culture. This could make American law more adaptable to new situations, but also less predictable than German law.

Related to this view, it is sometimes claimed that the common law process is very adaptable to a changing society, and Leoni favored it, as “a spontaneous process resulting in a spontaneous order that parallels the uncon-

2924 David Nelken, Defining and Using the Concept of Legal Culture, in Comparative Law: A HANDBOOK 109, 112–113 (Esin Orucu & David Nelken eds., Hart Publishing: Oxford 2007) (Regarding different definitions.). See also supra section 1.4.2 (On legal culture.).
2925 See David Nelken, Using the Concept of Legal Culture, 29 AUSTL. J. LEG. PHIL. 1, 1 (2004) (“Legal culture, in its most general sense, is one way of describing relatively stable patterns of legally oriented social behaviour and attitudes. The identifying elements of legal culture range from facts about institutions such as the number and role of lawyers or the ways judges are appointed and controlled, to various forms of behaviour such as litigation or prison rates, and, at the other extreme, more nebulous aspects of ideas, values, aspirations and mentalities. Like culture itself, legal culture is about who we are not just what we do.”).
2926 Lundmark, supra note 2872, at 117 (Regarding Lundmark’s culture clash between an American legal culture that “looks favorably on novel approaches” and a German legal culture where there is one right rule to a factual situation.).
strained market relation” in contrast to legislation.2928 And the idea that statutes may cement antiquated rules was expressed prior to the introduction of the UCITA.2929 But since the American law relevant to software license agreements is primarily the result of judicial activity, and is not “[c]hoking on statutes” to paraphrase CALABRESI,2930 this subject can be used to evaluate this claim. There are perhaps more situations when it is difficult to find legal answers under German law than under American law. However, it is difficult to claim that the stronger focus on statutory rules in this field under German law would make it less adaptable to a changing society than the common law process. For example, the first European Union Software Directive was proposed 25 years ago,2931 and entered into force in 1991,2932 well before the Internet changed software distribution forever. Those rules are still relevant and found their way into the current Software Directive. It can be argued that the civil law tradition is also adaptable to a changing society, based on its more abstract laws,2933 and its ability to “reboot” legislation when lawmakers find this necessary. Thus, both civil law and common law countries can adapt to a changing society, they only achieve this in different ways.

Compared to German law, there are a relatively higher number of relevant cases for this subject in American law. Different explanations can be put forward: (1) The United States dominates the standard software industry, both in terms of transferors and transferees. The United States has approximately four times the population of Germany, and the estimated legal value of standard software sales was approximately 6.5 times of Germany in 2011.2934 (2) American legal culture is more litigious than German legal culture. And

2929 Cf. Gomulkiewicz, supra note 2830, at 908 (Regarding doubts towards the UCITA: “A regulatory statute, a statute based on antiquated rules and distribution methods, or a statute which provides even less contract certainty than today’s world of licensing law chaos, is probably best left unwritten.”).
2933 See supra section 10.2.6.
2934 See BUSINESS SOFTWARE ALLIANCE, SHADOW MARKET: 2011 BSA GLOBAL SOFTWARE PIRACY STUDY (9th ed., 2012) (Data is calculated from estimated piracy losses and piracy rates in 2011.).
(3) American judges could be more judicially active than German judges, making each case matter more.

The American legal culture is considered to be litigious in comparison to some legal cultures. Different explanations for the American litigiousness have been brought forward. For example, that the American legal culture would be more adversarial than others, that early American history created a reliance on lawyers and courts, or that legal rules create incentives for litigation. One study shows that there is empirical support for that divided government and economic wealth are two determinants for high litigation rates. It is plausible that lawyer density is correlated to litigation levels, which would suggest higher litigation levels in the United States than Germany. It also seems plausible that the ratio of judges is correlated to litigation rates. But from this perspective, German courts would create greater incentives for litigation than American courts. Blankenburg conducted a study of litigation rates in Netherlands and West Germany (Nordrhein-Westfalen), two similar cultures, but with much higher litigation rates in Germany (among the highest on the European continent). The study suggests that incentives to litigation, infrastructure that provides access or alternatives to the court system,

2935 Tonja Jacobi, *The Role of Politics and Economics in Explaining Variation in Litigation Rates in the U.S. States*, 38 J. Legal Stud. 205, 214–215 (2009) (Regarding the characterization of the United States as exceptionally litigious. See also cited sources.). Zweigert & Kötz, *supra* note 2900, at 300–302 (Regarding the notion that some legal traditions, such as the American legal tradition, is considered to have a high level of litigiousness, while other legal traditions, such as the Japonic legal tradition, is considered to have a low level of litigiousness. But some argue that it is a myth that the Japanese are reluctant to litigation. Slow judicial processes due to strain on courts can instead explain lower levels of litigation. Alternative dispute resolution is therefore often preferred over traditional courts.).
2937 Jacobi, *supra* note 2935, at 207 (Examples of such rules include, “contingency fees, facilitation of forum shopping, costs assignment, and joining rules.”).
2938 *Id.* at 226–227.
2939 Data from Council of Bars and Law Societies of Europe (CCBE) combined with German demographic data shows that there was approximately 1 lawyer per 506 people in 2012. See CCBE Lawyers’ Statistics 2012, COUNCIL OF BARS AND LAW SOCIETIES OF EUROPE, <http://www.ccbe.eu>. Data from the American Bar Association combined with American demographic data shows that there was approximately 1 lawyer per 249 people in 2012. See Lawyer Demographics 2012, Am. Bar Ass’n, <http://www.americanbar.org> (Number of licensed lawyers 2012).
2940 Cf. Lundmark, *supra* note 2872, at 209–210 (In Germany, there is one judge for every 4,000 people. In the United States, there is one judge for every 35,000 people.).
are important, not “folk mentality.” This conclusion follows the current general trend of explaining litigation differences with the supply of law, not the demand. Since no comparable data between Germany and the United States has been found, it is not possible to say something about raw differences in litigation rates between Germany and the United States. German litigation rates might be relatively high from a European perspective, but American litigation rates are often characterized as exceptional. So it is possible that any difference in litigiousness may be of importance from this perspective.

If we would accept the notion of the American litigious culture, this could perhaps partly be explained by legal predictability. It could be argued that the higher German level of predictability discourages litigation and American uncertainty encourages litigation. But litigation is important for the gradual development of law. A lawmaker can try to write clear statutes, but a lawmaker is seldom able to anticipate all possible situations that the market may create in the future. This is especially true in legal cultures with very specific legislation, such as the United States. Courts therefore fill an important function, both for common law and civil law legal systems, to clarify or to develop the law. And in an area of constant development such as this, the gradual development of law can be very important. This gradual development is arguably partly reliant on litigation rates. While American law is sprawling in different directions, it is arguably easier to find some answer for more questions under American law than under German law. This is probably partly the result of an American litigious culture.

The role of judges could also be important. In theory, German judges have a very limited role. Formally, case law has not been recognized as a source of law in Germany, and judges should not create law. But in practice, it is difficult to maintain the position that judges do not make law when courts have interpreted statutes against the wording, and that case law is not an important source of law in less codified areas of law. Still, in comparison, American judges have a more active role.

2941 Blankenburg, supra note 2936, at 806–807.
2942 See Nelken, supra note 2924, at 113–114.
2943 Lundmark, supra note 2872, at 75 (“Legal predictability discourages people for questioning and testing the boundaries of the law. It can lead to acquiescence, lack of interest, and even resignation.”).
2944 See supra section 10.2.6.
2945 See Merryman & Pérez-Perdomo, supra note 2871, at 154 (“Unlike the legislative process, which proceeds sporadically and in substantial increments, the judicial process is gradual and accretive.”).
2946 Nigel Foster & Satish Sule, German Legal System and Laws 52–55 (4th ed.,
Both German and American law discourages judicial lawmaking.2947 A court “makes law” when it formulates new policy or reformulate existing policy. But when society changes, new “patterns of interests” arise, and courts give existing principles new meanings by applying principles that has been applied to “the most nearly pattern of interests” to a new “pattern of interests.” This is not considered making law. Accepting and registering such changes in society also changes the law.2948 Thus, both German and American courts try to avoid judicial lawmaking. Many situations, that can be interpreted as making of new law, is arguably an adaption of existing law to new economic and social conditions. Still, it is not possible to deny the influence of judges on common law:

The common law is a monument to the judicial activity of the common-law judge. He, not the legislator or the scholar, created the common law. … However, [German courts], like the French courts, have no claim to credit for developing a common law.2949

So even though courts can develop law without making new law, it is difficult to deny the importance of judges for American legal development.2950 For example: (1) Some American federal appellate courts developed the copyright misuse doctrine based on the recognized patent misuse doctrine; (2) the Seventh Circuit finally found shrink-wrap license agreements to be legally binding in 1996 with *ProCD v. Zeidenberg*,2951 after several years of invalidity in different courts; and (3) the Ninth Circuit with *Vernor* and subsequent cases created a norm that perpetually transferred software should be considered licensed.2952 While German courts could develop law, it seems unlikely that a German judge would make similar leaps in legal development or affect future legal assessment as dramatically as American judges sometimes do. These differences may create incentives or disincentives to adjudication. If the parties know that a court is more likely to make great leaps in legal development, this...


2948 Id. at 1143–1144.

2949 Id. at 1146–1148.

2950 Cf. LUNDMARK, supra note 2872, at 322 (All common-law judges sometimes create law, but American judges also extend this to “judicial review of constitutionality.”).

2951 86 F.3d 1447 (7th Cir. 1996).

2952 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010); MDY Indus. LLC v. Blizzard Entmt, Inc., 629 F.3d 928, 938 (9th Cir. 2010). See supra section 3.1.1.
might create incentives for litigation. Conversely, if the parties know that adjudication is unlikely to make major leaps in legal development, this might discourage litigation. Based on this, American legal actors and institutions might encourage litigation, while German dittos might discourage litigation.

To summarize, it is likely that differences in legal culture, actors, and institutions may explain differences in relevant case law between German and the United States.

10.3 Reasons III: Actors

The fundamental differences above can partly explain cross-national invalidity, but there are additional reasons for invalidity that are associated with the actors. Such reasons include: (1) Mobile applications and their effect on digital software distribution, lawmakers and interest associations; (2) the uncertainty whether transferors wish to overcome differences, or to overcome differences at any price; (3) transferors attempt complex schemes; (4) agreements that require interpretation; (5) increasingly unclear line between consumers and business actors; (6) market conditions; and (7) problematic business and technical choices.

10.3.1 The Disruptive Effects of “Apps”

The importance of mobile applications, or “apps,” for the current and future development of this subject should not be underestimated. The advent of the current generation of mobile applications has likely changed software use tremendously. It has become easier than ever before to transfer software. All the major mobile platforms are pushing their own software distribution channels. Such software distribution channels contain vast amounts of software and transferees download large amounts of software. For example, as of May 2013, Apple’s App Store contained more than 850,000 mobile applications and transferees had downloaded 50 billion mobile applications between July 2008 and May 2013.

This development takes digital software distribution to a new level. And this development means that more transferees are exposed to more software

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2953 But the uncertainty of American adjudication might also create disincentives to litigation if the parties are afraid that adjudication might lead to the opening of Pandora’s box. See supra section 10.2.4.
2954 See supra section 2.1.5.
and software license agreements. Based on this development, the importance of software license agreements is likely to increase and problems associated with cross-national validity will likely become clearer. The surge in mobile applications has very recently led to investigations of software license agreements for such platforms among consumer associations, and also led to more industry self-regulation. The legal consequences of this development are likely to lag behind technical development, but the legal consequences will likely become clear to transferors in the future. Thus: (1) Mobile applications will likely increase the importance of cross-national validity; (2) mobile applications might cause lawmakers to create new legal requirements for software license agreements; and (3) mobile applications are likely to increase the practical importance of invalidity when consumer associations and other actors become more active against transferors and software license agreements.

Mobile applications will probably also increase software exports and the economic importance of the single software market. Previously, software exports were less important for European transferors, while software exports have always been more important for American transferors, partly due to the greater focus on standard software among American transferors. Thus, for a long time, cross-national validity of software license agreements has arguably been a one-way street. The relevant question was: Are American software license agreements valid abroad? To some extent, this is perhaps still the most relevant question, but very much has happened in less than fifteen years, and especially in the last five years, with software distribution channels and the surge in less complex software with more focused functionality. Small undertakings from all over the world are developing successful mobile applications that are transferred within the single software market. This is likely to increase software exports from many different countries. This means that: (1) Cross-national

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2956 See Verbraucherzentrale Bundesverband (vzbv), Press Release: App-Store-Betreiber bestehen AGB-Check nicht, August 20, 2012 (Roughly: App Store operators do not stand standard-form agreement scrutiny.).


2958 See supra section 1.2.1.

2959 Kimmo Alajoutsijävi, Kari Mannermaa & Henrikki Tikkanen, Customer Relationships and the Small Software Firm: A Framework for Understanding Challenges Faced in Marketing, 37 INFO. & MGMT. 153, 153 (2000) (“Most European software firms are relatively small and concentrated almost solely on serving their home markets. For instance, there are approximately 2000 software companies in Finland and only 10 percent have regular export activities.” But “Finnish software producers have increased their exports by more than 40 percent annually since the mid-1990s.”).
validity becomes less of a one-way street; and (2) that transferors in other legal systems must also aim for cross-national validity.

The explosion of mobile applications will probably make the single software market take a major leap forward. This is probably only the beginning of that leap. This will likely affect both the importance of cross-national validity and the challenges with achieving cross-national validity.

10.3.2 Are Transferors Pursuing Cross-National Validity?

Even though software is distributed cross-nationally, and transferors operate within the single software market, it does not naturally follow that transferors are currently actively aiming for cross-national validity. Asymmetrical validity of software license agreements is not necessarily a failure. A transferor can be fully content if the software license agreement is valid and enforceable in the jurisdiction where the transferor has its principal place of business. From a transferor’s perspective, asymmetrical validity might even be the most beneficial state in some situations. For example, if a transferor is to some extent favored by the laws of one legal system, the transferor will have incentives to take advantage of such favorable laws. This might lead to asymmetrical validity, but: (1) Asymmetrically valid software license agreements might sometimes be valid in specific software transfers; and (2) the transferor does not need to compromise with provisions, and the overall gains of this practice in one jurisdiction may outweigh the negative consequences in other jurisdictions.

But it is clear that at least certain transferors and software license agreement drafters actively aim for cross-national validity. Others are at least aware that laws in other legal systems might lead to different results. And finally, some transferors might be: (a) Unaware of differences between legal systems;

2960 See supra section 9.2 (Regarding asymmetrical validity.).
2961 Cf. Emma Wilson, *Douglas v. Talk America: Making the Case for Proper Notice*, 45 *Idaho L. Rev.* 479, 485 (2009) (“If sellers know buyers will be bound to unread agreements as long as the terms do not “shock the conscience,” it certainly provides an incentive for sellers to include as many favorable provisions as possible with the hope that courts will enforce them.”).
2962 See Creative Commons, *Press Release: Creative Commons Launches Version 4.0 of its License Suite*, November 26, 2013 (“Since 2007, CC has been working with legal experts around the world to adapt the 3.0 licenses to local laws in over 35 jurisdictions. In the process, CC and its affiliates learned a lot about how the licenses function internationally. As a result, the 4.0 licenses are designed to function in every jurisdiction around the world, with no need for localized adaptations.”); Adobe, *Software License Agreement: Adobe Photoshop CS6*, Section 16.1.3 (2012) (“[If] Customer is located in the European Union (EU)…”).
(b) aware of differences, but hoping they do not cause problems; or (c) aware of differences, but calculating that the potential risk is manageable.

While transferors operate in a global market, they do not always look beyond their own legal system, but this is sometimes also true for globally operating lawyers. When drafting software license agreements, transferors may borrow terminology from national law, which may be difficult to interpret on a national level and even more so when strictly national terminology have to be interpreted on a cross-national level.

Some transferors may argue that the geographical distribution of the single software market is currently heavily tilted towards the United States, and that validity under American law is several times more important than validity in other countries, and that the potential risk of cross-national invalidity is manageable. However, if we examine the collective leverage of the European Union, the dominance of the United States becomes less pronounced, which creates incentives for pursuing cross-national validity.

("This agreement describes certain legal rights. You may have other rights under the laws of your state or country.")


2965 Free Software Foundation, GNU General Public License (GPL): Version 2, Section 0 (1991) ("[A] 'work based on the Program' means either the Program or any derivative work under copyright law.").


2967 See Mikko Välimäki, GNU General Public License and the Distribution of Derivate Works, 2005(1) J. Info. L & Tech. (2005) (Regarding confusion how to interpret the strictly American concept of “derivative works” in Europe.).

2968 See, e.g., Joel Kotkin & Shashi Parulekar, The State of the Anglophere, 22 City J. No. 1, 2012 (The top eight countries in software sales, as of 2009 (numbers are in millions of USD): (1) U.S. 450,000; (2) India, 34,000; (3) Canada 32,000; (4) U.K. 22,000; (5) Germany 21,000; (6) France 18,000; (7) Japan 12,000; and (8) Netherlands 3,000.); BUSINESS SOFTWARE ALLIANCE, supra note 2934 (2011 global study) (Legal sales of PC software as of 2011 (numbers are in millions of USD): (1) U.S. 41,664; (2) Japan 7,054; (3) Germany 6,447; (4) U.K. 5,530; (5) France 4,689; (6) Canada 3,085; (7) China 2,659.).

In the longer perspective, a risk calculation based on American dominance does not seem manageable, due to: (1) The current focus of European lawmakers and consumer associations on software license agreements, and the collective leverage of the European Union within the single software market; and (2) a future likely geographical redistribution of the single software market, especially as transferees/transferors in developing countries become more active and important.2970

While these questions primarily lie in the interest of transferors, it is clear that other actors also fail to look beyond their own legal system. This also includes lawmakers and legal scholars. Law is in many ways still focused on national or regional territorial boundaries.2971 When new laws are drafted, lawmakers or drafting committees are more or less reluctant to make comparative legal inquiries. Several American draft committees have been reluctant to make such inquiries, while that is expected within the European Union.2972 Such lack of comparative inquiries when making new laws will at least not reduce differences between legal systems and might also increase differences.

Some argue that scholars fail to look beyond their own legal systems when attempting to harmonize the laws applicable to software license agreements or creating best practices for software license agreements. For example, the ALi Principles have been accused of being “ethnocentric.”2973 While the ALI Principles do not offer comprehensive advice for creating cross-nationally valid software license agreements, I am less critical and think that the ALI Principles contain valuable starting points for creating cross-nationally valid

2970 See supra section 1.2.1.
2971 See Dan Danielsen, Local Rules and a Global Economy: An Economic Policy Perspective, 1 Transnat’l Legal Theory 48, 53 (2010) (“[O]ur increasingly global economy is governed principally by local rules created by local institutions designed to serve primarily (if not exclusively) local policy interests and purposes.”); Johnson & Post, supra note 2796, at 1367 (“Cyberspace challenges the law’s traditional reliance on territorial borders.”).
2972 See Maxeiner, supra note 2851, at 129–131; Braucher, supra note 2817, at 359.
software license agreements.\textsuperscript{2974} Still, scholars can become better, and this thesis is one attempt to look at these issues from a cross-national perspective.\textsuperscript{2975}

To summarize, transferors may approach legal issues from a very narrow national perspective in a globalized world, but this also applies to lawmakers and scholars.

\textbf{10.3.3 Transferors Attempting Complex Schemes}

Transferors are sometimes too clever for their own good and attempt very complex schemes. For example: (1) Transferors sometimes try to bind transferees by very unorthodox contract formation methods, such as browse-wrap license agreements;\textsuperscript{2976} (2) transferors attempt to unilaterally modify software license agreements in a later stage;\textsuperscript{2977} or (3) draft problematic severability clauses to ensure or prevent severing of invalid provisions.\textsuperscript{2978} While some of these schemes might work in exceptional situations, they put transferors at risk, since failure is more likely than success. The result can be achieved with other, arguably simpler, methods that are much more likely to be valid and enforceable.

\textbf{10.3.4 Agreements Requiring Interpretation}

Sometimes, transferors write software license agreements that require interpretation, which may lead to unenforceability, legal uncertainty, or unwelcome results.

Intuitively, it might seem reasonable that different approaches to contract interpretation in civil law and common law countries would be a reason behind cross-national invalidity. Traditionally, common law legal systems have relied more on objective meaning, while civil law legal systems have focused more on the “true intentions” of the parties.\textsuperscript{2979} German law contains traces of both subjective and objective contract interpretation,\textsuperscript{2980} but

\textsuperscript{2974} See infra section 12.1 (Regarding the ALI Principles and achieving cross-national validity.).
\textsuperscript{2975} See supra section 1.3.5 (Regarding relation to earlier research.).
\textsuperscript{2976} See supra section 4.2.3.
\textsuperscript{2977} See supra section 4.3.
\textsuperscript{2978} See supra section 4.4.3.
\textsuperscript{2980} See BGB §§ 133, 157 (Ger.) (Section 133 expresses the subjective “true intention”
the subjective method has been diminished, offers should be interpreted objectively. However, the subjective side might become relevant regarding falsa demonstratio non nocet, when objective and subjective intentions differ. Still, the differences between common law and civil law contract interpretation should not be exaggerated since they only become relevant in rare situations.

Instead, transferors themselves and bad craftsmanship in contract writing arguably cause most problems with interpretation, not fundamental differences between German and American law. Two examples can illustrate this: In Overlap, Inc. v. Alliance Bernstein Investments, the court could not "conclude as a matter of law whether and how the use of the software’s outputs was limited," since the software license agreement was not sufficiently specific. This is an example when unclear provisions inhibit enforceability.

Sometimes, unclear provisions cause uncertainty even if they are considered valid in court. For example, in Altera Corp. v. Clear Logic, Inc., the court had to interpret a general use provision before it could establish that the provision covered the prohibition of reverse engineering and that the provision was enforceable against such actions. The provision was valid, but the unclear wording created unnecessary uncertainty.

("wirkliche Wille") of the parties. BGB Section 157 requires objective interpretation due to good faith and common usage.). See also BGB §§ 305(b–c) (Ger.).

BHG Jun. 7, 1984, BGHZ 91, 324, NJW 1984, 2279 (Ger.) (The objective interpretation applies both to the content of the contract and the question of intent to enter into an agreement.); BGH Nov. 7, 2001, NJW 2002, 363 (Ger.); Markesinis, Unberath & Johnston, supra note 2979, at 134; Raymond Youngs, English, French & German Comparative Law 607 (2nd ed., Routledge-Cavendish: London 2007).

RG Jun. 8, 1920, RGZ 99, 147 (Ger.) ("Haakjöringsköd-Fall") (The parties had entered an agreement for delivery of "Haakjöringsköd", but the parties had presumed the Norwegian word to mean whale meat, while it meant Greenland shark meat. While the delivery conformed to the objective meaning of the agreement, it did not conform to the subjective meaning of the agreement. Thus, there was a defect in the delivery.).

Overlap, Inc. v. Alliance Bernstein Investments, 2007 WL 4373975 (W.D. Mo. Dec. 14, 2007) (1) There was no definition of the term “single use environment”; (2) it was not clear whether “user” referred to the transferee (the company), or an employee that accepted the software license agreement when the software was loaded unto the employee’s computer; and (3) the term “benefit” was not clear either.).

Altera Corp. v. Clear Logic, Inc., 424 F.3d 1079, 1082, 1090–1092 (9th Cir. 2005) (Allowing transferees to “use the Licensed Programs for the sole purpose of programming logic devices manufactured by ALTERA and sold by ALTERA or its authorized distributors.”).
Most problems with interpretation are arguably caused by transferors themselves and can be solved by improving the quality of software license agreements. For example, by using more precise provisions that clearly cover common questions such as reverse engineering.

10.3.5 Increasingly Unclear Line Between Consumers and Business Actors

As seen, there are clear differences in legal requirements if a transferee is a consumer or a business actor. Software license agreements are much more likely to become invalid if the transferee is a consumer than a business actor. This applies to both American and German law. Generally speaking, consumer protection is much more comprehensive in Germany, and the requirements are also stricter. In fact, the requirements might in certain situations be stricter against both consumers and business actors under German law than against consumers under American law. This creates two types of challenges to transferors: (1) Software license agreements are much more likely to be invalid if the transferee is a consumer; and (2) very different requirements present challenges to transferors that offer software directed at both consumers and business actors.

The latter might require some explanation. Different requirements present challenges to transferors that offer software directed at both consumers and business actors, since it is difficult for a transferor to know whether a transferee is a consumer. The distinction between products and services aimed at business actors or consumers is arguably becoming increasingly blurred; what was previously considered consumer products and services are also becoming professional products and services and vice versa. Thus, this challenge could arguably become increasingly difficult as the line between consumers and business actors become less clear.

The challenge is to present the right software license agreement to the right transferee. If a consumer is presented with a software license agreement that would be valid against a business actor, the agreement could be invalid. If a business actor is presented with an agreement that would be valid against a consumer, the agreement is likely to be valid. The former is problematic from a legal perspective, while the latter could be problematic from a business perspective if this means that the transferor fails to enforce price-discrimination.

2988 See supra section 10.2.6 (Regarding different lawmaking strategies in Germany and the U.S. and their consequences.).
10.3.6 Market Conditions

It has been argued that undertakings with market power have few incentives to offer competitive provisions and might instead use one-sided provisions.\(^{2990}\)

Granted, market conditions are naturally related to cross-national invalidity under competition law. Competition law is only likely to render standard software license agreements invalid in some rare situations, since few standard software transferors have sufficient market power and use provisions that could likely violate German or American competition law.\(^{2991}\) Since the requirements for competition law violations be may lower under German law than under American law, the importance of market conditions are arguably slightly higher under German law. But while market conditions may be a rare reason for cross-national invalidity, it is very much correlated to those particular situations.

Also, market conditions may also be more indirectly related to cross-national invalidity. For example, software license agreements used by transferors with market power are both more commonly used and more visible among transferees. This means that such software license agreements are probably more likely to end up in litigation, unrelated to competition law.

If transferors with market power would be more likely to use one-sided provisions this could increase the risk of cross-national invalidity beyond competition law violations. But Marotta-Wurgler’s empirical study found little support for the notion that transferors with market power would use more one-sided — and thus more likely to be invalid — provisions than other transferors.\(^{2992}\) Thus, it does not seem that transferors are likely to use more one-sided provisions due to market conditions. Otherwise, such provisions could more likely be cross-nationally invalid. Thus, market conditions are not a universal reason behind cross-national invalidity, but rather a specialized reason.


\(^{2991}\) And those cases might not end up in court, since they are increasingly settled outside court. See Alison Jones & Brenda Süberin, *EU Competition Law — Text, Cases and Materials* 363 (5th ed., Oxford University Press: Oxford 2013) (Regarding the recent tendency of Commitments Decisions.).

10.3.7 Problematic Technical and Business Choices

Software license agreement invalidity may ultimately sometimes be the result of different technical and business choices. As we saw in chapter two, transferors can make many different technical and business choices, which will affect software license agreements. If a software license agreement aims to legally secure revenue streams, reasons for invalidity can, at least partly, be found in the chosen business model. For example: (1) A business model where revenue streams come from using transferees’ personal data requires personal data collection provisions; (2) a business model where the main revenue stream comes from hardware sales may require provisions that require the software to be used on certain hardware; and (3) downstream user proliferation may be a great risk for a business model where the main revenue stream comes from lump sum fees, which may cause transferors to include provisions that prevent software resale.

These business models and provisions can be problematic from a cross-national perspective. But while such business models may increase the risk of cross-national invalidity, it might still be possible to create cross-nationally valid software license agreements using those business models, even though it may require some effort.

11 Consequences of Invalidity

In this chapter, legal and practical consequences of software license agreement invalidity will be examined.

11.1 Legal Consequences of Invalidity

A number of legal consequences may be associated with cross-national invalidity. For example: (1) Complete invalidity; (2) partial invalidity; (3) legal consequences beyond the individual agreement; (4) legal consequences beyond the agreement; (5) increased liability exposure; and (6) increased judicial exposure.

11.1.1 Complete Invalidity

The consequence of a completely invalid agreement is that the relationship between the parties becomes void, that is, obligations cease to exist. This leads to two consequences: (1) Inability to enforce the software license agreement; and (2) performances should be returned.

Thus, the transferor cannot invoke claims against the transferee and vice versa. In Jesmer v. Retail Magic, Inc., the court said that when a software license agreement was unenforceable — since the transferee did not read or assent to it — it precluded any breach of implied warranties in the software. In Johnson v. Microsoft Corp., the plaintiffs claimed that monitoring software (Windows Genuine Advantage) violated the software license agreement. However, the plaintiffs had not accepted the software license agreement, and therefore lacked standing.

If an agreement is void, performances should be returned, including transferred property. However, this is unlikely for standard software. A minimal agreement relating to the software transfer is likely to exist, even if a software license agreement with use restrictions is void. It is unlikely that a transferor

would require standard software to be returned, and it is also unlikely that German or American courts would invalidate the entire software transfer and require standard software to be returned.

Based on the idea of “pure licenses,” it has been argued that a failed “pure license” would revert back to copyright law. And since certain software license agreements are more permissive than default copyright, acting according to the void agreement would thus potentially lead to copyright infringement under this theory.\textsuperscript{2998} This is unlikely. As seen, this “pure license” theory can probably be discarded.\textsuperscript{2999} Also: (1) A transferor would not likely sue for copyright infringement or claim the “pure license” to be invalid in this situation, and courts would not likely accept such claims; and (2) under American law, a transferor might be able to rely on the promissory estoppel doctrine, if the transferee could reasonably have relied on this promise.\textsuperscript{3000} Thus, regardless of the “pure license” theory, this situation will not likely lead to copyright infringement.

Complete invalidity is likely in one of two situations: (1) The software license agreement formation process fails; or (2) one or several provisions are found invalid and those provisions cannot be severed from the contract.

The first situation presupposes that there is no agreement, not even a shell where central provisions are incorporated. Causes can be timing failures, insufficient notice, no time to review, lack of transparency, language issues, or lack of clear assent.\textsuperscript{3001} There is at least a potential risk for this problem, but it can relatively easily be avoided.

The second situation is an exception, since severability is the main principle under German and American law.\textsuperscript{3002} However, if the main purpose would


\textsuperscript{2999} See supra section 3.2.2.

\textsuperscript{3000} Restatement (Second) of Contracts § 90 (1981); Drennan v. Star Paving Co., 51 Cal.2d 409 (Cal. 1958); Youngman v. Nevada Irr. Dist., 70 Cal.2d 240 (Cal. 1969); Kajima/Ray Wilson v. Los Angeles County Metropolitan Transp. Authority, 96 Cal.Rptr.2d 747 (Cal. 2000). This requires that: (1) The promisor must have made a clear and unambiguous promise; (2) the promisee must reasonably and foreseeably have relied on the promise, without bargaining for the reliance; (3) the promisee must have sustained substantial detriment because of this reliance; and (4) the relief for this detriment is limited by the extent of the promisee’s reliance, and not by the terms of the promise. See Restatement (Second) of Contracts § 90 (1981); Poway Royal Mobilehome Owners Ass’n v. City of Poway, 58 Cal.Rptr.3d 153 (Cal. Ct. App. 2007).

\textsuperscript{3001} See supra section 4.2.

\textsuperscript{3002} See supra section 4.4.3.
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fail, or if upholding the contract would lead to unreasonable hardships for one party, the agreement could fail. As an example, two lower German courts have argued that the entire software license agreement would fail if provisions upholding fundamental principles, such as the open development of software transferred under the GNU GPL, would be invalid. In Armendariz v. Foundation Health Psychcare Services, Inc., the California Supreme Court could not enforce a contract, since it was not possible to cure unconscionability by removing a specific provision. However, complete invalidity due to severability failure must be considered a rare exception.

11.1.2 Partial Invalidity

Partial invalidity is much more common, since the main principle is severability; that is, the invalid provision will be severed from the enforceable rest of the agreement. Unless severability is impossible, the remainder will be enforced.

As seen, it is much more likely that a software license agreement will be partially invalid under German law. Thus, the result under German law becomes interesting to examine. Under German law, gaps can be filled with default statutory provisions, not new contractual provisions. However, partial invalidity does not automatically lead to gaps. Whether gap filling with statutory provisions will be necessary depends on the invalid provision in question. As seen, invalid provisions may include, for example, invalid reverse engineering and hardware clause, use restrictions, warranty and liability dis-

3004 BGB § 306(3) (Ger.).
3005 LG München 1 May 19, 2004, GRUR-RR 2004, 350 (Ger.); LG Frankfurt/Main Sep. 6, 2006, CR 2006, 729 (Ger.).
3006 99 Cal.Rptr.2d 745 (Cal. 2000).
3008 See supra section 4.4.3.
3009 Restatement (Second) of Contracts § 184(1) (1981); BGB § 306(3) (Ger.).
3012 See also 2 Franz Jürgen Säcker & Roland Rixecker, Münchener Kommentar zum Bürgerlichen Gesetzbuch, Buch 2. Abschnitt 2. § 306. III. 2, recital 11 (6th ed., C.H. Beck: München 2012) (For example, if a provision in a standard-form agreement for sale of a coffee machine stipulated that the customer must also buy coffee or coffee filters, and that provision is unenforceable, there is no gap in the agreement.).
claimers, forum selection, arbitration, and choice-of-law clauses. Some of these examples are regulated in statutory law, and a court will apply these default rules when necessary.

These examples are unlikely to hinder severability. Forum selection, arbitration, choice-of-law clauses, provisions prohibiting reverse engineering and similar are potentially or likely invalid, but their invalidity are not likely to create unreasonable hardships for either party and hinder severability.\textsuperscript{3013}

Still, such partial invalidity will likely lead to both noticeable legal and practical consequences, as we will see. Practical consequences may be equally or even more important than legal consequences for transferors.

\subsection*{11.1.3 Beyond the Individual Agreement}

As was said above, an invalid software license agreement or provision under American law will have few consequences beyond that individual case.\textsuperscript{3014} This will naturally have consequences for a transferor in an individual case, but will not necessarily have wider consequences for this individual transferor. That is, unless this hypothetical individual case leads to substantial financial losses, which is unlikely due to the nature of the transactions.\textsuperscript{3015} A more likely situation is if this hypothetical individual case leads to further litigation by other transferees in similar situations. Still, other transferors with similar provisions will not necessarily be affected by the outcome in any of these hypothetical cases.

Within the European Union, invalidity may have broader consequences. According to the Unfair Terms Directive, Member States must prevent continued use of unfair contract terms.\textsuperscript{3016} Thus, not only refuse to enforce them, but also to prevent them from being used. From a German perspective, this means that a court can urge transferors to stop using similar terms in similar agreements. German law also allows consumer associations to invalidate software license agreements without litigation.\textsuperscript{3017} This means that invalidity in one case may have broad implications. Even if transferees would be unlikely to

\begin{footnotes}
\footnote{\textsuperscript{3013} Cf. BGB § 306(3) (Ger.) (No severability if unreasonable hardships.).}
\footnote{\textsuperscript{3015} Granted, market reactions based on an individual case might lead to substantial financial losses. See \textit{infra} section 11.2.2 (Regarding market reactions.).}
\footnote{\textsuperscript{3016} See Council Directive 93/13 on unfair terms in consumer contracts, 1993 O.J. (L 95) 29 (EC), Article 7(1).}
\footnote{\textsuperscript{3017} See supra section 10.2.2. See also Maxeiner, supra note 3014, at 173–174.}
\end{footnotes}
challenge software license agreements, it is not possible for transferors to rely on this.\textsuperscript{3018} If one transferor is affected, other transferors will also be affected. This is a substantial difference between American and German law. This feature of German and European Union law is likely to lead to important consequences for transferors.

\subsection*{Beyond Agreement Invalidity}
Invalid software license agreements can have consequences beyond software license agreement validity. This may include liability for tortious use of invalid provisions and fines under competition law.

As seen, consumer associations may sometimes sue for tortious use of disapproved provisions.\textsuperscript{3019} For example, when disapproved provisions have been used or are likely to have been used against German consumers.\textsuperscript{3020} Thus, cross-nationally invalid software license agreements may create tort liability, which is unrelated to tort liability caused by defect software.

If a transferor violates competition law — where the software license agreement may be the cause of violation or merely enforcing a problematic practice — that transferor can be liable for substantial fines.\textsuperscript{3021} Such fines may be related to either technical tying, or contractual tying through software license agreements. However: (1) Such fines are exceptional; and (2) for transferors of this magnitude, a couple of billion USD in fines might not always be sufficient to change an illegal but lucrative behavior unless this leads to market reactions.

\subsection*{Increased Liability Exposure}
Since transferors cannot always disclaim warranties and waiver liability, transferors could be exposed to some risk. The scope of liability for software defects and liability for damages to property, for example data loss, is not completely


\textsuperscript{3019} LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.).

\textsuperscript{3020} See BGH May, 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.).

clear, but it seems that transferors are more likely to be liable under German law than under American law in the absence of liability provisions.\textsuperscript{3022} Since: (1) Transferors may be more likely to be liable under German law; and (2) since such liability is more difficult to disclaim under German law, transferors may be exposed to liability for software defects and damages caused by software defects to property and life.

Since software products and services are used to store increasing amounts of our important personal and professional lives, potential liability exposure is a proverbial Pandora’s box waiting to be opened.

\subsection{11.1.6 Increased Judicial Exposure}

As seen, procedural provisions, such as forum selection, choice-of-law, arbitration clauses, and class action waivers, are not always cross-nationally valid. This problem is especially likely against German consumers, but sometimes also against American consumers. Invalidity of such procedural provisions could lead to increased judicial exposure for transferors. For example: (1) Courts abroad could have jurisdiction over transferors; (2) transferors cannot always avoid class action lawsuits; (3) transferors may not be able to arbitrate, which could mean (a) more litigation and (b) public exposure; and (4) transferors may be subject to laws in countries outside their legal expertise.

This could lead to both legal and practical problems for transferors. Increased judicial exposure is likely related to increased risks of invalidity, liability, or badwill.

\section{11.2 Practical Consequences of Invalidity}

Cross-national invalidity has a number of practical consequences, which may also be important. Such consequences include: (1) Failure to prevent downstream user substitution; and (2) business consequences, such as (a) failure to secure revenue streams, (b) the need to raise prices to compensate for increased legal liability and (c) potential market reactions. However, as we will see, there are several other practical consequences to take into account.

\textsuperscript{3022} It is possible that liability is viable under American law as well, but has not become relevant since disclaimers have been effective.
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11.2.1 Failure to Prevent Downstream User Substitution/Proliferation

As seen, perpetually transferred software against a single payment is considered licensed under American law, but sold under German law. When software is considered licensed, it is possible to prevent downstream user substitution, and facilitate price discrimination, but also to create an enforcement mechanism against downstream user proliferation. Under American law, it is possible to prevent downstream user substitution and proliferation with software license agreements, but not under German law. As a consequence, transferors might start exploring other technical and business solutions to create enforcement mechanisms against downstream user proliferation. For example: (1) Transfer software for a limited time against recurring fees, which will be classified as a lease under German law; (2) tie software to non-perpetual, recurrently remunerated user accounts and impose use restrictions on such accounts; (3) use technical measures such as product keys to prevent downstream user proliferation; and (4) move to a cloud model, since downstream user proliferation is not possible for cloud software, especially if tied to user accounts.

11.2.2 Business Consequences

Cross-national invalidity might also have consequences from a business perspective. Invalidity might lead to: (1) Failure to legally secure the revenue

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3023 See supra section 3.1.1.
3025 See Appellant's Opening Brief at 48, Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010) No. 09-35969, 2010 WL 894736, at *48 (“[A] copyright owner’s retention of ownership of its software copies protects against unauthorized reproductions of the software. After installing the software, a licensee of Autodesk’s software can transfer the tangible copy of the software while retaining and using the copy installed on its hard drive. Autodesk’s licensing of its software copies provides an enforcement mechanism against this possibility because it permits Autodesk to sue a downstream purchaser for copyright infringement.”). See also Wang, supra note 3024, at 12–14.
3026 See supra section 3.1.1.
3027 See BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).
3029 See supra section 2 (Regarding the relationship between business models and software license agreements.).
streams that the software generates;\textsuperscript{3030} (2) increased risk, and a need to raise prices to compensate for that risk;\textsuperscript{3031} and (3) market reactions.

For example, if one purpose of a software license agreement is to legally secure collection and use of location data as a revenue stream, and the judiciary does not accept this, this business model becomes difficult to sustain from a legal perspective. Thus, it becomes necessary to find workarounds to such problems or choose a different business model.

Since a number of positive and negative provisions are likely to be asymmetrically valid, or even completely invalid, this might raise a number of practical consequences for transferors. Transferors might have to revisit a number of problematic provisions that might be relevant to business models, such as:

(1) Hardware restriction clauses; (2) user restriction clauses; (3) resale prohibition clauses; and (4) data collection clauses.

As seen, cross-national invalidity might lead to increased legal exposure, both increased liability and judicial exposure. This might increase transferors’ risk, and transferors have argued that price raises might be necessary to compensate for such increased risk.\textsuperscript{3032}

Invalidity, or software license agreement overuse might also lead to market reactions. It can be argued that the legal system creates incentives for transferors to push software license agreements as far as possible.\textsuperscript{3033} However, transferors want to avoid negative press and negative market reactions. Transferors vote with their money or personal data,\textsuperscript{3034} and may choose another program or service if a transferor tries to push its software license agreement too far. Thus, transferors do not only face legal consequences when overusing software license agreements. This applies at least to major transferors such as Microsoft, Apple, Google, and Facebook. Their actions are highly scrutinized


\textsuperscript{3031} Appellant’s Opening Brief at 47, Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010) No. 09-35969, 2010 WL 894736, at *47 (Arguing that if transferees would not be bound by software license agreements, transferors would, \textit{inter alia}, face “considerable additional liability,” which would force them to “raise their prices to compensate for this additional exposure.”).

\textsuperscript{3032} See Id. at *47.

\textsuperscript{3033} See Emma Wilson, \textit{Douglas v. Talk America: Making the Case for Proper Notice}, 45 Idaho L. Rev. 479, 485 (2009) (“If sellers know buyers will be bound to unread agreements as long as the terms do not “shock the conscience,” it certainly provides an incentive for sellers to include as many favorable provisions as possible with the hope that courts will enforce them.”).

\textsuperscript{3034} Unless they are completely “locked in” with a specific program or service.
by users and (social) media. If they would overuse their software license agreement, it would probably lead to a public backlash and a retreat. And practice shows that even somewhat smaller transferors, such as Instagram (owned by Facebook), cannot push their software license agreements too far.\textsuperscript{3035} The relationship between transferors and transferees is sometimes described as a tug-of-war; transferors try to extend their rights, which are then retracted by public resistance, and so it goes on.\textsuperscript{3036} Still, potential market reactions might arguably be a very important business consequence for transferors in many situations.

Thus, software license agreement invalidity might not only have legal consequences, but also practical consequences. However, practice is likely to be more complicated than this. Transferors must consider additional questions, such as: (1) Type of invalidity; (2) when software license agreements are likely to be challenged in practice; and (3) in what jurisdiction a software license agreement is likely to be invalid.

### 11.2.3 Not All Invalidity is Equal

From a transferor perspective, not all invalidity is equal, and the transferor must examine a couple of questions, especially: (1) Is the software license agreement completely or partially invalid, and if partially invalid, which provisions are invalid; and (2) is invalidity probable or merely possible?

Complete invalidity is likely to be a major problem in most situations, as long as the legal system has some leverage. Partial invalidity can be a practical problem if invalidity is related to a provision that is important for the chosen business model.\textsuperscript{3037} If invalidity is related to boilerplate provisions that are less important from a practical perspective, such invalidity may be more acceptable.

\textsuperscript{3035} See Mike Isaac, Instagram’s Updated User Agreement Goes Into Effect This Week, AllThingsD Jan. 15, 2013 (“Instagram reminded users on Tuesday morning that it would roll back its user agreement to the previous version, with some minor changes, after a widespread user outrage last year erupted over a change in the service’s terms to suit future monetization of the product.”).

\textsuperscript{3036} See Sherry Turkle, Alone Together: Why We Expect More from Technology and Less From Each Other 255 (Basic Books: New York) (“In fact, from the very beginning, Facebook has been in something of a tug-of-war with its users about how much control it has over their data. The pattern, predictably, is that Facebook declares ownership of all of it and tries to put it to commercial use. Then, there is resistance and Facebook retreats. This is followed by another advance, usually with subtler contours.”).

\textsuperscript{3037} See infra section 12.3.2.
Certain forms of invalidity are probable while other forms are possible. Competition law violations are very problematic, but only a very limited number of transferors are likely to be affected by this, especially for standard software. Other forms of invalidity are relevant for all transferors, and certain kinds of problems are likely to always create problems, for example, software license agreement formation.

11.2.4 Legal Challenges in Practice

This mapping has tried to predict how courts in different legal systems would assess the validity of certain provisions and practices when interpreting the law as it stands. However, this builds on the assumption that software license agreement validity will be examined in practice.

There might exist gaps between law as courts would apply it, law in action, and the law under which people live, law in practice, if the formal law is not used. Common reasons for such discrepancy can, for example, be poverty, corruption, prejudice, and ignorance of the law. Apart from ignorance of applicable law, such reasons are not likely to be applicable to this subject. However, not all software license agreements or provisions that would probably be invalid in courts will be challenged. Thus, even if a provision is likely to be invalid in court, not all software license agreements are likely to be challenged in courts. This is not unique to software license agreements, but rather likely to be true for most adhesion contracts.

From this perspective, it becomes interesting to examine when software license agreements are likely to end up in court in practice. Generally, there is a lot of ongoing litigation in this field. But incentives to litigate may vary between different categories of transferees. Thus, it might be necessary to divide litigation into different situations, and assess the probability of litigation. Such situations can be: (1) Consumer initiatives; (2) business actors initiatives; (3) competitor initiatives; (4) initiatives from lawmakers and interest organizations; and (5) initiatives from transferors.

3038 Lloyd, supra note 3021, at 439.
3039 See supra section 4.5.
3040 See supra section 1.4.1 (Regarding my prediction method.).
3043 Nimmer, supra note 2995, at § 19:1 (“The result in this country [the United States] has been remarkably active litigation, involving well over 500 reported cases since the mid-1990’s, as well as legislative attention in Europe and elsewhere. The pace of litigation is high because the stakes are high.”).
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Consumers
It is often repeated that few consumers read consumer contracts.\textsuperscript{3044} Certain empirical studies also support this claim.\textsuperscript{3045} There is not much empirical data on software license agreements, but one study on end user software license agreements also seems to confirm this. The study showed that very few potential software buyers accessed a software license agreement prior to the purchase.\textsuperscript{3046} Transferees click “I Accept” by habit.\textsuperscript{3047} Even the Chief Justice of the United States Supreme Court, Justice Roberts have admitted not reading the fine

\textsuperscript{3044} See Straus v. Victor Talking Machine Co., 243 U.S. 490, 501 (1917) (“[N]ot one purchaser in many would read such a notice, and that not one in a much greater number, if he did read it, could understand its involved and intricate phraseology”). See also Omri Ben-Shahar, The Myth of the ‘Opportunity to Read’ in Contract Law, 5 EUR. REV. CONT. L. 1, 2 (2009) (“Real people don’t read standard form contracts. Reading is boring, incomprehensive, alienating, time consuming, but most of all pointless.”); Alan Siegel & Irene Etzkorn, When Simplicity Is the Solution, WALL ST. J. March 30, 2013, at C1 (“Do you know anyone who stops to read click-through agreements on websites in the middle of performing a task? One company, PC Pitstop, deliberately buried a clause in its end-user license agreement in 2004, offering $1,000 to the first person who emailed the company at a certain address. It took five months and 3,000 sales until someone claimed the money. The situation hadn’t improved by 2010 when Gamestation played an April Fools’ Day joke by embedding a clause in their agreement saying that users were selling them their souls.”).

\textsuperscript{3045} See Amy J. Schmitz, Pizza-Box Contracts: True Tales of Consumer Contracting Culture, 45 WAKE FOREST L. REV. 863, 873–878 (2010). Cf. Shmuel I. Becher & Esther Unger-Aviram, The Law of Standard Form Contracts: Misguided Intuitions and Suggestions for Reconstruction, 8 DePaul Bus. & COM. L.J. 199, 212–223 (2010). (The study shows that consumers might read parts of the agreement or skim through the agreement before assenting to the agreement. Consumers were also more likely to read standard-form agreements ex ante for expensive transactions. Since software transactions seldom involve more than minor sums this does not suggest that software transferees are likely to read software license agreements.). See also supra section 1.3.3 (Regarding the omission of a consumer perspective.).

\textsuperscript{3046} Yannis Bakos, Florencia Marott-Wurgler & David R. Trossen, Does Anyone Read the Fine Print? Testing a Law and Economics Approach to Standard Form Contracts, NYU Law and Economics Research Paper No. 09-40, 3 (2009) (“[A]bout one or two in one thousand shoppers accesses a product’s EULA for at least one second.”).

\textsuperscript{3047} Rainer Böhme & Stefan Köpsell, Trained to Accept?: A Field Experiment on Consent Dialogs, in PROCEEDINGS OF THE SIGCHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (CHI ’10) 2403, 2406 (Atlanta, USA: 10–15 April 2010) (“Ubiquitous EULAs have trained even privacy-concerned users to click on ‘accept’ whenever they face an interception that reminds them of a EULA. This behavior thwarts the very intention of informed consent. So we are facing the dilemma that the long-term effect of well-meant measures goes in the opposite direction: rather than attention and choice, users exhibit ignorance. Even worse, this ignorance seems to spill over from moderately relevant topics (e. g., EULAs) to more critical ones (online safety and privacy.”).
print presented to computer users. However, this picture is not unproblematic. First, fractions do not tell the whole story. A small relative number of consumers that read software license agreements can add up to a very large absolute number. Second, it must be remembered that there are different categories of software license agreements, and only certain software license agreements are aimed at consumers. Consumer behavior cannot be extended to other categories. It could be rational for transferees not to read software license agreements and other standard-form agreements, if the contractual value is minimal, but not if the contractual value is substantial. Third, even transferees that do not read software license agreements may litigate. Invalid, unfair, and overreaching provisions spread word to mouth. If major transferors such as Apple, Google, or Facebook use problematic provisions, there will likely be a public outrage and many people will know about it, even if only three people would read their provisions, as long as the right people read them and communicate about it. Transferees and interest associations that did not read the software license agreement at first may read about them and attempt to litigate. So litigation is not necessarily related to reading numbers.

It is sometimes further argued that few consumers would be interested in litigation. However, while consumer litigation is not likely to be common, there are at least some cases where consumers have challenged software license

3048 Debra Cassens Weiss, Chief Justice Roberts Admits He Doesn’t Read the Computer Fine Print, ABA J. October 20, 2010.
3049 For example, if we consider that Facebook had 1.19 billion monthly active users as of September 30, 2013, one or two in one thousand is still sums up to 1.19–2.38 million reading users, a large absolute number. See Key Facts, Facebook, <https://newsroom.fb.com/Key-Facts>.
3050 See supra section 1.3.4.
3051 On the other hand, low contractual value might indicate that transferor acquire personal data from transferees, which would be an argument for reading.
3052 Cf. Isaac, supra note 3035 (“Instagram reminded users on Tuesday morning that it would roll back its user agreement to the previous version, with some minor changes, after a widespread user outrage last year erupted over a change in the service’s terms to suit future monetization of the product.”).
3053 See Pablo Cortés, Online Dispute Resolution for Consumers in the European Union 34 (Taylor & Francis: London 2010) (“B2C transactions on the internet are usually low cost transactions. Realistically, no-one is going to pursue a lawsuit for a small amount of money.”). Cf. Lee A. Bygrave, Contract vs. Statute in Internet Governance, in Research Handbook on Governance of the Internet 168, 192 (Ian Brown ed., Edward Elgar Publishing: Cheltenham 2013) (Arguing that end users “are probably indifferent to the agreements’ actual terms and, in the absence of untoward behaviour, they can generally enjoy the proffered service(s) without significant interference from the EULA drafter.”).
agreements. Also, from an American perspective, groups or classes of transferees are also challenging software license agreements. If Germany implements a collective redress mechanism, we might see a similar development in Germany. Granted, the amount of consumer-driven cases against software license agreements is not that substantial, but it would be wrong to presume that consumers are never going to challenge software license agreements.

Business Actors
Still, most challenges to software license agreements are likely to come from other sources than consumers. Most cases concerning software license agreement validity concern business actors. And as seen, there are a lot of cases that concern software license agreement validity in different forms. Thus, software license agreements will be challenged. There are a number of reasons why litigation is more likely among business actors than among consumers. For example: (1) More expensive software; (2) higher stakes and larger possible rewards; and (3) more time and resources needed for litigation. Still, business actors are not going to litigate over every little question, due to the uncertainties with litigation in civil matters.

Competitors
Since the software industry is among the largest industries and is growing, the size and the importance of the market combined with uncer-


3056 Commission Recommendation 2013/396 on common principles for injunctive and compensatory collective redress mechanisms in the Member States concerning violations of rights granted under Union Law, 2013 O.J. (L 201) 60 (EU).


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tainty in the market might inhibit litigation. Actors in this market might become afraid to enforce or challenge software license agreements, if this might open the proverbial Pandora’s box and jeopardize the entire system.

In line with this, it has been suggested that challenging certain software license agreements can be “a dangerous game.”\(^\text{3059}\) Being defensive rather than offensive might be a virtue. An analogy would be the “patent arms race” where patent arsenals neutralize or retaliate against patent threats.\(^\text{3060}\)

Most transferors use similar business models and software license agreements. So even if competitors would have legal standing, it is not certain that competitors are likely to challenge software license agreements. As long as there is legal uncertainty in the market, litigation between competitors might be deterred. However, at some point, it will not be possible to avoid litigation.\(^\text{3061}\)

Interest Associations and Lawmakers

In practice, different interest associations are likely to be very important for challenging software license agreements in courts. This includes associations focusing on this kind of issues, such as the Electronic Frontier Foundation and gpl-violations.org, or associations with broader agendas, such as the American Civil Liberties Union and consumer associations.\(^\text{3062}\) Such associations are also contacting transferors without litigation in courts.\(^\text{3063}\) Initiatives from interest associations are arguably becoming increasingly important.

C2 (Arguing that software is “eating” itself into an increasing number of industries). \(\text{See also supra section 1.2.1.}\)

\(^{3059}\) \text{See Wacha, supra note 2998, at 483 (Describing the consequences if an open source license agreement would be a “pure license” and it would fail. Wacha argues that the relationship would revert back to default copyright law, and the transferee would not be able to distribute and modify the software. “So for a user, challenging the validity of the GPL is a dangerous game.”).}

\(^{3060}\) Colleen V. Chien, \textit{From Arms Race to Marketplace: The Complex Patent Ecosystem and its Implications for the Patent System}, 62 Hastings L.J. 297, 299 (2010) (There is a widespread perception that large corporations create such patent portfolios and practice “defensive patenting” since they “dread going to court.” However, Chien’s empirical study shows that this might not be a entirely successful strategy.).

\(^{3061}\) Compare with the ongoing patent litigation between Apple and Samsung.

\(^{3062}\) \text{See, e.g., Arizona Cartridge v. Lexmark International, Inc., 421 F.3d 981 (9th Cir. 2005); Davidson & Assoc. DBA Blizzard Entertainment Inc. v. Jung and Internet Gateway, 422 F.3d 630 (8th Cir. 2005); LG München I May 19, 2004, GRUR-RR 2004, 350 (Ger.); BGH Feb. 11, 2010, NJW 2010, 2661 ("Steam") (Ger.); LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.).}

Lawmakers, both in Europe and in the United States, especially California, are also becoming increasingly active. They do not challenge software license agreements in court, but they do create new requirements for software license agreements.

Transferor initiatives
If a transferor or an organization wishes to enforce a software license agreement, a court must examine its validity. Transferors might be more likely to enforce software license agreements against business actors, but enforcement against consumers occurs as well. For most transferors, there is likely one point when enforcement becomes necessary. And when transferors attempt to enforce a software license agreement, the court will have to examine software license agreement validity.

Consequences and Functions
Practice raises a number of questions: (1) If software license agreements would not be challenged in court, will transferors have any incentives to improve (cross-national) validity of software license agreements; and (2) if few consumers are likely to read software license agreements, what functions do software license agreements have?

Regarding the first question, transferors will arguably have incentives to improve (cross-national) validity of software license agreements: First, software license agreements are often challenged in courts, and even consumers challenge software license agreements. Second, the line between consumer and professional software is becoming increasingly unclear, and business actors might challenge consumer software license agreements. Since provisions in certain situations might be invalid against both consumers and business actors, such software license agreements could become invalidated. Third, transferors are likely to gain more incentives to improve cross-national validity, since (a) lawmakers in different countries/jurisdictions are becoming increasingly

3064 Brian W. Carver, Share and Share Alike: Understanding and Enforcing Open Source and Free Software Licenses, 20 Berkeley Tech. L.J. 443, 465–468 (2005) (Organizations such as the Free Software Foundation and individual transferors have sometimes tried to enforce software license agreements against transferees; forcing transferees to release their source code.).
3066 See infra section 12.
(b) interest associations are increasingly eying transferors and software license agreements, (c) legal mechanisms might extend effects beyond a single lawsuit, and (d) increased knowledge about applicable law among consumers might increase litigation. Based on this, transferors have incentives to improve cross-national validity, and those incentives are likely to increase.

Regarding the second question: In contrast with technical tools for software control, software license agreements rely upon enforcement by courts when transferees are not abiding by their provisions. However, if transferees do not read software license agreements, they are not likely to abide by their provisions, and transferors are not likely to enforce every failure to abide by the provisions. This raises questions about software license agreements’ functions. More than fifty years ago, Lord Devlin said the following about standard-form agreements: “What the men behind the form-monger really want to achieve is not so much exemption from liability as exemption from litigation.” “The contractual rubbish they concoct (it is not often examined; it is generally left in the bin; it is not meant to stand up to scrutiny so much as to deter litigation) is a social nuisance rather than a moral evil.” This is sometimes also known as an *in terrorem* effect. It is possible that such effects can be supported even though consumers are unlikely to read software license agreements; the mere existence of an agreement may deter litigation. Procedural provisions and liability provisions are only going to be relevant in litigation, and the function of such provisions can be upheld even if transferees do not read software license agreements. Certain negative provisions, on

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3067 This also applies to California, which is likely to have a larger influence than lawmakers in many other jurisdictions.
3068 But challenges to software license agreements from consumer associations are not a new phenomenon. See Maxeiner, *supra* note 3014, at 164–165, fn. 346 (Regarding German consumer association challenges to American standard terms.).
3070 When transferees are abiding, software license agreements can arguably become self-enforcing. See Robert W. Gomulkiewicz, *Enforcement Of Open Source Software Licenses: The MDY Trio's Inconvenient Complications*, 14 *Yale J. L. & Tech.* 106, 108 (2011) (“In the past, if a software ‘hacker’ happened to meet an American lawyer, the first question the hacker would ask the lawyer is this: ‘Are open source software licenses enforceable in the United States? Lawyers usually gave three answers to that question. … And finally, a lawyer might say that because people are abiding by the terms of open source licenses as if they were enforceable, for all intents and purposes the licenses are self-enforcing.’.”).
the other hand, might presuppose that transferees read and abide by those requirements. Certain positive provisions give transferors rights, and those rights can be used even if the transferee has not read the software license agreement. Thus, it is not always necessary for transferees to read software license agreements, in order for software license agreements to have a function. If software license agreements would only mainly be a mean, or façade, to avoid litigation, transferors might have fewer incentives to improve cross-national validity. But if it becomes apparent to transferees and interest groups that software license agreements are only Potemkin villages, their function to deter litigation will be severely diminished. Thus, it might not be possible to avoid cross-national validity even if reading levels are low.

11.2.5 The Importance of Legal System Leverage

Where a software license agreement or provision is likely to be invalid will likely be of practical importance. In the choice of comparandum, one important principle for choosing legal systems was leverage. The idea was that transferors are most likely to change their behavior if their software license agreements will be invalid in a legal system with leverage.

As seen, certain legal systems are dominating the single software market, and the United States dominate among these legal systems. Thus, any form of invalidity under American law, especially under California law, will be a major practical problem for transferors with clear consequences.

Invalidity in any of the top legal systems is likely to be problematic. Germany is one of them, and a number of other European Union Member

3073 Unless there are legal mechanisms to prevent use of invalid provisions. See supra section 10.2.2.
3074 See supra section 1.4.3.
3075 See, e.g., BUSINESS SOFTWARE ALLIANCE, Shadow Market: 2011 BSA Global Software Piracy Study (9th ed., 2012) (Estimated shares of the global legal software market (software transfers) in 2011: (1) U.S. - 40 percent; (2) Japan - 7 percent; (3) Germany - 6 percent; (4) U.K. - 5 percent; (5) France - 5 percent; (6) Canada - 3 percent; (7) China - 3 percent. Data is calculated from estimated piracy losses and piracy rates.); Joel Kotkin & Shashi Parulekar, The State of the Anglosphere, in 22 City J. No. 1, 2012 (The top eight countries in software sales, as of 2009 (numbers are in millions of USD): (1) U.S. 450,000; (2) India, 34,000; (3) Canada 32,000; (4) U.K. 22,000; (5) Germany 21,000; (6) France 18,000; (7) Japan 12,000; and (8) Netherlands 3,000.).

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States are also among these top legal systems. Each country is relatively far behind the United States, but many findings are extendable to all Member States of the European Union, meaning that the collective leverage of the European Union becomes important. This leverage is quite substantial:

<table>
<thead>
<tr>
<th>Year</th>
<th>Worldwide</th>
<th>European Union</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$50,910M</td>
<td>$16,663M</td>
<td>33 percent</td>
</tr>
<tr>
<td>2004</td>
<td>$59,707M</td>
<td>$22,566M</td>
<td>38 percent</td>
</tr>
<tr>
<td>2005</td>
<td>$60,137M</td>
<td>$21,419M</td>
<td>36 percent</td>
</tr>
<tr>
<td>2006</td>
<td>$63,997M</td>
<td>$19,561M</td>
<td>31 percent</td>
</tr>
<tr>
<td>2007</td>
<td>$76,849M</td>
<td>$22,997M</td>
<td>30 percent</td>
</tr>
<tr>
<td>2008</td>
<td>$87,330M</td>
<td>$25,965M</td>
<td>30 percent</td>
</tr>
<tr>
<td>2009</td>
<td>$82,659M</td>
<td>$23,157M</td>
<td>28 percent</td>
</tr>
<tr>
<td>2010</td>
<td>$93,776M</td>
<td>$24,993M</td>
<td>27 percent</td>
</tr>
<tr>
<td>2011</td>
<td>$104,849M</td>
<td>$29,303M</td>
<td>28 percent</td>
</tr>
</tbody>
</table>

This means that the European Union has substantive collective leverage and problems under German law might also be found within the other Member States, meaning that problems under German law might be more substantial than at first sight. Examples of problems with a European-wide scope include: (1) Provisions relating to the notion that software is licensed and not sold, for example, transfer restrictions; (2) forum selection clauses, choice-of-law clauses and applicable law in the absence of agreement; (3) provisions prohibiting all reverse engineering; and (4) hardware restrictions under a competition law analysis.

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3077 See Business Software Alliance, supra note 3075 (2011 global study); Business Software Alliance, supra note 3076 (2007 global study) (Germany, United Kingdom, and France have been among the top five markets in all these years, clearly ahead of countries such as China and India. Data is calculated from estimated piracy losses and piracy rates in 2003, 2007, and 2011.); Korkin & Parulekar, supra note 3075.

3078 See Business Software Alliance, supra note 3075 (2011 global study); Business Software Alliance, supra note 3076 (2007 global study).

3079 For the purpose of copyright exhaustion, see Case C-128/11, UsedSoft GmbH v. Oracle International Corp., Judgment of 3 July 2012, not yet reported. See also BGH Feb. 3, 2011, GRUR 2011, 418 (Ger.).

11 Consequences of Invalidity

Transferors will clearly have more incentives to improve problems that exist within almost a third of the global market (the European Union) than within six percent of the global market.\textsuperscript{3081}

The question of leverage means that invalidity in another legal system might not necessarily be of equal practical importance. The practical consequences of invalidity in states with low legal software transfer rates (often correlated with high piracy rates) might be negligible. For example, the “least important” countries from this perspective in 2011 were (share of the global software market): (1) Zimbabwe - 0.0003 percent; (2) Zambia - 0.0006 percent; and (3) Cameroon - 0.0018 percent.\textsuperscript{3082} Thus, the question of where a software license agreement is likely to be invalid might be of substantial practical importance for transferors.

11.2.6 Summary

Cross-national invalidity might have a number of practical consequences. This may include failure to prevent downstream user proliferation and user substitution, and a number of business consequences such as failure to secure revenue streams, the need to raise prices, and potential market reactions in a number of situations.

From a cross-national perspective, there is an increasing risk that software license agreements will be challenged in courts, or otherwise affected, especially by lawmakers and interest associations. Since United States and Germany (including the European Union as a collective) have substantial leverage, the practical consequences of cross-national invalidity might be noticeable. Thus, cross-national validity is or will likely become a practical problem for transferors.

\textsuperscript{3081} See Business Software Alliance, supra note 3075 (2011 global study) (Based on data from 2011. Data is calculated from estimated piracy losses and piracy rates in 2011.).

\textsuperscript{3082} See Business Software Alliance, supra note 3075 (2011 global study) (Réunion would have been third at 0.0014 percent, but Réunion is part of France and the European Union. Based on data from 2011. Data is calculated from estimated piracy losses and piracy rates in 2011.).
12 Validity Improvements

Within the discourse about law and globalization, the creation of global contractual governance is a common theme.\textsuperscript{3083} This ties into my underlying hypothesis, that differences between jurisdictions can be overcome through cross-nationally applied software license agreements.\textsuperscript{3084} As seen, in their current state, software license agreements commonly fail to do this. This chapter will therefore examine ways to improve cross-national validity of software license agreements, by improving software license agreements, not law, since: (1) Software license agreement validity primarily lies in the interest of software license agreement drafters and transferors; and (2) global harmonization through legislation is very unlikely, while overcoming national differences through cross-nationally applied agreements — standardization based on different national requirements — is much more feasible.\textsuperscript{3085}

This chapter will focus on six aspects: (1) Basic and full cross-national validity; (2) current approaches to national differences; (3) strategies for further improvements; (4) avoiding differences; (5) bridging differences; and (6) choosing solutions to improve cross-national validity.

12.1 Basic and Full Cross-National Validity

The appropriate level of cross-national validity might vary between transferors. This might sound peculiar. In theory, cross-national validity is a binary concept; a software license agreement is either cross-nationally valid or not. But in practice, there are arguably different levels of cross-national validity. We can talk about a basic and full level of cross-national validity. The latter refers to complete cross-national validity of all provisions and practices, the former to cross-national validity of certain key elements.

Different levels of cross-national validity might be appropriate for different transferors. For some transferors, it might be sensible with completely cross-national software license agreements, even if that would require some compromises and more work. Other transferors might be content if there is a

\textsuperscript{3083} See supra section 1.3.1.
\textsuperscript{3084} See supra section 1.3.2 (Regarding my hypothesis.).
\textsuperscript{3085} See supra section 1.2.6 (Regarding why the market should solve the problem and not lawmakers.).
basic level of cross-national validity, so that all fundamental provisions will be cross-nationally enforceable, even if some provisions are only asymmetrically valid. The latter approach would allow transferors to achieve some level of cross-national validity without having to compromise over all asymmetrically valid provisions.

It can be discussed whether complete cross-national validity is the most efficient approach. This would require time, effort, and perhaps compromises. This might increase transaction costs and thus make software license agreements less efficient. Thus, it is not certain that cross-national validity of every provision is even desirable.

Still, a basic level of cross-national validity should be possible for most if not all transferors. A starting point could be the ALI Principles.

Expanding the ALI Principles
The reporters of the ALI Principles “believe several of [their] proposals could constitute core elements of a global software licensing policy.” By being more restrictive than American law as it currently stands, the ALI Principles may in some situations create a “safe harbor” for transferors doing business globally. The reporters highlight: (1) Disclosing provisions prior to any transaction, something that also might create incentives to write fair terms; (2) accepting a non-disclaimable implied warranty for hidden defects that the transferor was aware of at the time of the transfer; (3) prohibiting the use of automated disablement that impairs access to data and other software that is not subject to the software license agreement breach; and (4) a professionally and commercially active transferor indemnifying the transferee against third-party claims existing at the time of the transfer. Both points (1) and (2) are consistent with my findings.

The ALI Principles’ views on other practices may also be more restrictive

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3087 Id. at 57–58.
3088 Id. at 57–58. See also Principles of the Law of Software Contracts § 2.02(c) (2009).
3089 Hillman & O’Rourke, supra note 3086, at 60–62. See also Principles of the Law of Software Contracts § 3.05(b) (2009).
3090 Hillman & O’Rourke, supra note 3086, at 64–69. See also Principles of the Law of Software Contracts § 4.03 (2009).
3091 Hillman & O’Rourke, supra note 3086, at 69–74. See also Principles of the Law of Software Contracts § 3.01 (2009).
than American law as it currently stands, but still not sufficiently restrictive to provide a safe harbor. As an example, the ALI Principles' view on provisions prohibiting reverse engineering is arguably more restrictive than American law as it currently stands, but it does not explicitly declare provisions prohibiting reverse engineering for interoperability purposes void like German law.

This is a good start, but this list must be expanded further to achieve a basic level of cross-national validity.

12.1.1 Achieving a Basic Level of Cross-National Validity

How would a basic level of cross-national validity work in practice? Mainly, a basic level of cross-national validity is a cross-nationally valid formation process. This is the first step for achieving cross-national validity. Certain improvements to cross-national validity might require compromises and lead to inefficiency, but a transferor has little to gain by an asymmetrically valid formation process. Making software license agreement formation cross-nationally valid would be a major step for many transferors, since many transferors are currently likely to fail at this step.

Making the formation process cross-nationally valid requires: (1) Presenting the software license agreement prior to the conclusion of the agreement; (2) giving adequate notice about the standard terms, and an opportunity to read for consumers; (3) writing the software license agreement in the prospective transferee's local language; (4) not including so many provisions so that important provisions become buried in the agreement and fail to become incorporated; (5) using an assent mechanism that is likely to be cross-nationally valid, such as click-wrap/web-wrap license agreements; (6) meeting the special consent requirements for certain provisions, such as personal data collection consent; and (7) reducing the risk of cross-national issues with interpretation.

Also, if possible, the software license agreement should not to include any provisions that, if invalid, would make severability impossible and thus render the entire software license agreement invalid. Sometimes, this might be difficult, since if provisions upholding fundamental principles, such as share-alike clauses, would be invalid, severability could be impossible. But sometimes,
unsconcionability may have permeated the entire contract, making it impossible to cure unconcionability by removing a specific provision.\footnote{3096 Armendariz v. Foundation Health Psychcare Services, Inc., 99 Cal.Rptr.2d 745, 774–777 (Cal. 2000).} The latter is arguably a good reason for avoiding unfair provisions.

These above requirements can be clarified further:

The point when the agreement is concluded might vary between different software transfers. But if the software is transferred against monetary payment, and the transferee pays through a payment form, the agreement will likely be finally concluded when making the final acceptance of the transaction. Thus, the software license agreement must be presented to the transferee before this point.\footnote{3097 Cf. Principles of the Law of Software Contracts § 2.02(c) (2009) (Under these safe harbor rules, the transferee is considered to have adopted the standard-form agreement, if having “reasonable notice and access to the standard terms before payment.”).}

The standard terms must be included in the agreement or incorporated through a clear reference,\footnote{3098 It might be sufficient if the terms are easily available on the Internet. See LG Hamburg Sep. 28, 2007, 324 O 871/06 (“Half-Life 2”) (Ger.).} and a consumer must be given opportunity to review the provisions. When provisions are included in the agreement, the provisions can be presented “inline” or in a separate window, but the latter can be problematic on the Internet if there is a danger that spawning of new windows can be blocked by pop-up blockers.\footnote{3099 Gerald Spindler & Fabian Schuster, Recht der elektronischen Medien Dritter Teil, Buch 2, Abschnitt 3, 1.2 § 312 c, III., 1(e)(bb), recital 53–54 (2nd ed., C.H. Beck: München 2011).}

The requirement of notice might create additional problems when software license agreements are presented on small screens, such as smartphones,\footnote{3100 See Peter Rott, Germany, in Digital Content Services for Consumers: Report 1: Country Reports 85, 94 (University of Amsterdam: Centre for the Study of European Contract Law (CSECL): Institute for Information Law (IViR) 2010).} meaning that transferors might have to adapt software license agreements to such devices.

Drafting software license agreements in the local language is advisable at least against German consumers,\footnote{3101 See Andreas Leupold & Silke Glossner, Münchenener Anwaltshandbuch IT-Recht Teil 1. B. V. 2(v), recital 138 (2nd ed., Beck Juristischer Verlag: München 2011).} but it might also be necessary in other legal systems.\footnote{3102 Cf. Ingeborg Schwenzer et al., Global Sales and Contract Law 154 (Oxford University Press: Oxford 2012) (Regarding language requirements in Mexican and Polish law for agreements performed or concluded in these legal systems.).}
The German consumer association vzbv has sent warning letters to transferors that use long software license agreements. The vzbv highlighted the iTunes software license agreement as an example of an agreement being too long. It was 21 A4-pages long, almost without numbering, and written in 9 pt. size.\footnote{Verbraucherzentrale Bundesverband (vzbv), \textit{Press Release: App-Store-Betreiber bestehen AGB-Check nicht}, August 20, 2012.} It is presently unclear what will be the outcome of this, but transferors might have to take this into account.

Click-wrap is generally the least problematic assent mechanism for software license agreements,\footnote{See supra section 4.2.2.} that is, as long as it is presented before the conclusion of the agreement. It will meet the basic requirements of contract formation in Germany and the United States, and the method allows keeping evidence of assent, if that ever should be questioned.

For certain provisions, certain consent requirements apply under German law. This includes requirements for: (a) Arbitration clauses; and (b) personal data collection. Requirements for arbitration clauses might be difficult to meet in practice, but the German requirements for personal data collection are possible to meet.\footnote{See supra section 9.1.1.}

Interpretation might raise issues,\footnote{See supra section 9.1.3.} but these are primarily associated with badly written agreements, and not fundamental differences between German and American law.\footnote{See supra section 10.3.4.} By using clear definitions, and precise provisions that clearly cover important situations, much uncertainty and unwanted results can be avoided.

If met, these requirements create a basic level of cross-national validity. Many transferors currently fail these requirements, but if they would be able to reach this basic level of cross-national validity, it would be a major improvement for the single software market from a legal perspective.

However, this basic level only creates a cross-nationally valid shell. It does not necessarily make substantive and procedural provisions in software license agreements cross-nationally valid. Invalidity of such provisions could cause problems and liability for transferors. Thus, it is likely that transferors want to extend cross-national validity further. However, each transferor must decide how far it is willing to go to make software license agreements cross-nationally valid. Making substantive and procedural provisions cross-national valid has advantages, but the question is whether those advantages outweigh its
potential shortcomings. Making substantive and procedural provisions cross-
national valid could increase transaction costs, or require compromises that
some transferors might currently have difficulties to accept due to the current
geographical distribution of the single software market. Still, it is likely that
many transferors would like to take cross-national validity further, especially
in the longer perspective.

The remainder of this chapter will focus on what transferors are currently
doing and solutions to further improvements.

12.2 Current Approaches to National Differences

So, what are transferors currently doing? Many transferors, at least larger
undertakings, are aware of national differences when software is distributed
cross-nationally. Different transferors and software license agreements have
different approaches to national legal differences. The following approaches
can be discerned: (1) Provides one set of provisions, does not acknowledge
that other rules may apply in the transferee’s jurisdiction;\(^{3108}\) (2) provides
one set of provisions, acknowledges that the transferee may have additional
legal rights depending on the transferee’s local jurisdiction;\(^ {3109}\) (3) includes
additional set(s) of provisions for transferees in specific jurisdictions and
regions;\(^ {3110}\) or (4) provides separate software license agreements for transferees
in different legal systems.\(^ {3111}\)

The first approach does not acknowledge national differences in law, while
the three latter approaches do, but handles this in different ways. The second
approach notifies the transferee that other rights may apply but does not
specify which rights. The third approach on the other hand specifies which
rights that do apply for transferees that are citizens of certain jurisdictions.

\(^ {3109}\) See Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 25 (2009)
(“This agreement describes certain legal rights. You may have other rights under the laws of
your state or country.”).
\(^ {3110}\) See Adobe, Software License Agreement: Adobe Photoshop CS6, Section 16 (2012) (Specific
provisions and exceptions for consumers in New Zealand, European Economic Area
or European Union, and Australia.); Facebook, Statement of Rights and Responsibilities, Sec-
tion 17.3 (last updated Nov. 15, 2013) (“Certain specific terms that apply only for German
users are available here.”); Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro,
Section 2(a) (2013) (“If you live in the United States, this Section 2 [binding arbitration and
class action waiver] applies to any dispute.”).
\(^ {3111}\) See Peter J. Quinn, A Click Too Far: The Difficulty in Using Adhesive American Law License
Blizzard’s different Terms of Use for World of Warcraft users in Europe and America.).
Adobe might have taken the last approach furthest, and applies it to several provisions in their software license agreements where validity varies between legal systems; for example, provisions prohibiting reverse engineering and warranty disclaimers.

These different approaches have both advantages and disadvantages from a legal perspective. The first (1) solution is the baseline against the other solutions can be measured. This solution is the least complex, but does not acknowledge or solve asymmetrical validity. This solution does not require full comparative inquiries, unlike when trying to adapt to the strictest legal requirements among several legal systems. Thus, this solution requires little energy, but is not a solution for improving cross-national validity.

The second (2) solution does not necessarily add complexity, but it does not solve asymmetrical validity either, even though it acknowledges the possibility of such problems; it arguably gives transferees notice of the possibility of asymmetrical validity, but a transferee cannot arguably learn what rights and obligations will actually apply by reading the provision. The latter relates to an issue that was introduced when discussing severability clauses. For example, assume that a provision states that liability is excluded to the extent permitted by law. Under German law, this provision would fail to meet the requirements of BGB § 305(2), and would thus not be incorporated, since it would violate the principle of transparency. A transferor cannot expect a transferee to find relevant legal provisions, or to assess legal provisions if they are found. A transferor cannot expect that carelessly worded provisions are going to be clarified by courts. Arguably, the phrase “[y]ou may have other rights under the laws of your state or country” leads to similar problems. Thus, it is far from certain that this solution will be significantly better than the first solution.

The third (3) and fourth (4) solutions are the most ambitious solutions. They might solve problems with asymmetrical validity, but require some work. The third solution also has the disadvantage of adding complexity, by adding

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3112 See supra section 8.1.1.
3113 See supra section 8.4.1.
3114 See supra section 4.4.3.
3116 See Id. at Buch 2. Abschnitt 2. § 305. VI. 3(f), recital 73–75; Buch 2. Abschnitt 2. § 306. III. 6, recital 30.
3117 See Microsoft, Microsoft Software License Terms: Windows 7 Ultimate, Section 25 (2009).
exceptions for certain jurisdictions, which might lead to burial of provisions in the software license agreement. This might risk failure to give sufficient notice of the provisions. Still, this approach should not be written off.

Different scholars have commented on the fourth solution. Blizzard Entertainment uses this solution for the computer game World of Warcraft. Quinn argues that Blizzard’s “regional segregation” of Terms of Use is not enforceable or effective, since anyone can use either software license agreement. Quinn further argues that this segregation is primarily significant as an indication of Blizzard’s problems with enforcing its American provisions in other jurisdictions. Winn & Webber do not share this view, and argues that “reluctance to localize contract terms and business process may prove to be a costly error after European operations have been set up. The experience of AOL in France shows the magnitude of changes that may be required to localize a U.S. business model and bring into compliance with EU consumer protection law.” Winn & Webber are thus proponents of regional segregation, but does not elaborate on the question whether this makes such software license agreements effective and enforceable in those jurisdictions. But if such software license agreements would be effective and enforceable, it would require a lot of work for transferors, as noted by the writers. The cost of localizing contracts must be balanced against the advantages and incentives of being compliant with the laws of other legal systems. Whether transferors are likely to localize contracts is probably dependent on the incentives that legal systems give for doing this; that is to say, is the risk of failing to comply substantial, and is the cost of failure substantial? If the cost of failure is low, it will probably not give transferors incentives to localize software license agreements.

When discussing improvements to cross-national validity below, we will return to these approaches.

3118 See supra section 4.4.2 (Regarding software license agreement length and validity.).
3119 See Quinn, supra note 3111, at 771 (The European software license agreement lacks provisions that are likely to be invalid under the laws of European Union Member States, for example, arbitration clauses and provisions prohibiting class actions. Liability disclaimers are less limiting that for American transferees. The language is simpler. And the software license agreement can only be terminated after a significant breach of the software license agreement.).
3120 Quinn, supra note 3111, at 771–772.
12.2.1 Current Acceptable Practices

While many transferors clearly fail at achieving cross-national validity, some do better than others. Currently acceptable practices among transferors should be recognized.

Regarding software license agreement formation, there are four major elements that certain transferors do better than others: (1) Use of click-wrap or web-wrap as assent mechanism; (2) disclose the agreement before the final confirmation; (3) translate software license agreements; (4) use short software license agreements to avoid burying provisions. Major transferors commonly meet the first and third requirements. The second and fourth requirement might cause problems for some transferors, but certain transferors manage to meet these requirements. This should create a basic cross-nationally valid software license agreement. However, it is still possible that severing of invalid provisions would be impossible, thus rendering the entire software license agreement invalid.

When it comes to individual provisions, the result is arguably generally worse than for contract formation. Many transferors manage to meet the requirements for contract formation, but many transferors include one or several provisions that are likely to be cross-nationally invalid. However, some draft their provisions better than others: (1) Some avoid provisions that are likely to be cross-nationally invalid; and (2) some include provisions that would be asymmetrically valid, but use (a) severability clauses or (b) additional provisions for German/European transferees.\(^{3122}\) The latter (b) is often advisable, since the former (a) may fail to meet the German requirement of transparency,\(^{3123}\) even though the latter might risk burying important provisions, and affect their incorporation. Still, the first (1) solution is advisable when possible.

As we will see, transferors can do more to improve cross-national validity.

12.3 Strategies For Further Improvements

When making further improvements, a transferor might attempt to: (1) Avoid differences; or (2) bridge differences. The first strategy refers to exploiting asymmetrical validity, by attempting to choose the law of a jurisdiction that

\(^{3122}\) See supra section 12.2 (Or additional provisions for American transferees.).

\(^{3123}\) For example, if a provision states that liability is excluded to the extent permitted by law. See Säcker & Rixecker, supra note 3115, at Buch 2. Abschnitt 2. § 305. VI. 3(f), recital 75; Buch 2. Abschnitt 2. § 306. III. 6, recital 30.
is likely to enforce the software license agreement. Since the first strategy requires least from transferors, this strategy will be examined first.

The latter strategy includes a number of modifications to software license agreements that reduces the risk of asymmetrical validity. Generally, the latter strategy requires transferors to: (1) Map the strictest requirements among the studied legal systems; (2) reflect on which current provisions are necessary; and (3) make necessary changes in software license agreements to make them cross-nationally valid. There are at least three different approaches to bridging differences: (a) One-size fits-all – one software license agreement, no additional provisions for transferees in certain jurisdictions; (b) one software license agreement with additional provisions for transferees in certain jurisdictions; or (c) several software license agreements that are being glocalized, that is, adapted to different markets.

Since there are many different issues that must be resolved, it is conceivable that one strategy will not be sufficient, and multiple strategies may have to be considered.

But before transferors attempt to avoid or bridge differences, they should: (1) Become more aware of the importance of software license agreement validity and problems caused by including non-essential provisions; (2) tie provisions in software license agreements to the chosen business model, and avoid provisions that are not necessary for the chosen business model; and (3) consider modifications to technical and business solutions.

### 12.3.1 Increasing Awareness

This thesis attempts to make software license agreement drafters more aware of national legal differences, and function as a framework for future improvements.\(^{3124}\) Currently, transferors have not succeeded in bridging cross-national differences, but bridging differences can still be a workable solution, since: (1) It is not certain that transferors have aimed to bridge national differences so far, or been aware of those national differences; and (2) with very few exceptions,\(^{3125}\) there have not been any “best practices” for transferors doing business on a global scale. Hopefully, the mapping done in this thesis can contribute to future improvements.

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3124 See supra section 1.2.1.
3125 See supra section 12.1 (Regarding the ALI Principles as a safe harbor).
To become better at this, transferors must arguably do two things: (1) Improve their understanding of the economic importance of software license agreement validity, that is, better risk analysis; and (2) avoid including non-essential provisions by habit.

Currently, many transferors fail to do a proper risk analysis on software license agreements, and do not give them sufficient attention. Another problem is that due to time constraints, many transferors simply copy other software license agreements. If we accept the notion that software license agreements are, at least partly, used to uphold a chosen business model, the provisions should correspond to that business model. However, if transferors simply copy from other software license agreements, it is possible that provisions irrelevant to the chosen business model will follow along. There is a potential price for doing that, since more provisions in a software license agreement could increase the risk of burying provisions, which might affect incorporation of truly important provisions. It is likely that transferors currently have a limited idea why their software license agreement contains certain provisions. Thus, transferors need to thoroughly examine all provi-
sions in their software license agreements, as well as their business models and technical requirements. Based on that, transferors can focus on what is truly important.

12.3.2 Software License Agreements and Business Context II

Taking business models and technical requirements into account have three functions: (1) Forcing transferors to consider what is important; (2) forcing me to give reasonable advice that takes business models and technical requirements into account; and (3) most importantly, it will arguably be necessary for creating cross-nationally valid software license agreements.

In chapter 2, the relationship between software, technical choices, business models and software license agreements was introduced. An important function of a software license agreement is to legally uphold a chosen business model, that is, legally secure the revenue streams that the software generates. A software license agreement must therefore correlate to an underlying business model and different technical requirements. If there is no or weak correlation between software license agreement and business model, due to copying of pre-existing software license agreements, unnecessary but problematic provisions might be included without reflection. More provisions than necessary could adversely affect the validity of important provisions. Focusing on core provisions and trying to make them cross-nationally valid is likely to be a better approach. A stronger tie between software license agreements and business models is therefore one way to improve cross-national validity.

Taking business models into account is also important from my perspective. The simplest advice would be to remove all provisions that are asymmetrically valid or completely cross-nationally invalid. But the unreasonable-ness and impracticability of such advice is clear. If certain provisions are very important from a business or technical perspective, the advice to remove them would simply not be reasonable and would probably not be taken seriously by transferors. Thus, taking business models into account will hopefully increase the reasonableness of my advice. Naturally, it is difficult to give advice based

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3131 Cf. Id. 703–705 (The suggested process for creating user-friendly software license agreements).

3132 See Liberman, supra note 3128, at *2.

3133 See Gomulkiewicz, supra note 3126, at 692–694.
on business models, since transferors might modify common business models to their own needs. Still, it might be possible to draft a relationship between business models and software license agreements. This is perhaps the most important contribution of this chapter, to stress the importance of tying software license agreements to underlying business models.

It should be noted that not all problems regarding cross-national validity are associated with business models, and may be resolved without affecting business models. For example: (1) Modify software license agreement formation to achieve a basic level of cross-national validity; 3134 and (2) seek consent for personal data collection. Transferors are required to disclose personal data collection under California law, but required to seek consent under German law. Making the leap from disclosure to consent will not necessarily affect business models. 3135

In chapter two, a categorization of software business models based on five elements was introduced: 3136 (alpha) Product strategy; (beta) revenue sources; (gamma) distribution strategy; (delta) transfer time; (epsilon) transferor valuables. Each element gives the transferor a number of choices:

<table>
<thead>
<tr>
<th>α Product strategy</th>
<th>β Revenue sources</th>
<th>γ Distribution strategy</th>
<th>δ Transfer time</th>
<th>ε Transferor valuables</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Services</td>
<td>2. Recurring fees</td>
<td>(a) Local software</td>
<td>2. Limited in time</td>
<td>2. Transferees and their personal data</td>
</tr>
<tr>
<td>3. Hybrids</td>
<td>3. Personal data collection</td>
<td>(b) Cloud software</td>
<td></td>
<td>3. A community</td>
</tr>
<tr>
<td></td>
<td>4. Advertising</td>
<td>2. OEM model</td>
<td></td>
<td>4. The transferor’s reputation</td>
</tr>
<tr>
<td></td>
<td>5. Time</td>
<td>3. Intermediaries/App Stores</td>
<td></td>
<td>5. The software platform</td>
</tr>
</tbody>
</table>

Five clear business models were introduced, as well as some permutations based on the above five elements. These business models will be briefly repeated and used below.

3134 See supra section 4.2.6.
3135 Unless a substantial proportion of transferees would not give consent, but then the business model has to be questioned.
3136 See supra section 2.2.
The Microsoft Model
The first business model focuses on software as products (alfa), acquire monetary payment in the form of a lump sum (beta), distribute software directly as local software (gamma), perpetually (delta), and primarily value the software in itself (epsilon). This model can be varied by offering the software as services or hybrids (alfa), acquire monetary payment in the form of recurring fees (beta), distribute it through an intermediary or an OEM (gamma), or transfer the software for a limited time (delta).

This is the traditional standard software business model. In this model, the software license agreement often attempts to: (1) Prohibit reverse engineering (and sometimes also debugging); (2) limit the possibilities for transferees to further transfer the software (including OEMs) and limit software use to certain transferees; and (3) include procedural and liability provisions.

The Apple Model
The second business model focuses on software as products (alfa), acquire monetary payment in the form of a lump sum (beta) from the hardware that the software runs on, not necessarily from the software itself, distribute software directly as local software (gamma), perpetually (delta), and primarily value the software platform (epsilon).

In this business model, the software license agreement often attempts to: (1) Prohibit reverse engineering (and the software is only distributed in binary form); (2) limit the possibilities for transferees to further transfer the software and limit software use to certain transferees; (3) limit software use to designated hardware; and (4) include procedural and liability provisions.

The Facebook Model
A third clear business model focuses on software as services (alfa), acquire non-monetary payment in the form of personal data collection or through advertising (beta), distribute the software directly as a cloud service (gamma), perpetually or for a limited time (delta), and the valuable property may be transferees and their personal data (epsilon).

In this business model, the software license agreement often attempts to: (1) Acquire the right to personal data; (2) sometimes prohibit transfer of user accounts; and (3) include procedural and liability provisions.
The Zynga Model
A fourth clear business model focuses on software as products, services, or hybrids (alpha), may acquire revenues from different sources (beta), distribute software as local software or as cloud software (gamma), perpetually (as long as the service is provided) or for a limited time (delta), and primarily value its community (epsilon).

In this business model, the software license agreement often attempts to: (1) Acquire the right to personal data; (2) prohibit the transfer of user accounts and in-app purchases; and (3) include procedural and liability provisions.

The Red Hat Model
A fifth clear business model focuses on software as products or services (alpha), often acquire revenues from donated time or recurring fees, sometimes from adjacent services (beta), distribute software directly as local software or as cloud software (gamma), perpetually or for a limited time (delta), and primarily value its community and reputation (epsilon).

In this model, the software is often distributed both in binary form and as source code. The software license agreement may attempt to: (1) Require grant-backs of improvements; (2) require derivative works to be transferred under the same conditions as the original work; (3) limit the use of trademarks to avoid freeriding on the transferor’s good reputation; and (4) include liability provisions.

Hybrid Business Models
In practice, it might be common to: (1) Combine different business models; (2) use different business models for different transferees; or (3) create separate software products and services and use different business models for each product or service. This might require transferors to combine the requirements from the above typical examples.

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3137 This may include lump sum payments, often from in-app purchases, recurring service fees, advertising, partnerships, or personal data collection.
3139 See Apache Software Foundation, *Apache License: Version 2.0*, Section 6 (2004) (“This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.”).
12 Validity Improvements

Consumers and Business Actors

Transferors may use different business models against consumers and business actors. Using price-discrimination, they can target different groups with different preferences and this can be enforced with software license agreements. As argued above, the line between consumer and business software is becoming increasingly unclear. And in practice, it is difficult to know whether a transferee is a consumer or a business actor. This might create both legal issues, invalidity, and business issues, failure to use price-discrimination.

When this becomes a problem for transferors, one solution is to merge different business models into one. If using separate business models, transferors can: (1) Include provisions that only allow use for household purposes, so that business actors must choose different software; or (2) try to identify necessary information about the transferee, without violating data privacy regulation, and try to present the transferee with the right offer and software license agreement.

12.3.3 Modifying Technical and Business Solutions

If we accept that certain provisions and practices are essential to a chosen business model and technical solution, and this causes cross-national invalidity, transferors can consider modify their technical and business solutions. This might allow transferors to discard problematic provisions and practices, or make it easier to overcome national differences. Thus, such modifications might lead to cross-national validity improvements.

Modifications to business models can be complete or partial. Giving the advice of complete changes is problematic since it: (1) Will require intimate business knowledge; and (2) such changes can be problematic from a business perspective.


See supra section 10.3.5.


Id. at 118.

However, suggesting partial modifications is less problematic and can resolve some legal issues and still achieve the same or similar legal result. Such potential modifications to technical and business solutions may include: (1) Transfer the software for a limited time against recurring fees;\footnote{See supra section 3.1.1 (Regarding the classification of sold and leased software under German law.).} (2) tie software to non-perpetual, recurrently remunerated user accounts;\footnote{See BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).} (3) rely more on technical tools, such as product keys;\footnote{See Case C-128/11, UsedSoft GmbH v. Oracle International Corp., judgment of 3 July 2012, not yet reported, para. 79.} or (4) move to a cloud model.\footnote{Cf. Michael Martinek, Franz-Jörg Semler, Stefan Habermeier & Eckhard Flohr, Handbuch des Vertriebsrecht 12. § 47. II. 4(c). recital 33 (3rd ed., C.H. Beck: München 2010) (If software is considered to be leased, this might affect the legal evaluation of warranty disclaimers under German law.).}

Such options could make provisions that prohibit reverse engineering unnecessary (option 4), can technically prevent downstream user proliferation (option 3 and 4), make it easier to legally prevent downstream user proliferation (option 1 and 2),\footnote{Cf. Wang, supra note 3140, at 8–14 (Regarding why transferors wish to categorize software transfers as licenses.).} and might modify the legal evaluation of liability provisions (option 1).\footnote{Cf. Wang, supra note 3140, at 8–14 (Regarding why transferors wish to categorize software transfers as licenses.).}

Each transferor must decide whether any of these potential modifications, or any other modifiable business or technical solution, would be reasonable and if such modifications could provide an adequate replacement to corresponding provisions in software license agreements. Doing so will likely improve the chance of achieving cross-national validity. However, the transferor must also balance the above options against the potential risk of market reactions among actual or prospective transferees. For example, if non-perpetual transfers against recurring fees (option 1) or product keys (option 3) would make actual or prospective transferees consider other software options such modifications might not be adequate.

After considering modifications to technical and business solutions, transferors can attempt to avoid or bridge national differences.
12.4 Avoiding Differences Between Legal Systems

One solution is to avoid differences between jurisdictions, by: (1) Using private international law;\(^{3152}\) or (2) creating a neutral ground for transferors to use.

The first solution might seem viable, since many problems regarding cross-national validity of software license agreements can be described asymmetrical validity,\(^{3153}\) that is to say: A software license agreement or provision may be valid in one jurisdiction but invalid and unenforceable in other jurisdictions. Thus, one solution could be to choose applicable law or control the outcome under default private international law rules, to increase the chance of software license agreement validity and enforcement.

12.4.1 Choosing Law to Improve Validity

It is suggested that parties in a globalized world can shop for law.\(^{3154}\) One potential way to avoid asymmetrical validity and to improve cross-national validity of software license agreements would thus be to increase the use of procedural clauses.\(^{3155}\) Some transferors, such as Apple, attempts this strategy,\(^{3156}\) while other transferors, such as Microsoft, clearly avoids this strategy.\(^{3157}\)

Increased use of such clauses would make software license agreements more similar to other commercial contracts, where “agreeing in advance on a forum

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\(^{3153}\) See supra section 9.2 (Regarding different levels of validity.).

\(^{3154}\) See O’Hara & Ribstein, supra note 3152, at 5 (“Once a state or nation produces a law, people and firms connected with the polity must obey the law or suffer consequences. But people and firms increasingly have another choice, that is, to move beyond laws’ reach. These moves are becoming easier with faster communication and transportation and freer trade. Parties, in effect, can shop for law, just as they do for other goods. Nations and states must take this ‘law market’ into account when they create new laws.”).

\(^{3155}\) Certain software license agreements already includes such clauses, see e.g. Kaustuv M. Das, Forum-Selection Clauses in Consumer Clickwrap and Browswrap Agreements and the ‘Reasonably Communicated’ Test, 77 Wash. L. Rev. 481, 482 (2002). However, other software license agreements do not use such clauses, and are very uncommon within certain categories of software license agreements. For example, among open source software license agreements, only software license agreements of minor importance include such forum- and choice-of-law clauses. See, e.g., IBM, IBM Public License: Version 1.0, Section 7 (1999).

\(^{3156}\) Apple, Software License Agreement for OS X Mavericks [10.9], Section 12 (2013) (“This License will be governed by and construed in accordance with the laws of the State of California, excluding its conflict of law principles.”).

\(^{3157}\) Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro, Section 3 (2013) (“The laws of the state or country where you live govern all claims and disputes concerning the software (including its price) or this agreement.”).
acceptable to both parties is an indispensable element.”3158 As has been said before, software license agreements are, generally speaking, more likely to be valid and enforceable under American law, especially in certain American jurisdictions, than under German law. One way to improve validity in the single software market would thus be to make American law applicable to all software transfers. Deciding applicable law and forum is common in commercial situations, but it can be controversial when consumers are involved, and are thus not always legally possible.3159 The validity and effectiveness of such provisions has been examined above, but can be shortly reviewed.

For this strategy to be successful, such clauses must be valid against foreign transferees (for example, German consumers). Neither arbitration nor forum selection clauses directly affect the validity of software license agreements. But arbitration clauses may inhibit litigation, and forum selection clauses may indirectly affect applicable law since the forum’s law (lex fori) will apply in procedural matters, including its choice-of-law rules, and certain courts seem to routinely apply its own substantive law.3160 However, software license agreements are unlikely to meet the German requirements for incorporating arbitration clauses against consumers.3161 And forum selection clauses are prima facie invalid against German and European consumers. Exclusive, pre-dispute forum selection clauses cannot deprive a consumer of the right to litigate in its own jurisdiction.3162 Thus, arbitration and forum selection clauses cannot be considered a primary strategy to avoid asymmetrical validity.

Choice-of-law clauses are directly associated with applicable law and might affect the outcome of an asymmetrically valid software license agreement in a specific situation. However, the situation is mostly the same as for forum selection clauses. Choice-of-law clauses are prima facie invalid against German and European consumers. A consumer should not lose its protection by agreeing to choice-of-law clauses. However, this protection is only meant to avoid depriving consumers from protection that would have applied in the absence of contract.3163

3159 See supra section 8.3.4.
3160 See supra section 3.4 (Regarding lex fori in procedural matters and the tendency among American courts to apply lex fori to substantial law as well.).
3161 See supra section 8.3.1.
3162 See supra section 8.3.2.
3163 See supra section 8.3.4.
Thus we have to remember what law would have applied in the absence of a contract.\textsuperscript{3164} If a transferor sues a German consumer in a German court, the court will apply German choice-of-law rules. If the transferor pursues or directs commercial or professional activities to that country, the possibilities for a transferor to contract away German law is clearly limited.\textsuperscript{3165} But not all transferors pursue or direct activities to Germany, or other Member States of the European Union.

In \textit{Alpenhof},\textsuperscript{3166} the CJEU examined applicable forum, which also makes the question of pursuing or directing commercial or professional activities relevant.\textsuperscript{3167} The CJEU said that an accessible website is not sufficient to direct commercial or professional activities, unlike traditional forms of advertising, under the Brussels I Regulation.\textsuperscript{3168} Other evidence must be presented, such as: (1) If the transferor mentions that it offers goods or services in that Member State; (2) if the transferor pays an operator of a search engine to improve their visibility in that Member State; (3) if the activity has an international nature (for example, tourism or voyages by freighter); (4) if the transferor presents telephone numbers with their land codes; (5) uses a top-level domain other than the top-level domain of the country where the transferor is established (for example, ".de" instead of ".au," if the transferor is established in Austria, or neutral domains such as ".com" or ".eu"); (6) presents itineraries to the location of a service from one or several Member States; (7) mentions or presents clients that are domiciled in other Member States; and (8) if the

\textsuperscript{3164} See supra section 3.4.2.
\textsuperscript{3165} See Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Article 6(1). See also supra section 8.3.4.
\textsuperscript{3167} Council Regulation 44/2001 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, 2001 O.J. (L 12) 1 (EC), Article 15(c).
\textsuperscript{3168} Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH & Co. KG / Hotel Alpenhof GesmbH v. Oliver Heller, 2010 E.C.R. I-12527, paras. 66–67, 69. See also Regulation 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations ("Rome I"), 2008 O.J. (L 177) 6 (EC), Preamble 24 ("[A] joint declaration by the Council and the Commission on Article 15 of Regulation (EC) No 44/2001 states that’’ … “the mere fact that an Internet site is accessible is not sufficient for Article 15 to be applicable, although a factor will be that this Internet site solicits the conclusion of distance contracts and that a contract has actually been concluded at a distance, by whatever means. In this respect, the language or currency which a website uses does not constitute a relevant factor.”").
site allows the customer to use another language or currency than used in the
transferor’s country.3169

Since the Rome I Regulation should be interpreted consistently with the
Brussels I Regulation,3170 the Alpenhof analysis of “directing activities” should
also be applicable to the Rome I Regulation, which has universal applica-
tion.3171

Thus, we must examine the overall impression. If some of these elements
suggest that a transferor is directing activities to Germany, the consumer pro-
tection can become applicable. For example, if the transferor also uses the top-
level domain “.de,” presents its website in German, with Euro as an alternative
currency, presents telephone numbers with area codes, or pays search engine
companies for better ranking in that country. Certain transferors might also
have subsidiaries in Germany or in other ways clearly conducts commercial
activities in Germany. If German law would have applied in the absence of a
choice-of-law clause, German law and German consumer law is likely to still
apply even if a choice-of-law clause is used.

Thus, whether this strategy is successful depends on how a transferor does
business in other legal systems. If the transferor has a subsidy in a Euro-
pean Union Member State, or otherwise directs activities to the transforee’s
Member State, this is not a viable option. This solution might work in some
situations, but it is not a general solution against asymmetrical validity.3172

To summarize, none of these strategies are likely to completely solve prob-
lems with asymmetrical validity for transferors. The fact that Microsoft clearly
avoids this strategy by clarifying that the transferee’s law applies suggests that
transferors do not always view this as a viable strategy either. It is also possible
that this strategy could create negative market reactions if deemed unfair by
consumers.3173

3169 Joined Cases C-585/08 & C-144/09, Peter Pammer v. Reederei Karl Schlüter GmbH &
3170 Regulation 593/2008 of the European Parliament and of the Council on the law appli-
cable to contractual obligations (“Rome I”), 2008 O.J. (L 177) 6 (EC), Preamble 7, 24.
3171 Id. at Article 2.
3172 The limited effectiveness of choice of law clauses against consumers extends to other
countries as well. In many countries, law and forum selection clauses must favor the con-
sumer in order to be effective. See Norman Solovay & Cynthia K. Reed, The Internet
AND DISPUTE RESOLUTION: UNTANGLING THE WEB § 5.05[2], 5–51 (Law Journal Press: New
York 2003).
3173 See supra section 11.2.2 (Regarding market reactions.).
12 Validity Improvements

12.4.2 Control Default Outcomes

Another solution is to rely on default rules of private international law, and try to control the result so that American law becomes applicable.

Against consumer transferees, this means to avoid pursuing or directing commercial activities against Germany, under the Alpenhof analysis. However, even if a transferor does not direct commercial activities to Germany, German law might still become applicable in certain situations. For example: (1) Tortious use of disapproved provisions; (2) German data privacy regulation might have a different geographical scope than applicable law to the software license agreement; and (3) there is always a possibility that an Italian court will disregard the Alpenhof analysis and apply German law anyway. Thus, this solution is not likely to be completely successful on its own.

12.4.3 Creating a Neutral Ground?

An alternative solution would be to create a neutral ground. During the last 30–40 years, there have been several ongoing projects to harmonize private law (civil law) in order to promote trade. For example, the UNIDROIT Principles provide a neutral ground so that the parties do not have to choose the law of either party, or a third country; this neutral ground could encourage international trade.

In theory, this kind of opt-in neutral ground sounds like a viable approach. But the main issue with an opt-in neutral ground is that many software license agreements are aimed at consumers. An opt-in neutral ground would not be able to override mandatory law aimed at consumers. It would be possible to restate the highest common denominator of relevant legal systems into an

3174 See supra section 3.4.2.
3175 See supra section 10.1.1.
3176 BGH May 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.) (The law of the country where the damage occurs will be applied. This is the place where the contractual provisions, which the legal order disapproves of, have been or are likely to be used, affect the legally protected collective interest of consumers.).
3177 Florian Jotzo, Gilt deutsches Datenschutzrecht auch für Google, Facebook & Co. bei grenzüberschreitendem Datenverkehr?, 2009 MMR 232, 236 (2009) (Arguing that German data privacy regulation is likely to be applicable if a transferor relies on users located in Germany by having some influence over personal data collection. This is likely if the software sends back data to the transferor.).
opt-in neutral ground, so that it would not conflict with mandatory consumer rights law in different legal systems. Still, it is not certain that choice-of-law clauses would be sufficient to make that opt-in neutral ground applicable, if, for example, such provisions fail to become incorporated.

Another type of opt-in solution would be a more international version of the ALI Principles. That is, a neutral solution that courts in different countries can apply to software license agreements. This solution must restate the strictest requirements among relevant legal systems into one set of principles. But the problem with this solution is that there is no certainty that courts will apply it. And while it in some regards might be better to adopt flexible rules to this kind of diverse subject like the ALI Principles do, \textsuperscript{3179} flexible rules might be applied differently in different courts around the world, reducing the uniformity of the regulation.

Another solution would be to create an opt-out neutral ground. Something like CISG, but made for software transfers and applicable to consumer transferees, which could be known as Contracts for Software Transfers (CST).

Contracts for Software Transfers (CST)
This solution would be a model law that provides default solutions for software license agreements. Thus, it would have to be accepted as applicable law by each legal system or state. It would include two parts: (1) A limited set of rules that all relevant competent lawmakers could agree on; and (2) requirements for making deviations from these default rules. These rules could either include a mandatory core, for example a mandatory right to make one backup copy, or be possible to completely modify by contract.

This model law could eliminate the need to use assent mechanisms for some transferors, if these default rules would strike a balance between transferees and transferors, so that the default rules would be acceptable to some or most transferors. For transferors wishing to deviate from the default rules, it would clearly reduce the amount of necessary provisions, and thus reduce legal problems.

Requirements for making deviations should be so stringent that each transferor wishing to make deviations should have to make references to the

\textsuperscript{3179} See Hillman & O’Rourke, supra note 3086, at 74 (“Ultimately, our common law tradition perhaps led us to be more receptive than lawyers from civil law countries to adopt flexible standards rather than bright-line rules for areas as diverse as consumer protection and the enforcement of terms that alter intellectual property rights.”).
default rule, state the default rule, and clearly state the provision that will apply instead.

It is unlikely that the United Nations would put forward a convention concerning this, like CISG, but an organization like the ALI could seek input from scholars, practitioners, and industry representatives to create a global model law for this purpose. The failed UCITA project might suggest that best practices such as the ALI Principles could be an easier path forward. But in order to create certainty and unity, a model law is preferable. Unlike the UCITA, it should be: (1) As uncontroversial as possible to avoid the failure of the UCITA; and (2) aim to fit with different legal traditions by seeking input from different legal systems, like Creative Commons did with their license agreements.

This solution would have a number of advantages over the single software market’s current legal state: (1) It would increase certainty for both transferors and transferees, nationally and especially cross-nationally; (2) it would reduce transaction costs for transferors; and (3) it would likely help the single software market grow further.

It would clearly be best if all important legal systems would agree on something like this. If this would not be possible, a solution that would be accepted by the European Union and the individual states of the United States would help a majority of the current single software market. And if this would not be possible, a good start would be if the European Union created something along these lines. This would improve the standing of transferees within the Union, it would improve the legal framework for the European software market, and it could facilitate software development and trade within the European Union.

If neither solution is possible, another solution could be to bridge national differences.

3180 See supra section 3.1.2 (Regarding the UCITA and the ALI Principles.).
3181 Creative Commons, Press Release: Creative Commons Launches Version 4.0 of its License Suite, November 26, 2013 (“Since 2007, CC has been working with legal experts around the world to adapt the 3.0 licenses to local laws in over 35 jurisdictions. In the process, CC and its affiliates learned a lot about how the licenses function internationally. As a result, the 4.0 licenses are designed to function in every jurisdiction around the world, with no need for localized adaptations.”).
12.5 Bridging National Differences

To bridge national differences, transferors should first consider making compromises when possible, and then choose a strategy to bridge differences. Such strategies may include: (1) A single software license agreement without additional provisions for transferees in certain jurisdictions; (2) a single software license agreement with additional provisions for transferees in certain jurisdictions; or (3) several software license agreements that are being glocalized.

12.5.1 Making Compromises

For certain provisions, making compromises might be one way to bridge differences between jurisdictions if compromises are acceptable. Liability provisions and provisions prohibiting reverse engineering might be two examples when compromises could be possible.

Granted, it can be reasonable to distribute risk between transferor and transferee if, for example, the software price is low. As seen, transferors are more likely to be liable for software defects under German law than under American law. On the other hand, warranty disclaimers are more likely to be valid under American law than under German law. One solution is to remove them, since they could be unnecessary under American or ineffective under German law. A small step further would be to follow the advice of the ALI Principles and accept a non-disclaimable implied warranty for hidden defects that the transferor was aware of at the time of the transfer.\textsuperscript{3182} If this is not deemed possible or sufficient, it might be possible to include some limitation on warranties or liability. “As-is” warranty disclaimers are not valid against German consumers or business actors. More selective warranty disclaimers can also be invalid under German law, but such provisions are more likely to be valid. Thus, avoiding “as-is” warranty disclaimers and use more selective warranty disclaimers could increase their cross-national validity when necessary.

Another example is provisions prohibiting reverse engineering. Both German and American law allows reverse engineering for interoperability purposes. However, American law allows provisions that prohibit all forms of reverse engineering, while German law expressly prohibits provisions that prohibit reverse engineering for interoperability purposes. Granted, it might be possible to prohibit reverse engineering for other purposes than interoperability.

\textsuperscript{3182} Hillman & O’Rourke, supra note 3086, at 60–62. See also Principles of the Law of Software Contracts § 3.05(b) (2009).
But this is not necessary, since German and American law do not permit reverse engineering for other purposes.\textsuperscript{3183} It should also be noted that the right to reverse engineering for interoperability purposes is already restricted under German law.\textsuperscript{3184} Thus, it should arguably be possible for transferors to make compromises over this type of provision.

After considering such compromises, transferors can consider different strategies to bridge national differences.

12.5.2 One-Size-Fits-All: One Set of Provisions

The first solution is to use one software license agreement, with no additional provisions for transferees in certain jurisdictions. This can be described as the one-size-fits-all approach. In order to be cross-nationally valid under this approach, transferors must adapt to the strictest requirements. As seen, this would generally require adaption to German law.

If all provisions should be valid and enforceable under German law, a number of changes must be made: (1) Hardware restriction clauses and software resale restriction clauses must be removed; (2) provisions that prohibit reverse engineering should be removed, since reverse engineering other than for interoperability is not allowed anyway; (3) liability provisions should be made more selective; (4) procedural provisions, such as arbitration clauses should be removed; (5) data collection provisions that create unreasonable disadvantages to the transferee should be removed.

Thus, this would require a number of substantial changes, and such changes could be problematic from a business model perspective: (1) Liability provisions are arguably important for the Microsoft, Apple, Facebook, Zynga, and Red Hat model; (2) data collection provisions can be important for almost all these business models from a functionality perspective, in order to legally offer certain functionality based on personal data, but is especially important to the Facebook and perhaps the Zynga model from a business perspective; (3) software resale restrictions are especially important to the Microsoft model, and to some extent to the Apple model; and (4) hardware restriction clauses are especially important to the Apple model.

If there are substantial differences between countries, the one-size-fits-all approach will suit some countries better than others. This would make

\textsuperscript{3183} Granted, transferors might sometimes still wish to clarify the limits of reverse engineering for transferees, even if this would merely repeat copyright law.

\textsuperscript{3184} See supra section 8.1.1.
German (consumer) requirements the norm even for American transferees. Whether this would be acceptable for transferors will likely vary between different transferors. Under this approach, a cost-benefit analysis becomes very important. This analysis should focus on the following questions: (1) What provisions are likely to be asymmetrically valid; and (2) what are the legal and practical consequences of asymmetrical validity, now and in the longer perspective? For some transferors, a one-size-fits-all approach meeting the German requirements might be acceptable, since the above problematic examples are not important for all transferors. For other transferors, the above problematic examples are important, and this approach becomes problematic.

12.5.3 Different Practices and Additional Provisions

Another solution is to use one software license agreement, but to use slightly different practices and include additional provisions to comply with German law. Both this approach and the one-size-fits-all approach above are likely to be cost-effective, since both will comply with German law using one agreement. If we return to our business model examples, we can see how this would work.

The Microsoft Model

Transferees using this business model should ask themselves a number of questions: (1) Is it important to prevent software resale in order to create an enforcement mechanism against downstream user proliferation; (2) is it necessary to prohibit all reverse engineering; (3) is it necessary to limit liability; and (4) define applicable forum and law?

To prevent downstream user proliferation (1), the transferor may consider the modified business and technical practices described above. If other technical solutions have been considered, and compromises have been considered, but all reverse engineering must still be prohibited (2), an additional clause for European Union transferees will be needed to clarify that reverse engineering for interoperability purposes is permitted. Regarding

3185 Or to use additional provisions for American transferees.
3186 Principles of the Law of Software Contracts § 1.11, cmt. c (2009) ("Indeed, as a practical matter, firms doing business in Europe may find it less expensive to develop standard forms that comply with European law for use worldwide than to use different forms in the U.S. and Europe.").
3187 See supra section 12.3.3.
3188 See supra section 12.5.1.
3189 The negative aspect of this solution is the increased amount of provisions, which might
liability provisions (3), it is not certain that transferors are liable under American law, but they are likely to be liable under German law, so compromises should be considered. If this is would be inadequate, it should be noted that complete warranty disclaimers are not valid under German law, which would require an additional warranty disclaimer for German transferees. It is unclear to what extent transferors are liable for damages caused by software defects, for example, data loss, but it is common to accept liability for ordinary negligence under German law. Thus, one additional clause must clarify this for German transferees. Forum selection, arbitration, and choice-of-law clauses (4) are likely to be valid and effective against German and American business actors. Restrictive forum selection clauses will not be valid against German consumers (only permissive forum selection clauses), but can be valid against American consumers. Arbitration clauses are likely to fail the formal requirements against German consumers, but might be valid against American consumers. Choice-of-law clauses are generally valid against American and German business actors, and American consumers. They are prima facie invalid against German consumers, but could theoretically be valid and effective if the Alpenhof requirements are not met; that is, if the transferor does not direct commercial activities against Germany. To be safe, for consumer software, it is likely best to use such clauses only against American transferees.

The Apple Model

Transferees using this business model should ask themselves a number of questions: (1) Are hardware sales the main revenue source, and are hardware restrictions necessary to uphold this business model; (2) is it necessary to prevent downstream user substitution if the main revenue source is hardware sales; (3) is it necessary to limit liability; and (4) define applicable forum and law?

Hardware restriction clauses (1) can be justifiable under German law if the software is complex, highly priced, and transferred against recurring fees. While transferors can transfer standard software against recurring fees, a different payment model may not be sufficient. Standard software is priced rela-

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3190 With the negative aspect of additional provisions.
3191 Cf. Microsoft, Microsoft Software License Agreement: Windows 8.1 Pro, Section 2(a) (2013) (A binding arbitration clause and class action waiver against American transferees.).

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tively low compared to specialized software, meaning that hardware restriction clauses can be difficult to justify. Such provisions could also be justifiable for protecting the transferor’s reputation, if the software would be likely to malfunction on other hardware,\textsuperscript{3193} or as a way to limit the risk of piracy.\textsuperscript{3194} Still, this likely to be a difficult route. Thus, to be cross-nationally valid, a provision clarifying that hardware restrictions do not apply under German law could be used. The effect of hardware restrictions could arguably also be achieved through technical means. Software resale restrictions (2) should arguably be less important under this model than under the Microsoft model, but the same requirements apply as to the Microsoft model. For liability provisions (3), the same requirements apply as to the Microsoft model. For procedural provisions (4), the same requirements apply as to the Microsoft model.

The Facebook Model

Transferees using this business model should ask themselves a number of questions: (1) is personal data collection, processing, and use the main revenue source, and has adequate permission been sought; (2) is it necessary to prevent downstream user substitution of user accounts; (3) is it necessary to limit liability; and (4) define applicable forum and law?

The first question regarding personal data collection (1) is the most problematic. Reasons include the strong current focus on data privacy from lawmakers and consumer associations, which might lead to stricter requirements in the future. But also current requirements might be relatively strict, especially under German law. The problems are associated with consent and content control. German law requires consent, and it must sometimes be explicit (opt-in). If the proposed European Union Data Protection Regulation will be adopted in its current form, explicit consent will generally be required. Thus, an assent mechanism seeking explicit consent from German transferees is required. Since it would be cumbersome to have a special mechanism for German transferees, it is probably preferable to seek consent from all transferees. Recent case law also suggests that such provisions can be found invalid under content control. A lower German court recently invalidated a privacy policy since it did not give transferees sufficient transparency of the scope of data collection and use,\textsuperscript{3195} for example, how the transferor would use the data, and how and with whom it would share the data. Also, the court found a location data provision to be

\textsuperscript{3193} See OLG Frankfurt Mar. 10, 1994, NJW-RR 1995, 182 (Ger.).
\textsuperscript{3194} See LEUPOLD & GLOSSNER, supra note 3101, at Teil 1. C. 6(f), recital 220–222.
\textsuperscript{3195} Cf. BDSG § 4(a) (Ger.) (Regarding this requirement.).
invalid. Even though the data was promised to be anonymized, the court said that location-based products and services would not be possible without individualizing the data.\textsuperscript{3196} The wider legal consequences of this ruling are yet to be determined, but the invalid location data provision suggests clear problems with this business model under German law. At its most extreme, one future scenario could be that location data features and provisions would have to be rewritten or removed for German transferees.

If it is necessary to prevent downstream user substitution (2), imposing restrictions on user accounts, especially non-perpetual and recurrently remunerated, should be cross-nationally possible.\textsuperscript{3197} For liability provisions (3), the same requirements apply as under the Microsoft model. And for procedural provisions (4), the same requirements also apply as under the Microsoft model.

The Zynga Model
While the revenue sources are different for the Zynga model than the Facebook model, the two models use similar software license agreements. Thus, the same types of questions and options apply as for the Facebook model. But under this business model, personal data collection might be less important than under the Facebook model, and transferors might be more focused on preventing downstream user substitution of user accounts and in-app purchases. If so, this model may potentially be less problematic than the Facebook model.

The Red Hat Model
Transferors using this business model should ask themselves whether: (1) is it necessary to limit liability; and (2) is injunctive relief important?

For liability provisions (1), the same requirements apply as to the Microsoft model, with some potential exceptions. The software might be considered a gift under German law,\textsuperscript{3198} and since a donor is only liable for intent and gross negligence,\textsuperscript{3199} this could reduce the need for liability provisions under German law. This relief for donations might perhaps also apply for consequential

\textsuperscript{3196} LG Berlin Apr. 30, 2013, NJW 2013, 2605 (Ger.).
\textsuperscript{3197} See BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).
\textsuperscript{3198} Cf. Leupold & Glossner, supra note 3101, at Teil 1. B. IV. 1(b) recital 62, Teil 1. C. II. 1, recital 228–230 (“Lite” versions, freeware, or open source software without any form of compensation could be considered a gift.).
\textsuperscript{3199} BGB § 521 (Ger.). See also Axel Metzger & Till Jaeger, Open Source Software and German Copyright Law, 32 INT’L REV. INTELL. PROP. & COMPETITION L. 52, 72 (2001).
damages, for example data loss. Since the Vernor ruling under American law only applies to restrictive software license agreements, this business model could potentially fail to meet those requirements. Based on this, the software could be considered sold and not licensed, and the UCC could become applicable to the software license agreement. While implied warranties apply under the UCC, courts have been reluctant to apply implied warranties to software transfers. Thus, this should not increase the need for liability provisions under American law.

The question of injunctive relief (2) and open source software has been a major reason behind the idea of “pure licenses” under American law. Whether the parties can affect the classification of provisions as conditions or covenants is debatable. Injunctive relief was granted in Jacobsen v. Kätzer, but within the jurisdiction of the Ninth Circuit, a “nexus between the condition and the licensor’s exclusive rights of copyright” is likely required. Gomulkiewicz argues that attribution provisions, share-alike clauses, and Anti-DRM clauses would not meet these latter requirements, meaning that injunctive relief would not be available for violations of such provisions. It is uncertain whether the result would be clearly different in another jurisdiction. But one way to avoid this potential problem is, when possible, to include a forum selection clause for American transferees pointing to a court outside the Ninth Circuit.

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3201 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010).
3202 But see Robert W. Gomulkiewicz, Clarifications and Complications in Enforcing Open Source Software Licenses, in Research Handbook on Intellectual Property Licensing 76, 88–89 (Jacques de Werra ed., Edward Elgar Publishing: Cheltenham 2013) (Arguing that the Vernor requirements are one way to prove that a transaction is a license, not the only way. And that granting more rights could be a way to show that a transaction is not a sale.).
3204 See supra section 3.2.2.
3205 See supra section 3.2.1.
3206 535 F.3d 1373, 1382 (Fed. Cir. 2008).
3207 See MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 941 (9th Cir. 2010).
3208 Gomulkiewicz, supra note 3202, at 92–95.
3209 See supra section 8.3.2 (Regarding limitations on such choices.)
Summary
Thus, most of the above business models can be upheld, but this will require additional provisions. Such additional provisions can either add more rights for German transferees, or add more restrictions, procedural provisions, or liability provisions for American transferees. Adding many exceptions might impede incorporation of provisions, so transferors should be very selective and only add exceptions when absolutely necessary.

Thus, a transferor should first examine the chosen business model against the software license agreement, and question whether all provisions are necessary or if included by habit. Inclusion by habit is perhaps especially likely for procedural and liability provisions.\textsuperscript{3210} Removing less important provisions leaves more room for making more important provisions cross-nationally valid.

But some uncertainty may still persist. Certain business models are potentially still problematic, especially those that rely on personal data, which is the clearest trend among business models today. Even if a transferor is able to seek consent for personal data collection and use, it seems as such provisions can still be found invalid, especially since it can be difficult to guarantee the anonymity of transferees.\textsuperscript{3211} The legal evaluation of such issues is still in its infancy, but transferors using such business models must keep up with legal development.

12.5.4 Glocalization
Since the theme of this thesis is cross-national validity of software license agreement, the presumption has been the application of the same software license agreement cross-nationally.\textsuperscript{3212} But as we know, this software license agreement must probably be translated into more languages than English.\textsuperscript{3213} Still, this does not require the content of the software license agreement (and the transferred software) to be adapted to national markets; the same content may apply, regardless of where the transferee is situated. But in practice, transferred software must sometimes be adapted for transferees in different jurisdictions for different legal reasons.\textsuperscript{3214} In this context, adapting software license agreements to different markets would not be unorthodox.

\textsuperscript{3210} Cf. Gomulkiewicz, supra note 3126, at 693 ("No one systematically re-thinks the business-deal points that are reflected in the words of the EULA, especially the boilerplate at the end of the document.").
\textsuperscript{3211} LG Berlin April 30, 2013, NJW 2013, 2605.
\textsuperscript{3212} See supra section 1.1.5.
\textsuperscript{3213} See supra section 4.4.1.
\textsuperscript{3214} For example, due to different regulation on DRM or cryptography.
As seen, some transferors already use this approach to some extent. But merely stating that something else might apply is not a sufficient solution for cross-national validity; a transferor must include the provision that will apply between the parties. Better solutions include: (1) Adding additional provisions to a cross-nationally applied software license agreement; or (2) presenting transferees in different legal systems with different software license agreements.\textsuperscript{3215} At least the latter approach is arguably a deviation from the main theme of this thesis, that the most cost-effective solution, a single software license agreement for all markets, should be pursued.\textsuperscript{3216} Still, it might be useful to examine whether this would be a better approach to the single software market, even though it might not be the most cost-effective solution.

The first solution is workable, but adding more provisions to a software license agreement might increase the risk of burying provisions in the software license agreement.\textsuperscript{3217} Thus, transferors must try to balance this with the requirement of sufficient notice. This can be hard in practice, since it is difficult to know when there are too many provisions.

Translating software license agreements only affect incorporation;\textsuperscript{3218} it will not automatically improve validity. In order to improve validity with local software license agreements, the provisions must also be adapted to the laws of different legal systems. Blizzard Entertainment has tried to this for its computer game \textit{World of Warcraft}\.\textsuperscript{3219}

Regardless of whether transferors provide translated software license agreements with the same content for all transferees, or software license agreements that have been adapted to the local laws of prospective transferees, it is not feasible that transferors can draft valid software license agreements for all legal systems (if we assume that most legal systems will require translations in order to be valid). But it is arguably more likely that a transferor can translate a software license agreement than adapt it to local laws. Adapting software license agreements to local laws is likely to quickly become complex, especially if the number of important markets grows over time. Thus, it is not

\textsuperscript{3215} See supra section 12.2.
\textsuperscript{3216} See supra section 1.3.2 (Regarding the aims and objectives of this thesis.).
\textsuperscript{3217} See supra section 4.4.2 (Regarding software license agreement length and validity.).
\textsuperscript{3218} See supra section 4.4.1.
\textsuperscript{3219} See Quinn, supra note 3111, at 771 (The European software license agreement lacks provisions that are likely to be invalid under the laws of European Union Member States, for example, arbitration clauses and provisions prohibiting class actions. Liability disclaimers are less limiting that for American transferees. The language is simpler. And the software license agreement can only be terminated after a significant breach of the software license agreement.).
likely that all transferors will be able to make such adaptations, and only for a handful legal systems.

Then there is also the question of transactions costs. Adapting software license agreements to local laws will increase transaction costs. But if the alternative to adaptation is uncertainty or invalidity, adaptation will still lead to lower transaction costs.\textsuperscript{3220} Thus, higher transactions costs could be acceptable if the alternative is worse.

When there are several software license agreements in circulation it might lead to problems. As noted by Quinn, nothing stops a transferee from accepting a software license agreement from another region than intended.\textsuperscript{3221} Thus, in order for local software license agreements to work and be effective, the transferee must be presented with the right software license agreement.

From a practical perspective, there are two ways to create “local” software license agreements: (1) Each local software license agreement is complete and completely independent from each other; or (2) a local software license agreement divided into two parts, (a) the lowest common denominator that works across many different legal systems and (b) special provisions that are adapted to a specific legal system. The latter is related to the practice of supplying additional provisions for certain transferees,\textsuperscript{3222} but this solution can probably be streamlined to avoid burial of provisions; it would only contain provision x or y, not x and y. While the creation of two parts might increase the risk of terminology inconsistency,\textsuperscript{3223} this is probably a minor problem for this kind of software license agreement.

However, two problems remain: (1) To supply a transferee with the correct software license agreement; and (2) the uncertainty that a court will evaluate the software license agreement under the law of the legal system that the transferor/drafter intended. While the second problem could be improved with choice-of-law clauses, it is not always certain that such clauses are valid and effective. A transferee could be presented with a specific software license agreement based on geographical data. But it is not certain that geographical

\textsuperscript{3220} See Uniform Computer Information Transactions Act Prefatory Note (Westlaw through 2013) (“[L]egal rules that are not relevant to commercial practice or that are uncertain in application inhibit contracting or raise transaction costs.”).

\textsuperscript{3221} See Quinn, supra note 3111, at 771–772.

\textsuperscript{3222} See Adobe, Software License Agreement: Adobe Photoshop CS6, Section 16.1.3 (2012) (“[I]f Customer is located in the European Union (EU)...”).

\textsuperscript{3223} Cf. Michael Overly & James R. Kalyvas, Software Agreements Line by Line: A Detailed Look at Software Agreements & How to Change Them to Fit Your Needs 11 (Aspatore Books: Boston 2004) (On why separate vendor licenses should be avoided: For example, to avoid inconsistency in terminology.).
position will be the deciding factor to the question of applicable law to the software transfer.\textsuperscript{3224} We must also add the question of language to this mix; the official language(s) of the geographical position might not be sufficient, the transferee must be able to choose language. These two elements are most likely to be problematic if a transferee transfers software whilst being on a trip abroad, but a private international law examination would lead to the conclusion that the law of the transferee’s legal system should apply. Granted, these are exceptions, but it is easy to complicate matters when several software license agreements are in circulation and only one should be used for a specific transfer.

To summarize, creating local software license agreements for the single software market is not unproblematic. Software license agreements with local elements might increase the risk of burying provisions. Completely adapted software license agreements increase transaction costs. It is not likely that all transferors are able to adapt their software license agreements, and it is not likely that software license agreements will be adapted for more than a handful legal systems. Also, there are potential problems to supply a transferee with the correct local software license agreement. Thus, adapted software license agreement is not necessarily generally a better solution. It might be an acceptable solution to some transferors, but not to all.

12.6 Choosing Solutions to Improve Validity

All examined solutions have some potential to improve cross-national validity. However, no solution is perfect and all have different limitations. For some transferors, these limitations might be problematic, but not for all.

Transferors should first remove provisions that are not essential to the chosen business model and consider modifying chosen technical and business solutions. The latter might reduce the need of problematic provisions and practices or make it easier to bridge or avoid national differences.

It may sometimes be possible to avoid German law, either through choice-of-law clauses or by avoiding directing commercial activities against Germany. However: (1) Such provisions are not likely to be valid against German consumers if a transferor directs commercial activities to Germany under an Alpenhof analysis; (2) German law might still be applicable in certain situations; and (3) this approach might create negative market reactions if con-

\textsuperscript{3224} See supra section 3.4.2 (Regarding applicable law in the absence of choice-of-law clauses.).
sidered unfair among actual or prospective transferees. Creating a neutral ground might be solution against business actors, but not necessarily against consumers.

Transferors have different approaches at hand to overcome differences between German and American law: (1) Making compromises; (2) using a one-size-fits-all approach with one set of provisions and potentially modified practices; (3) modifying practices and include additional provisions; or (4) using different software license agreements for different countries. Each approach has its own advantages and drawbacks. Making compromises might sometimes affect business models, but certain compromises can probably be done without affecting business models. Using one software license agreement with one set of provision will require adaptation to German requirements, which may sometimes be problematic from a business model perspective. Using one software license agreement with different practices and additional provisions for German transferees might be less problematic from a business model perspective, but adds complexity, which might lead to burial of important provisions, adversely affecting incorporation. Glocalizing software license agreements, that is, using different software license agreement for different transferees may solve issues with incorporation and substantive validity, but requires the transferor to present the transferee with the correct software license agreement, which may be problematic in practice.

But it might not be necessary to choose one approach and use it consistently throughout the entire software license agreement. It might be better to combine different approaches, and use different approaches for different provisions and practices. For example, it might be possible to: (1) Consider modifying technical and business solutions; (2) make compromises when possible to reduce complexity; (3) bridge differences by (a) adapting to German requirements for certain provisions and practices, (b) adding certain additional provisions for German or American transferees, or (c) perhaps glocalizing software license agreements for different national markets; (4) discuss the possibility of adding choice-of-law clauses, making American law applicable when bridging differences are not possible;3225 and (5) avoid directing commercial activities to Germany.

3225 This will likely be California law, since: (1) Transferors are most likely to have a substantial relationship with that state; and (2) California law is a good choice, since it clarifies the law for many situations.
12.6.1 Checklist for Improvements

Based on these solutions, it is possible to create a checklist for transferors for cross-national improvements. Transferors should focus on: (1) Achieving the basic level of cross-national validity described above to create a cross-nationally valid shell; (2) assessing potential risk and consequences (legal and practical) of cross-national invalidity, both generally and for the transferor in question; (3) making a complete assessment of current software license agreements and how they correlate to used business models and remove unnecessary provisions, especially if cross-nationally invalid, to avoid affecting more important provisions and leave room for improvements; (4) assessing if slight adjustments in business models and ways of conducting business are reasonable, and if it is worth the potential improvements in cross-national validity; (5) making compromises when possible to reduce complexity; (6) bridging differences by (a) adapting to German requirements for certain provisions and practices, (b) adding certain additional provisions for German or American transferees, or (c) perhaps glocalizing software license agreements for different national markets; (7) discussing the possibility of adding choice-of-law clauses, making American law applicable when bridging differences are not possible;3226 (8) avoiding directing commercial activities to Germany; and (9) making a cost-benefit analysis of what level of cross-national validity is reasonable.

In the end, it is far from certain that all transferors can remove all problems,3227 but most transferors can improve cross-national validity.

3226 Balancing this against potential market reactions if consumers will deem this practice unfair.
3227 See also infra section 13.4.
Marlowe’s Faustus: The Contract

On these conditions following. First, that Faustus may be a spirit in form and substance. Secondly, that Mephistophilis shall be his servant, and be by him commanded. Thirdly, that Mephistophilis shall do for him, and bring him whatsoever he desires. Fourthly, that he shall be in his chamber or house invisible. Lastly, that he shall appear to the said John Faustus, at all times, in what shape and form soever he please. I, John Faustus, of Wittenberg, Doctor, by these presents, do give both body and soul to Lucifer Prince of the East, and his minister Mephistophilis; and furthermore grant unto them that, twenty-four years being expired, the article above written inviolate, full power to fetch or carry the said John Faustus, body and soul, flesh, blood, or goods, into their habitation wheresoever.

By me, JOHN FAUSTUS.3228

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13 Summary and Concluding Observations

13.1 Overcoming National Legal Differences

The world is being globalized and national software markets are converging into a single software market. Previously, when software was sold in bricks-and-mortar stores on physical media, software distribution was naturally divided into national markets by geographical boundaries. Then, software was primarily transferred through national subsidiaries or on national licenses. But with digital distribution and Internet access, transferees are now able to access software from the other part of the world. Geographical boundaries have lost their importance and geographically divided markets are converging into a single software market. This increases competition and increases the customer base, thus making a single software market favorable for both transferors and transferees.

But legal obstacles, due to conflicts between global software transfers and the local nature of law, disturb the process of creating a single software market. Software license agreements are dependent upon law for their validity,

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3229 See supra section 1.3.1.
3230 See supra section 1.1.4.
3232 See Oleksandr Pastukhov, Going Where No Taxman Has Gone Before: Preliminary Conclusions and Recommendations Drawn from a Decade of Debate on the International Taxation of E-Commerce, 36 Rutgers Computer & Tech. L.J. 1, 1 (2009) (“The advent of e-commerce has forever changed how business is done. Internet operations have launched even the smallest of undertakings into global markets and have made them part of an important industry with enormous potential.”).
3233 See Dan Danielsen, Local Rules and a Global Economy: An Economic Policy Perspective, 1 Transnat’l Legal Theory 48, 53 (2010) (“[O]ur increasingly global economy is governed principally by local rules created by local institutions designed to serve primarily (if not exclusively) local policy interests and purposes.”); David R. Johnson & David Post, Law and Borders–The Rise of Law in Cyberspace, 48 Stan. L. Rev. 1367, 1367 (1995) (“Cyberspace challenges the law’s traditional reliance on territorial borders.”). See also supra section 1.1.5. (On how to overcome differences between local rules with software license agreements.)
and since relevant rules may vary substantially between legal systems, global software transfers are becoming increasingly and unnecessarily difficult. If differences between legal systems are not overcome, validity could vary between different software transfers, which affects both transferors and transferees.\textsuperscript{3234} Since the software industry is one of the world’s largest industries, and is growing, invalidity or legal uncertainty not only affects individual transferors and transferees, but may also affect the entire software industry and the economy at large.\textsuperscript{3235}

As a potential solution to this problem, cross-nationally applied agreements have been suggested; both in the general discussion of local law, globalization and private ordering,\textsuperscript{3236} but also regarding software license agreements, as a way to level differences between legal systems.\textsuperscript{3237} This has been treated as a hypothesis in this thesis, and has been tested through the question of cross-national validity of software license agreements.\textsuperscript{3238} In this thesis, cross-national validity of certain software license agreements has been studied under German and American law.\textsuperscript{3239}

Overcoming national legal differences through cross-nationally applied software license agreements is clearly not a simple approach. The law applicable to software license agreements varies substantially between Germany and

\textsuperscript{3234} Varying validity will result in different legal protection depending on what law will be applied to a software transfer. See Lucille M. Ponte, \textit{Getting a Bad Rap? Unconscionability in Clickwrap Dispute Resolution Clauses and a Proposal For Improving the Quality of These Online Consumer “Products”}, 26 \textit{Ohio St. J. On Disp. Resol.} 119, 154 (2011) (“[T]his discord sets up a two-tier system amongst online users in different states who will continue to receive different levels of protection, often regarding the exact same dispute resolution clauses in clickwrap agreements.”).

\textsuperscript{3235} See supra section 1.2.1 (Regarding importance of cross-national validity.).

\textsuperscript{3236} See John Flood, \textit{Globalisation and Law, in An Introduction to Law and Social Theory} 311, 313 (Reza Banakar & Max Travers eds., Hart Publishing: Oxford 2002).

\textsuperscript{3237} See, e.g., Kelly Leong, \textit{iTunes: Have They Created a System for International Copyright Enforcement?}, 13 New Eng. J. Int’l & Comp. L. 365, 388–390 (2007) (Regarding how Apple uses its Terms of Service to level differences in national laws and create a private international copyright enforcement system.); Greg Lastowka, \textit{Virtual Justice: The New Laws of Online Worlds} 91 (Yale University Press: New Haven 2010) (“If all virtual world participants are required to agree to the ‘laws’ of the virtual world (expressed in the online contract), then the problem created by divergent jurisdictional rules and by the unique nature of fantastic environments could be overcome by setting more optimal rules through contract.”).

\textsuperscript{3238} See supra section 1.3.2.

\textsuperscript{3239} See supra section 1.4.3 (Regarding choice of comparandum. These two legal systems have leverage over the single software market, making validity in these legal systems a priority.).
the United States. Since the most prominent standard software transferors are located in the United States,\textsuperscript{3240} it seems reasonable that such transferors would primarily have focused on meeting the requirements of American law,\textsuperscript{3241} even though some transferors and software license agreement drafters have clearly aimed for cross-national validity.\textsuperscript{3242} The historical dominance of the United States in the worldwide software market, prior to the emergence of the single software market, could also be one explanation for the existence of such potential focus since transferors have limited time and resources. But if we compare the American market with the European Union market, the American dominance becomes less conspicuous,\textsuperscript{3243} creating incentives for improving cross-national validity. Also, the single software market is in its infancy and its geographical distribution is likely to change over time. Some data suggests that this is already happening.\textsuperscript{3244}

\textsuperscript{3240} See supra section 1.4.3 (Regarding choice of comparandum and where the most prominent transferors can be found.).

\textsuperscript{3241} And it can be a challenge only to be aware of differences between American jurisdictions. See Lucille M. Ponte, \textit{Getting a Bad Rap? Unconscionability in Clickwrap Dispute Resolution Clauses and a Proposal For Improving the Quality of These Online Consumer “Products”}, 26 Ohio St. J. on Disp. Resol. 119, 154 (2011) (“The disagreement between courts on issues of unconscionability and public policy makes it difficult for online businesses to uniformly and efficiently process online consumer transactions across state borders.”). Learning and adapting to applicable law in other legal systems is arguably even more difficult.

\textsuperscript{3242} See Creative Commons, \textit{Press Release: Creative Commons Launches Version 4.0 of its License Suite}, November 26, 2013 (“Since 2007, CC has been working with legal experts around the world to adapt the 3.0 licenses to local laws in over 35 jurisdictions. In the process, CC and its affiliates learned a lot about how the licenses function internationally. As a result, the 4.0 licenses are designed to function in every jurisdiction around the world, with no need for localized adaptations.”); Adobe, \textit{Software License Agreement: Adobe Photoshop CS6}, Section 16.1.3 (2012) (“[I]f Customer is located in the European Union (EU)...”).


\textsuperscript{3244} See supra section 1.2.1 (Regarding increasing importance of cross-national validity and the BRIC countries.). See Business Software Alliance, supra note 3243 (2011 global study); Business Software Alliance, \textit{Shadow Market: 2007 BSA Global Software Piracy Study} (5th ed., 2008) (The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011. Worldwide numbers are calculated by adding data from all countries, not by using the estimated worldwide piracy losses and piracy rate.).
13 Summary and Concluding Observations

Legal Software Transfers and Worldwide Market Shares

<table>
<thead>
<tr>
<th>Year</th>
<th>Worldwide Transfers</th>
<th>United States Market Share</th>
<th>European Union Market Share</th>
<th>Other Countries Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$50,910M</td>
<td>45%</td>
<td>$16,753M</td>
<td>23%</td>
</tr>
<tr>
<td>2004</td>
<td>$59,707M</td>
<td>42%</td>
<td>$22,427M</td>
<td>20%</td>
</tr>
<tr>
<td>2005</td>
<td>$60,137M</td>
<td>43%</td>
<td>$21,416M</td>
<td>21%</td>
</tr>
<tr>
<td>2006</td>
<td>$63,997M</td>
<td>43%</td>
<td>$19,636M</td>
<td>26%</td>
</tr>
<tr>
<td>2007</td>
<td>$76,849M</td>
<td>42%</td>
<td>$23,363M</td>
<td>28%</td>
</tr>
<tr>
<td>2008</td>
<td>$87,330M</td>
<td>42%</td>
<td>$26,514M</td>
<td>28%</td>
</tr>
<tr>
<td>2009</td>
<td>$82,659M</td>
<td>41%</td>
<td>$23,338M</td>
<td>31%</td>
</tr>
<tr>
<td>2010</td>
<td>$93,776M</td>
<td>41%</td>
<td>$25,749M</td>
<td>32%</td>
</tr>
<tr>
<td>2011</td>
<td>$104,849M</td>
<td>40%</td>
<td>$29,021M</td>
<td>32%</td>
</tr>
</tbody>
</table>

2003–2011 Growth rate: 106 percent United States, 81 percent European Union, 73 percent Other Countries
Market share diff.: – 5 pp United States, – 4 pp European Union, + 9 pp Other Countries

If we focus on growth in this period, we get the following figures:

Software Transfer Growth 2003–2011

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Country</th>
<th>M USD</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>$18,633M</td>
<td>81%</td>
</tr>
<tr>
<td>2</td>
<td>Japan</td>
<td>$3,056M</td>
<td>76%</td>
</tr>
<tr>
<td>3</td>
<td>China</td>
<td>$2,327M</td>
<td>700%</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>$2,194M</td>
<td>661%</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>$2,016M</td>
<td>45%</td>
</tr>
<tr>
<td>6</td>
<td>France</td>
<td>$1,865M</td>
<td>66%</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>$1,795M</td>
<td>237%</td>
</tr>
<tr>
<td>8</td>
<td>Russia</td>
<td>$1,730M</td>
<td>1,049%</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
<td>$1,718M</td>
<td>126%</td>
</tr>
<tr>
<td>10</td>
<td>United Kingdom</td>
<td>$1,610M</td>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Country</th>
<th>M USD</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Other Latin America</td>
<td>$4,610M</td>
<td>4610%</td>
</tr>
<tr>
<td>2</td>
<td>Vietnam</td>
<td>$2,499M</td>
<td>76%</td>
</tr>
<tr>
<td>3</td>
<td>Dominican Republic</td>
<td>$1,760M</td>
<td>76%</td>
</tr>
<tr>
<td>4</td>
<td>Other Middle East</td>
<td>$1,706M</td>
<td>76%</td>
</tr>
<tr>
<td>5</td>
<td>Panama</td>
<td>$1,501M</td>
<td>51%</td>
</tr>
<tr>
<td>6</td>
<td>Pakistan</td>
<td>$1,281M</td>
<td>42%</td>
</tr>
<tr>
<td>7</td>
<td>El Salvador</td>
<td>$1,264M</td>
<td>34%</td>
</tr>
<tr>
<td>8</td>
<td>Ukraine</td>
<td>$1,254M</td>
<td>42%</td>
</tr>
<tr>
<td>9</td>
<td>India</td>
<td>$1,168M</td>
<td>34%</td>
</tr>
<tr>
<td>10</td>
<td>Russia</td>
<td>$1,049M</td>
<td>34%</td>
</tr>
</tbody>
</table>

3245 All countries except the United States and the Member States of the European Union.
3246 Estimated legal transfers in millions of USD.
3247 Estimated share of the worldwide market.
3248 Percentage points.
3249 Countries with the highest absolute growth in M USD.
3250 Countries with the highest growth rate in percentages.
As seen, the relative importance of the United States and the European Union seems to be decreasing on the expense of other countries. Also, the growth rate in the United States and within the European Union is lower than the worldwide average, and significantly lower than the other countries. While the absolute growth is still significant in the United States and certain European countries, the combination of absolute growth and growth rate in the BRIC countries suggests that the geographical distribution of the single software market is changing more towards developing countries over time. The market share of the BRIC countries increased from 2 percent in 2003 to 8 percent in 2011. Legal transfers increased from 965 M USD in 2003 to 8,801 M USD in 2011, an 812 percent increase. If piracy rates can be further reduced in developing countries, this would further suggest a geographical redistribution of the single software market over time.

Based on this, cross-national validity is important and will be increasingly important in the future. A changing geographical distribution of the single software market, increasingly active lawmakers and interest associations, and potential market reactions to overreaching software license agreements may put external pressure on cross-national validity. Also, if transferors wish to use software license agreements as a competing factor, it becomes neces-

3251 Estimated market shares in 2003 and 2011: The United States decreased from 45 percent in 2003 to 40 percent in 2011. The European Union decreased from 33 percent in 2003 to 28 percent in 2011. Other countries increased from 23 percent in 2003 to 32 percent in 2011.
3252 The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011. Worldwide numbers are calculated by adding data from all countries, not by using the estimated worldwide piracy losses and piracy rate. The figures for the BRIC countries are calculated by adding sums for all countries within each region, not using the estimated piracy losses and piracy rates for the region. See BUSINESS SOFTWARE ALLIANCE, supra note 3243 (2011 global study); BUSINESS SOFTWARE ALLIANCE, supra note 3244 (2007 global study).
3253 See supra section 1.2.1 (Regarding increasing importance of cross-national validity and the BRIC countries.). Legal transfers can be increased by increasing total software use (legal transfers and illegal use), but also by decreasing piracy. Countries that are able to improve both are likely to improve leverage. See BUSINESS SOFTWARE ALLIANCE, supra note 3243 (2011 global study); BUSINESS SOFTWARE ALLIANCE, supra note 3244 (2007 global study) (Estimated piracy rates: United States: 2003 - 22 percent, 2007 - 20 percent, 2011 - 19 percent; European Union: 2003 - 37 percent, 2007 - 35 percent, 2011 - 33 percent; BRIC: 2003 - 87 percent, 2007 - 75 percent, 2011 - 70 percent. Total use (legal sales and illegal use) is calculated from estimated piracy losses and piracy rates.) The fast decrease in software piracy within the BRIC countries suggests that this is plausible.
3254 See supra section 11 (Regarding legal and practical consequences of cross-national invalidity.).
3255 See supra section 2.2.2.
sary to improve cross-national validity. The single software market is still in its infancy, but this makes it a good time to make improvements.

Granted, Creative Commons worked for six years to improve cross-national validity,\textsuperscript{3256} and while it is not simple to bridge differences between jurisdictions, transferors can make both small and major changes to improve cross-national validity. These include: (1) Creating a cross-nationally valid shell; (2) removing provisions that are not necessary for the chosen business model; (3) making slight modifications in technical and business solutions to (a) make it easier to bridge differences or (b) make certain provisions unnecessary; (4) making compromises when this does not affect business models; and (5) bridging or avoiding differences through a number of different options. It is perhaps not reasonable to think that all transferors can make all potential changes, but all transferors can improve cross-national validity.

13.2 Summary of Problems, Reasons, and Consequences

A number of current legal (and business) problems with cross-national application of software license agreements have become clear in this thesis.

In the second chapter, we saw that different technical and business choices led to different software license agreements. Later, it has become clear that these choices have led to certain cross-national validity problems.

In the third chapter, a number of potential cross-national validity problems emerged, for example: (1) Differences regarding whether transferred software is considered to be licensed or sold,\textsuperscript{3257} and differences regarding laws applicable to software license agreements due to this;\textsuperscript{3258} and (2) the possibilities of being subject to a foreign forum,\textsuperscript{3259} and foreign law.\textsuperscript{3260} Practical problems also emerged in this chapter, such as the legal categorization of different provisions in software license agreements, which may affect legal remedies when software license agreements are breached.\textsuperscript{3261}

\textsuperscript{3256} Creative Commons, Press Release: Creative Commons Launches Version 4.0 of its License Suite, November 26, 2013 (“Since 2007, CC has been working with legal experts around the world to adapt the 3.0 licenses to local laws in over 35 jurisdictions. In the process, CC and its affiliates learned a lot about how the licenses function internationally. As a result, the 4.0 licenses are designed to function in every jurisdiction around the world, with no need for localized adaptations.”).

\textsuperscript{3257} See supra section 3.1.1.

\textsuperscript{3258} See supra section 3.1.2.

\textsuperscript{3259} See supra section 3.4.1.

\textsuperscript{3260} See supra section 3.4.2.

\textsuperscript{3261} See supra section 3.2.
As seen, there are fundamental differences between Germany (including the European Union) and the United States regarding the legal classification of perpetual software transfers. This form of software transfer is considered sold in Europe, but licensed in the United States as long as the Vernor requirements are met. The outcome of this categorization affects: (1) Post-transfer use restrictions, for example, ability to create an enforcement mechanism against downstream user proliferation and substitution; (2) applicable laws to software license agreements, which affects legal rights and remedies; and (3) legal rights of subsequent transferees and intermediaries. As seen, several examples of cross-nationally invalid provisions are caused by differences between the United States and Europe regarding this classification. Such provisions include hardware restrictions, restrictions to certain transferees, and restrictions to further transfers.

In chapter four, we saw that the formal requirements for contract formation are, at least superficially, similar between Germany and the United States. However, in practice, especially regarding software license agreements, there are clear differences, which leads to problems. Such problems include: (1) Asymmetrical validity or complete invalidity of certain assent mechanisms; (2) the requirement of software license agreements in German against German consumer transferees; (3) problems associated with long software license agreements and incorporation, which may be more problematic under German law; and (4) issues associated with severability clauses under German law, if they create uncertainties regarding the contractual content. Certain issues apply to both German and American law, including: (5) Sufficient notice of provisions; (6) time of disclosure, that is, disclosure before the conclusion of the transfer; and (7) problems associated with unilateral modification clauses in software license agreements. Such problems can be overcome, but may require changing certain current practices. Translation of software license agreements into German might create additional costs, but is probably acceptable in order to create cross-nationally valid software license agreements.

3262 See supra section 3.1.1.
3264 Vernor v. Autodesk, Inc., 621 F.3d 1102, 1111 (9th Cir. 2010) (That is, as long as the copyright owner: “(1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”); MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 938 (9th Cir. 2010).
In chapter five to seven, we found clear differences between German and American law regarding formal requirements for and restrictions on software license agreement validity. In chapter five, we saw fundamental differences regarding mandatory private law restrictions on software license agreement validity. Both German and American law contains restrictions on freedom of contract, especially against weaker parties, and restrictions to prevent copyright overuse. However: (1) The scope of these restrictions is often wider in German law, and certain restrictions under American law has a limited subject matter and jurisdictional scope; (2) American restrictions are arguably more flexible, but German restrictions are arguably more predictable and easier to apply; and (3) the German regulation can be use as a sword, but several American obstacles can only be used as a shield. Also, if a consumer association has brought suit under German law, and a provision is found invalid, this provision will be invalid against all customers. Thus, the effects of German law can extend beyond an individual lawsuit.

In chapter six, we saw that there are clear similarities between German/European Union and American competition law, but there are also clear differences. From a practical perspective, such differences include: (1) Lower market thresholds in Europe than in the United States; and (2) limited scope and applicability of certain doctrines under American competition law.

In chapter seven, we saw that the formal requirements for personal data collection are fundamentally different under German and American law, since German law focuses on consent, while American law focuses on disclosure of data collection in certain situations. Under American law, the most stringent requirements are found under California law, which requires disclosure of personal data collection for web services/sites, and similar requirements for mobile applications under industry self-regulation. Under German law, consent is required. Currently, implicit consent (opt-out) is sufficient for many applications, but a general requirement for explicit consent (opt-in) might be required in the future.

In chapter eight, we saw that validity of certain negative, positive, procedural, and liability provisions differs substantially between German and American law, many times due to differences found in the preceding chapters (3–7). Only a few of the studied provisions can be predicted to be completely cross-nationally valid. Certain provisions are likely to be completely cross-nationally invalid, but most provisions are likely to be asymmetrically valid. This include, for example: (1) Provisions that prohibit reverse engineering (and debugging); (2) provisions that restrict software to certain hardware or restricts software transfers; (3) provisions that attempt to acquire consent for
personal data collection, use, and processing; (4) procedural provisions such as arbitration, forum selection, and choice-of-law clauses; and (5) warranty and liability disclaimers.

Asymmetrically valid software license agreements may be valid or invalid depending on which law will be applied to a specific software transfer. As seen, German law is likely to apply against consumers when major transferors are involved, which are more likely to meet the requirements for application of German law, or when a transferor is sued for tortious use of legally disapproved provisions. Thus, software license agreements are likely to be invalid in a fair number of specific software transfers.

There are a number of reasons for cross-national invalidity, and these reasons can be divided into three groups: Inherent limits of law, fundamental differences between German and American law, and reasons associated with the actors. The first group includes: (1) The application of national law to foreign transferors and transferees; (2) the pace and direction of legal, business, and technological development; and (3) difficulties associated with predicting and combining relevant rules. The second group includes: (4) Whether transferred software is considered to be licensed or sold; (5) the existence of legal mechanisms to prevent use of invalid provisions; (6) whether law can only be used as a shield or also as a sword; (7) the balance between flexibility and predictability; (8) whether relevant rules are primarily centralized or decentralized; (9) different lawmaker cultures; and (10) differences in legal infrastructure and use of such infrastructure and differences in legal actors and approaches to legal reasoning. The third group includes: (11) Mobile applications and their effect digital software distribution, lawmakers and interest associations; (12) the uncertainty whether transferors currently wish or attempt to overcome differences, at least at any price; (13) transferors attempt complex schemes; (14) use agreements that require interpretation; (15) the increasingly unclear line between consumers and business actors; (16) market conditions; and (17) problematic business and technical choices.

Cross-national invalidity is associated with a number of legal and practical consequences. Legal consequences include: (1) Complete or partial invalidity; (2) legal consequences beyond the individual agreement; (3) legal consequences beyond agreement invalidity; (4) increased liability exposure; and (5) increased judicial exposure. Practical consequences include: (6) Failure to prevent downstream user proliferation/substitution; (7) difficulties to legally uphold a chosen business model; and (8) potential market reactions. All these consequences may increase financial and legal risk, and could require raised prices to compensate for such risks.
in practice, there might be limitations to the practical consequences of predicted invalidity, especially regarding consumers, but: (1) Consumers are litigating, both individually and in the form of class action lawsuits; (2) consumer associations are increasingly focused on transferors and software license agreements, through (a) litigation or (b) actions against transferors without litigation; (3) lawmakers are increasingly active regarding questions related to software license agreement validity, with a current focus on data privacy; (4) business actors often use the same kind of software as consumers, and business actors are likely to be more litigious than consumers; and (5) software license agreement overuse might increasingly lead to vocal reactions among consumers and cause market reactions. Thus, cross-national validity can be a problem in practice for transferors, even for consumer software.

The question of cross-national validity is still in its infancy. However, the importance of cross-national validity is likely to increase when the geographical distribution of the single software market changes, especially when transferees/transferors in developing countries increasingly participate in the single software market. This is likely to make cross-national validity more urgent for transferors, but may also increase complexity, due to differences between legal systems. Still, there is hope for legal improvements within the single software market.

13.3 Outlining Best Practices: A Memorandum

In practice, good examples are likely to be important for the realization of a single software market. But what is a best practice for one transferor is not necessarily a best practice for all transferors. Thus, it is difficult to create one best practice for all transferors.

Instead, this chapter offers a workflow for how transferors can think about cross-national validity. Hopefully, this can have some practical effects on transferor behavior regarding cross-national validity and the single software market. This workflow includes a number of questions and options, so that each transferor can analyze what is best in a given situation. This workflow can be divided into three stages: (1) Before drafting; (2) drafting; and (3) post drafting. While certain questions and options in the drafting stage are adapted to German and American requirements, many questions and options are applicable to all Member States of the European Union, and most questions and options can be adjusted to other legal systems as well.

See supra section 11.2.2 (Regarding market reactions.).
13.3.1 Before Drafting

By laying the groundwork before drafting, transferors will be able to reduce a number of problems. This includes: (1) Understanding the importance of software license agreements; (2) making a cost-benefit analysis; and (3) deciding on a reasonable level of cross-national validity.

Software is among the largest industries, and is growing. The aggregated value of software license agreements is substantial. The amount of time and interest spent on software license agreements should reflect this. This involves: (1) Including senior management in the process; and (2) allocating sufficient time for software license agreement drafting.

The second step is to make a cost-benefit analysis of making software license agreement cross-nationally valid. The analysis will be slightly different if the transferor already has a software license agreement. Generally, the cost-benefit analysis should include questions such as: (1) The geographical distribution of the global market, both generally for the software industry and for the transferor’s software; (2) technical and business choices that might affect software license agreements, and the legal problems that might become


3267 See Robert W. Gomulkiewicz, Getting Serious About User-Friendly Mass Market Licensing For Software, 12 Geo. Mason L. Rev. 687, 701 (2004) (“eULAs are, in the aggregate, a contract with a group of people rivaling the largest corporate end user in size, bringing in revenue in the thousands or millions of dollars.”).

3268 Cf. Id. at 701, 703–705 (“Senior management sees the EULA as a relatively non-strategic, low revenue contract between the company and an individual user. However, this is an incorrect perception of the magnitude of the contract formed by the EULA. EULAs are, in the aggregate, a contract with a group of people rivaling the largest corporate end user in size, bringing in revenue in the thousands or millions of dollars. Most contracts of this magnitude would be read and approved by senior management, but the EULA is not.”).

3269 Transferor’s lawyers often have to draft software license agreements in the last minute. Thus, they often base their work on pre-existing software license agreements and only make necessary changes. See Id. at 692–694. See also Peter Wayner, Free For All 94, Chapter 10.5, recital 440 (Harper Business: New York 2000) (Describing the evolution of BSD and the BSD software license agreement. One of the original researchers, Bill Joy, “explains that he just copied over a license from the University of Toronto and ‘whited out’ ‘University of Toronto’ and replaced it with ‘University of California’.”).
relevant due to this; and (3) the amount of resources available to create cross-
nationally valid software license agreements.

Cross-national validity begins with making technical and business choices. Some technical and business choices can make it easier to overcome differences between jurisdictions with software license agreements, and make certain provisions and practices unnecessary. This is especially important when developing a new program and drafting its software license agreement, but it may also be possible to make such modifications at a later stage. Options may include to transfer software for a limited time against recurring fees,\textsuperscript{3270} tie software to non-perpetual, recurrently remunerated user accounts,\textsuperscript{3271} rely more on technical tools such as product keys, or move to a cloud model.

Currently, a strong trend in software business models is personal data collection as a revenue source.\textsuperscript{3272} This might also be the most problematic business model, due to the current strong focus on data privacy among lawmakers, consumer associations, and the market. Certain legal issues might be possible to resolve, but compared to more traditional business models, there is more uncertainty regarding this kind of business model.

Based on these technical and business choices, a transferor must decide what provisions and practices will be necessary to legally secure revenue streams.

If there is a preexisting software license agreement, the analysis should also include questions such as: (1) If a provision becomes invalid, is it likely to become severed or is there a risk that the entire contract becomes invalid; (2) the risk and consequences of invalidity (both legal and practical); (3) the primary function of the software license agreement, for example to (a) legally secure a chosen business model, (b) determine rights and obligations, or (c) create \textit{in terrorem} effects to avoid litigation; (4) which provisions are necessary to uphold the chosen business model and what provisions can be safely removed; and (5) the potential savings or costs created by making software license agreements cross-nationally valid.

\textsuperscript{3270} See supra section 3.1.1 (Regarding the differences between leased or sold software under German law.).

\textsuperscript{3271} BGH Feb. 11, 2010, NJW 2010, 2661 (“Steam”) (Ger.).

\textsuperscript{3272} Julia Angwin & Jeremy Singer-Vine, \textit{Selling You on Facebook}, \textit{Wall St. J.} April 7, 2012, at C1 (“Apps are gateways, and when you buy an app, there is a strong chance that you are supplying its developers with one of the most coveted commodities in today’s economy: personal data.”).
This analysis will likely suggest that improvements are beneficial or necessary. This will reduce legal uncertainty and might be a way to reduce transaction costs. Furthermore, it might be necessary, at least in the longer perspective. The geographical distribution of the single software market is changing. Increasingly external pressure from lawmakers, consumer associations, and the market\(^{3273}\) makes it increasingly important to improve cross-national validity.

Still, transferors must decide whether only a basic level of cross-national validity is feasible from a technical and economic perspective, or whether complete, or close to complete cross-national validity can be feasible.

### 13.3.2 Drafting

First, transferors should focus on achieving a basic level of cross-national validity, by creating a cross-nationally valid shell. This requires: (1) Presenting the software license agreement prior to the conclusion of the agreement; (2) giving adequate notice about the standard terms, and an opportunity to read for consumers; (3) writing the software license agreement in the prospective transferee's local language; (4) not including so many provisions so that important provisions become buried in the agreement and fail to become incorporated; (5) using an assent mechanism that is likely to be cross-nationally valid, such as click-wrap/web-wrap license agreements; (6) meeting the special consent requirements for certain provisions, such as personal data collection consent; and (7) reducing the risk of cross-national issues with interpretation.

Second, based on technical and business choices, only essential provisions should be used; unnecessary provisions should be removed to avoid affecting more important provisions, and to leave room for improvements. Transferors should consider modifying technical and business solutions, so that transferors can achieve their objectives without problematic provisions, or so that national differences can more easily be overcome.\(^{3274}\) Transferors should also simplify software license agreements by drafting shorter and clearer soft-

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\(^{3273}\) Problematic practices among technology companies spread incredibly fast word to mouth today. Cf. Mike Isaac, *Instagram's Updated User Agreement Goes Into Effect This Week*, AllThingsD Jan. 15, 2013 (“Instagram reminded users on Tuesday morning that it would roll back its user agreement to the previous version, with some minor changes, after a widespread user outrage last year erupted over a change in the service's terms to suit future monetization of the product.”).

\(^{3274}\) See supra section 12.3.3.
ware license agreements. Furthermore, software license agreements should include clear explanations and definitions.

Third, transferors should compromise when possible and find a middle ground. This might sometimes be possible without affecting business models. Such examples include provisions that prohibit reverse engineering and warranty disclaimers.

Fourth, transferors have two major approaches to make software license agreements cross-nationally valid. They may attempt to bridge or to avoid differences between jurisdictions. Both approaches will be simpler if transferors have made changes related to technology and business.

When bridging differences, transferors have mainly three different options: (1) One software license agreement with one set of provisions for all jurisdictions; (2) one software license agreement with additional sets of provisions for certain jurisdictions; or (3) different software license agreements for different jurisdictions. The first approach will require adaptation to German requirements, which is simplified if business models and technical choices are first modified. The second approach can meet the German requirements while allowing transferors to adapt to the more lenient American requirements. But additional provisions might impede incorporation of provisions and additional provisions must clearly state the rights of German transferees. The third approach solves the incorporation problem by reducing the amount of text, but requires transferors to be able to present each transferee with the correct software license agreement, which may raise transaction costs.

When avoiding differences, transferors have mainly three different options: Use choice-of-law clauses, control the outcome under default private international law rules on applicable law, or create a neutral ground for the parties.

3275 This is related to user-friendliness, which lies both in the interest of transferors and transferees. Gomulkiewicz suggests six improvements to software license agreement user-friendliness: (1) “Plain, simple language” that is accessible to the average transferee; (2) “Friendly format,” that is to say: Improve readability by avoiding small print; (3) “Brevity”; (4) “Clear explanations,” preferably with examples; (5) “Simple license model” to avoid complex provisions; and (6) “Customer-friendly terms,” that is to say: Imposing restrictive provisions increase the number of words. See Gomulkiewicz, supra note 3267, at 697–699.

3276 Cf. Overlap, Inc. v. Alliance Bernstein Investments, 2007 WL 4373975 (W.D. Mo. Dec. 14, 2007) (Regarding the court’s problems to determine the meaning of the software license agreement.).

3277 Provisions that prohibit reverse engineering for other reasons than interoperability purposes are cross-nationally valid, but this is already prohibited in the absence of contract.

3278 Liability might be more likely under German law, so such provisions might be more important under German law, and then it might be acceptable to compromise with less far-reaching warranty disclaimers.
to use. Each approach has a number of limitations, which makes this unsuitable as a general approach. Against business actors, all three approaches may be viable, but all approaches have problems against consumers. Under German private international law rules, choice-of-law clauses will not be able to limit German mandatory law, if German law would apply in the absence of contract. German law will apply if a transferor directs activities to Germany under the *Alpenhof* analysis, if the transferor, for example: (1) Pays a search engine operator for improved visibility in Germany; (2) presents its telephone number with land-codes; (3) uses top-level domains that belongs to other countries, such as “.de,” or neutral domains such as “.com”; or (4) allows the transferee to use a site in another language and currency, for example German and Euro.\textsuperscript{3279} German law might also be applicable due to tortious use of disapproved provisions.\textsuperscript{3280} German data privacy regulation might have a different geographical scope than applicable law to the software license agreement,\textsuperscript{3281} and there is always a possibility that a German court will disregard the *Alpenhof* analysis and apply German law anyway. Also, there is a risk that this strategy could create negative market reactions if deemed unfair by consumers.\textsuperscript{3282} Avoiding to direct activities to Germany might be one way to reduce the risk of software license agreement validity, but this is a difficult approach.

In the end, it might be possible to combine different approaches. That is, bridge differences between jurisdictions with any of the above solutions, avoid directing commercial activities to Germany, and perhaps also include choice-of-law clauses pointing to California law.


\textsuperscript{3280} BGH May 20, 2010, NJW 2010, 2719, para. 23 (Ger.); BGH Jul. 9, 2009, NJW 2009, 3371, para. 22 (Ger.) (The law of the country where the damage occurs will be applied. This is the place where the contractual provisions, which the legal order disapproves of, have been or are likely to be used, affect the legally protected collective interest of consumers.).

\textsuperscript{3281} Florian Jotzo, *Gilt deutsches Datenschutzrecht auch für Google, Facebook & Co. bei grenzüberschreitendem Datenverkehr?*, 2009 MMR 232, 236 (2009) (Arguing that German data privacy regulation is likely to be applicable if a transferor relies on users located in Germany by having some influence over personal data collection. This is likely if the software sends back data to the transferor.).

\textsuperscript{3282} See supra section 11.2.2 (Regarding market reactions.).
13.3.3 Post Drafting

The law applicable to software license agreement is in constant flux, so transferors need to stay up to date with applicable law. But transferors must also continuously re-evaluate software license agreements, technical choices, and business models, and improve software license agreements based on this. Thus, the process described above for use before drafting should be repeated on a regular basis. This will require time and resources. But the cost will still be negligible in relation to the importance of the industry.

It might also be worth exploring if the cost can be reduced through shared resources tracking the development of legal requirements on a cross-national level. This could be achieved in the form of an open tool. We can borrow two ideas from the European Union, the European Union CLAB Database of Unfair Contract Terms (“CLAB Database”), and the IATE term base. The first example contained specific contractual terms in consumer contracts that have been considered unfair by legal decisions. The IATE term base is able to give advice on translation on central terminology. By combining the two ideas it would be possible to create a database containing legally problematic provisions. Also, it would be possible to give advice on alternative drafting for different jurisdictions that would avoid such problems. This kind of idea and other ideas that simplify the process of drafting cross-nationally valid software license agreements are worth exploring.

13.4 Not Merely a Pipe Dream

While technology allows, and to some extent even advocates for globalization, it is far from simple to unite the global nature of technology with the local nature of law. One potential solution can be found in the discourse about law and globalization, the creation of global contractual governance. Cross-nationally applied agreements have been put forward as a potential bridge between different legal systems. In this thesis, this has been tested as a
hypothesis through the question of cross-national validity of software license agreements.\textsuperscript{3287}

Clearly, this is not a simple approach, but it is possible for transferors to make substantial improvements to cross-national validity, especially if transferors are willing to make slight technical and business modifications. Some transferors will be able to make software license agreements almost completely cross-nationally valid, while some transferors might have to be content with a basic level of cross-national validity. It can be discussed whether perfect cross-national validity is optimal, or whether that would increase transaction costs and thus contravene the purpose of cross-national validity. Still, clear improvements are likely to be possible without unreasonable increases in transaction costs.

Thus, it might be possible to bridge many, if not most, differences between different jurisdictions. My hypothesis can clearly not be falsified, and cross-national validity is not merely a pipe dream. Still, it is important to remember that this thesis has only focused on two legal systems, Germany and the United States. But many German findings can be extended to the entire European Union, and the combined leverage of the United States and the European Union in the single software market is substantial. While the collective leverage of the United States and the European Union seems to decrease over time, the two still dominate the single software market.\textsuperscript{3288} While these figures are likely to change over time, they clearly show that being able to create software license agreements that are valid in the United States and within the European Union will likely cover a vast majority of situations. Granted, this might become more difficult in the future when developing countries, such as the BRIC countries, become increasingly important.

Still, realizing the single software market is arguably not as difficult as one might imagine. In theory, this would require transferors to take all the legal systems in the world into account.\textsuperscript{3289} In practice, the United States

\textsuperscript{3287} See supra section 1.3.2.

\textsuperscript{3288} See Business Software Alliance, supra note 3243 (2011 global study); Business Software Alliance, supra note 3244 (2007 global study) (Market share of the worldwide market: 2003 – United States 45 percent, European Union 33 percent, total 78 percent; 2007 – United States 42 percent, European Union 30 percent, total 72 percent; 2011 – United States 40 percent, European Union 28 percent, total 68 percent. The data is calculated from estimated piracy losses and piracy rates between 2003 and 2011.).

\textsuperscript{3289} Cf. Tim Gerlach, Using Internet Content Filters to Create E-Borders to Aid in International Choice of Law and Jurisdiction, 26 Whittier L. Rev. 899, 908 (2005) (Regarding holding individuals responsible for damages that may be caused on the Internet: “This then would
and the European Union make up a dominant, albeit decreasing, portion of the single software market. By adding a handful of other important countries, it becomes possible to cover almost the entire current single software market, without taking the laws of hundreds of legal systems into account. For example, if transferors would also make software license agreements valid within the BRIC countries and Japan, this would cover almost the entire single software market.3290

<table>
<thead>
<tr>
<th>Year</th>
<th>United States</th>
<th>European Union</th>
<th>BRIC</th>
<th>Japan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>45 percent</td>
<td>33 percent</td>
<td>2 percent</td>
<td>8 percent</td>
<td>88 percent</td>
</tr>
<tr>
<td>2004</td>
<td>42 percent</td>
<td>38 percent</td>
<td>2 percent</td>
<td>8 percent</td>
<td>89 percent</td>
</tr>
<tr>
<td>2005</td>
<td>43 percent</td>
<td>36 percent</td>
<td>3 percent</td>
<td>7 percent</td>
<td>88 percent</td>
</tr>
<tr>
<td>2006</td>
<td>43 percent</td>
<td>31 percent</td>
<td>5 percent</td>
<td>8 percent</td>
<td>87 percent</td>
</tr>
<tr>
<td>2007</td>
<td>42 percent</td>
<td>30 percent</td>
<td>7 percent</td>
<td>8 percent</td>
<td>87 percent</td>
</tr>
<tr>
<td>2008</td>
<td>42 percent</td>
<td>30 percent</td>
<td>7 percent</td>
<td>6 percent</td>
<td>86 percent</td>
</tr>
<tr>
<td>2009</td>
<td>41 percent</td>
<td>28 percent</td>
<td>7 percent</td>
<td>8 percent</td>
<td>85 percent</td>
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<tr>
<td>2010</td>
<td>41 percent</td>
<td>27 percent</td>
<td>8 percent</td>
<td>7 percent</td>
<td>83 percent</td>
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<tr>
<td>2011</td>
<td>40 percent</td>
<td>28 percent</td>
<td>8 percent</td>
<td>7 percent</td>
<td>83 percent</td>
</tr>
<tr>
<td>Average</td>
<td>42 percent</td>
<td>31 percent</td>
<td>5 percent</td>
<td>7 percent</td>
<td>86 percent</td>
</tr>
<tr>
<td>Median</td>
<td>42 percent</td>
<td>30 percent</td>
<td>6 percent</td>
<td>8 percent</td>
<td>87 percent</td>
</tr>
</tbody>
</table>

While their cumulative market share may be decreasing over time and it might be necessary to extend validity to additional legal systems in the future, cross-national validity is not a pipe dream. There is great hope for achieving cross-national validity of software license agreements and bringing us one step closer to realizing the single software market.

require him to know the laws of every nation, which is too great a burden for a single Internet publisher and would greatly stifle Internet publication.”).

3290 See Business Software Alliance, supra note 3243 (2011 global study); Business Software Alliance, supra note 3244 (2007 global study) (Estimated shares of the global legal software market (software transfers). Data is calculated from estimated piracy losses and piracy rates.).
13.5 Further Research

Research is never completely done, especially in an area like this that is both relatively new and constantly evolving. The proliferation of software distribution channels and mobile applications will likely help the single software market take a major leap forward in the near future. This leap will likely make cross-national validity more important, but an ever-expanding single software market will also increase the challenges with achieving cross-national validity. The importance of cross-national validity is especially likely to increase if consumer associations become even more active and if lawmakers become increasingly active on a national level without making comparative inquiries. Thus, it will be important to make continuous studies in this subject as law, business, and technology develop. This subject could also be further developed in several directions. For example:

(1) Studying additional legal systems to see if similar problems can be found in other legal systems, or if new problems emerge.\textsuperscript{3291} The latter is likely, since this study has focused on legal systems within the Western legal culture.

(2) Making further inquiries to creating a simple model law that would work as a neutral ground.\textsuperscript{3292}

(3) A quantitative and qualitative study on how transferors approach software license agreement drafting, how transferors think about cross-national validity, and what aspects they find problematic.

(4) A study on the practical consequences of predicted invalidity.\textsuperscript{3293} Not all predicted invalidity will likely end up in court. But court decisions over similar provisions, market reactions, increased external pressure from interest associations, lawmakers, and transferees, as well as increased institutional support and mechanisms to prevent use of invalid provisions will likely affect

\textsuperscript{3291} Interesting legal systems would be the BRIC countries and Japan. Together with the United States and the European Union they cover almost the entire single software market. See \textit{Business Software Alliance}, supra note 3243 (2011 global study); \textit{Business Software Alliance}, supra note 3244 (2007 global study) (Estimated shares of the global legal software market (software transfers): 2003 - 88 percent; 2007 - 87 percent; 2011 - 83 percent. Data is calculated from estimated piracy losses and piracy rates.).

\textsuperscript{3292} See supra section 12.4.3 (Regarding a neutral ground and Contracts for Software Transfers (CST).).

\textsuperscript{3293} See supra section 11.2.
transferors’ approach to cross-national validity. It would be interesting to quantitatively and qualitatively measure how such things affect transferors.

(5) Examine technical aids that might simplify drafting of cross-nationally valid software license agreements easier.

13.6 Closure

The law applicable to software license agreements is in constant development, and has taken significant leaps during the time that I have been working on this thesis. It can be taken for granted that applicable law will continue to develop, sometimes in unexpected ways. It can also be taken for granted that technology, business models, and software license agreements will continue to develop. The single software market is likely to expand, and the geographical distribution of the single software market is likely to tilt more towards developing countries. As a result, transferors will have to take the national law of an increasing number of legal systems into account. Thus, the importance of cross-national validity is likely to increase further.

Transferors will probably not be able to eliminate every legal issue in the single software market. But transferors can make great strides, and transferors are likely to make more improvements when our knowledge of cross-national validity increases further. Fewer legal issues will reduce uncertainty, promote efficiency and trade, and will bring us one step closer to realizing the single software market.
Glossary

“Apps”
The term “app” is a short form for application, or application software, which may be generically defined as “software designed to make the computer do what is required and perform particular tasks.” Technically, applications for all platforms can be “apps.” But the term has recently been transformed and now commonly denotes applications for mobile devices such as smartphones or tablets.

Benchmark(ing)
“Benchmarking” denotes “the testing of a system or a program with a benchmark.” A “benchmark” denotes “a program used to test the performance of software or hardware or a system.”

Binary executables
Sometimes “executable file” or “binaries.” A binary executable is “a file that contains a program rather than data.” Software in executable form is “a program translated or compiled into a machine code form that a processor can execute.”

Business model
A business model can be defined as depicting “the design of transaction content, design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities.”

3295 Cf. Apple, Inc. v. Amazon.com, Inc., 2011 WL 2638191, *7 (N.D. Cal. Jul. 6, 2011) (“Thus, while the apps might be similar in use and function, the apps offered by Amazon can be used on Android devices only, not on Apple devices, which suggests that the class of purchasers is not the same in each instance.”).
3296 Collin, supra note 3294, at 36. See also Norse Systems, Inc. v. Tingley Systems, Inc., 49 Conn. App. 582, 584, fn. 2 (1998) (“Benchmarking is a test of the compatibility among a computer software program, the data to be processed and the computer hardware.”).
3297 Collin, supra note 3294, at 129 (“executable file”).
3298 Id. at 129 (“executable form”).
characteristics of business models may include: “(1) Value propositions or offerings; (2) the resources needed to develop and implement a business model; (3) the revenue logic (including sources of revenue, price-quotation principles and cost structures) that is characteristic of a particular business; and (4) relationship with other actors.”

**Browse-wrap license agreement**

“Browse-wrap” is a method of binding a visitor to a web page’s terms of use. The agreement is commonly accessible through a hyperlink on the web page and simply accessing the web page often indicates assent. The user is not presented with the agreement before entering into the agreement and is not required to view the agreement to use the site.

**Click-wrap license agreement**

A “click-wrap license agreement” is an on-screen electronic agreement that the transferee has to accept in order to install, download, or use the software. Acceptance of the terms is indicated by clicking on a button labeled “I accept” or similar in a dialog box or pop-up window. Rejection of the terms is indicated by clicking on a similar button labeled “I do not accept” or similar. Click-wrap license agreements that must be accepted before software on a physical media can be installed is sometimes known as “CD click-wrap.” Click-wrap license agreements found on web pages, and which must be accepted before downloading or accessing software are known as “online click-wrap license agreements,” or sometimes “web-wrap” or “net-wrap license agreements.”

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3301 Kaustuv M. Das, *Forum-Selection Clauses in Consumer Clickwrap and Browsewrap Agreements and the ‘Reasonably Communicated’ Test*, 77 *Wash. L. Rev.* 481, 499–500 (2002). See also Southwest Airlines Co. v. BoardFirst, L.L.C., 2007 WL 4823761, *8 (N.D. Tex. Sep. 12, 2007) (“Browsewraps may take various forms but typically involve a situation where notice on a website conditions use of the site upon compliance of certain terms or conditions, which may be included on the same page as the notice or accessible via a hyperlink.”).


3304 *Id.* at 385.

Cloud computing
There is yet no uniform definition of cloud computing, partly because the term is relatively new, and partly because it is used as a grab bag of various services and technologies. Still, cloud computing can denote “a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”

Cloud Software as a Service (SaaS)
One form of cloud computing, allowing, “the consumer … to use the provider’s applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin client interface such as a web browser (e.g., web-based email).”

Compatibility
Compatibility of software or hardware, by adhering to a standard, allows software and hardware from different manufacturers to work together without modifications.

Compilation
“[T]ranslation of an encoded source program into machine readable code.”

Complete validity, asymmetrical validity, and complete invalidity
Denotes different levels of validity of cross-nationally applied software license agreements. An asymmetrically valid software license agreement or provi-
Glossary

A provision is valid and enforceable in one jurisdiction, but invalid and unenforceable in another jurisdiction. This can be contrasted with a completely valid or completely invalid software license agreement or provision. The former is valid and enforceable in all jurisdictions, while the latter is invalid and unenforceable in all jurisdictions.

Computer

“A ‘computer’ is an electronic device that processes information and follows instructions to accomplish a result.” Computer is an electronic device that processes information and follows instructions to accomplish a result. A computer consists of hardware and software. This broad definition will cover everything from desktop computers to mobile phones and antilock brakes.

Computer code

Computer code denotes “a programming language that consists of commands in binary code that can be directly understood by the central processing unit, without the need for translation.” Computer code is sometimes also known as object code or machine code. Software is not written in computer code, but in a programming language and then translated through a compilation process into computer code.

Conditions and covenants

Pure conditions (not blended with a covenant) have copyright implications. A breach of a pure condition is copyright infringement. Pure covenants, on the other hand, only have contract law implications. A breach of a pure covenant is a breach of contract. There are two views on how to distinguish pure conditions. According to the first view, applicable within the jurisdiction of the Ninth Circuit, pure conditions must touch upon the exclusive rights of

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3313 Principles of the Law of Software Contracts § 1.01(c) cmt. a. (2009). Cf. Collin, supra note 3294, at 75 (A computer is “a machine that receives or stores or processes data very quickly using a program kept in its memory.”).

3314 Principles of the Law of Software Contracts § 1.01(c) cmt. a. (2009).

3315 Collin, supra note 3294, at 73 (Regarding computer code.).


According to the second view, the parties may freely choose what is a condition.\textsuperscript{3319}

**CPU**
A CPU, or central processing unit, is “[t]he principal operating part of a computer.”\textsuperscript{3320}

**“Debugging”**
To “debug” software is a process to find and resolve defects in software, known as “bugs”.\textsuperscript{3321}

**Hardware**
“[T]he physical units, components, integrated circuits, disks and mechanisms that make up a computer or its peripherals.”\textsuperscript{3322} Apart from personal computers, and computer-like devices such as phones and tablets, such hardware products include electronic systems in various industrial and personal applications (for example aircrafts and cars).

**Interoperability**
Allowing different software running on different hardware to interconnect, that is, exchange and use information.\textsuperscript{3323}

**Kernel**
“[T]he essential instruction routines required as a basis for any operations in a computer system.”\textsuperscript{3324}

**License (agreement)**
A license agreement is a document evidencing a license.\textsuperscript{3325} A license is “[a] permission, [usually] revocable, to commit some act that would otherwise be

\textsuperscript{3318} See MDY Indus. LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 941 (9th Cir. 2010).
\textsuperscript{3319} See Gomulkiewicz, supra note 3317, at 354–358.
\textsuperscript{3321} Collin, supra note 3294, at 95.
\textsuperscript{3322} Id. at 156. Cf. Ravicher, supra note 3316, at *6 (“[E]very part of a computer that is visible, whether with a blind eye or with a microscope.”).
\textsuperscript{3323} See Collin, supra note 3294, at 180.
\textsuperscript{3324} See Collin, supra note 3294, at 187.
\textsuperscript{3325} See Gomulkiewicz, supra note 3317, at 346 (“To be most accurate, the entire contract
Whether a software license agreement contains a true license or merely post-sale use restrictions depends on whether software is licensed or sold.3327

Open source
“[D]escribes a program for which the source code is freely available and which anyone is legally able to modify and improve.”3328 Sometimes used interchangeably with free software.3329 The requirements for software to be labeled free or open source software are found in the Free Software Definition3330 and the Open Source Definition (OSD).3331 Open source and free software should not be confused with freeware.3332

Principles of the Law of Software Contracts (ALI Principles)
The Principles of the Law of Software Contracts, published by the American Law Institute (ALI), can provide guidelines for courts regarding software transfers. The Principles of the Law of Software Contracts “seek to clarify and unify the law of software transactions,” but it is not a restatement of the law. It’s only accounting “for the case law and recommends best practices.”3333 The Principles of the Law of Software Contracts are sometimes abbreviated as the “ALI Principles.”3334

should be called the ‘license contract’ and the rights-granting part of that license contract should be called the ‘license.’”).

3326 See Black’s Law Dictionary 1002 (9th ed. 2009). Cf. De Forest Radio Telephone Co. v. United States, 273 U.S. 236, 241–242 (1927) (A license “has been described as a mere waiver of the right to sue by the patentee.”).

3327 See supra section 3.1.1 (Regarding whether standard software is licensed or sold.).

3328 Collin, supra note 3294, at 239.


3331 See Bruce Perens, The Open Source Definition, in Open Sources: Voices from the Open Source Revolution 171 (Chris DiBona, Sam Ockman & Mark Stone eds., O’Reilly: Sebastopol 1999).

3332 Cf. Collin, supra note 3294, at 146 (“[S]oftware that is in the public domain and can be used by anyone without having to pay.”).


Reverse engineering, decompiling, and disassembling
Reverse engineering, decompiling and disassembling refers to “any process by which computer software is converted from one form to another form which is more readily understandable to human beings, including without limitation any decoding or decrypting of any computer program which has been encoded or encrypted in any manner.”

Share-alike clause
A provision that requires software modifications to be licensed under the same or compatible terms as the original work. This type of provision is sometimes known as a copyleft clause.

Shrink-wrap license agreement
“Shrink-wrap” refers to the transparent plastic that physical software boxes are wrapped in. The box commonly has a notice of the software license agreement, and a requirement to consent to the software license agreement. The software license agreement is found either on or inside the box. The software license agreement states the acceptance procedure for the license agreement. Some software license agreements state that the transferee manifests assent simply by breaking the plastic barrier, others that the transferee manifests assent by reviewing the license agreement and not returning the software for a full refund within a set time.

Software
“ ‘Software’ consists of statements or instructions that are executed by a computer to produce a certain result.” Technically, software can be defined as everything that is not hardware. The term has traditionally referred to

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3337 See, e.g., ProCD v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996); Mark A. Lemley, Intellectual Property and Shrinkwrap Licenses 68 S. Cal. L. Rev. 1239, 1241–1242 (1995); Ravicher, supra note 3316, at *40–41. See also the UCC on terms attached in a shrink-wrap license agreement, UCC § 2-207(c) cmt. 5 (Westlaw through September 2013).
3338 See, e.g., ProCD v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996); Black’s Law Dictionary, supra note 3326, at 1004.
3339 Principles of the Law of Software Contracts § 1.01(j) cmt. a. (2009). This definition is consistent with the definition of a “computer program” found in the U.S. Copyright Act, see 17 USC § 101. See also Collin, supra note 3294, at 309 (“[A]ny program or group of programs which instructs the hardware on how it should perform.”).
3340 See South Cent. Bell Telephone v. Barthelemy, 643 So.2d 1240, 1246 (La. 1994) (“In
operating systems, application programs (for example, Adobe Photoshop, Apple iTunes or Microsoft Excel) and data that are used by hardware.\textsuperscript{3341} Technical developments have expanded the term to cloud software as a service and other novel forms of software.\textsuperscript{3342}

**Software distribution**

Software distribution refers to the process of distributing software from transferor to transferee. Software can either be distributed on physical media or in digital form.\textsuperscript{3343} The term should not be confused with the noun “a software distribution” (sometimes “distro”), that is, a collection of software, for example Berkeley Software Distribution (BSD) or the GNU/Linux software distribution Ubuntu.

**Software license agreement**

A software license agreement is an agreement for the transfer or access of software.\textsuperscript{3344} The term “software license agreement” is used as a generic term to describe what is sometimes known as a “software license,”\textsuperscript{3345} “software contract,”\textsuperscript{3346} “terms of use,” (end user) “license agreement,” “access agreement,”\textsuperscript{3347} and similar. The term software license agreement attempts to bridge these different terms.

its broadest scope, software encompasses all parts of the computer system other than the hardware, i.e., the machine; and the primary non-hardware component of a computer system is the program”). See also Christine E. Reinhard, Tangible or Intangible—Is That the Question? Conflict in the Texas Tax Classification System of Computer Software, 29 St. Mary’s L.J. 871, 887–889 (1998).

\textsuperscript{3341} Cf. Collin, supra note 3294, at 309 (Software denotes “any program or group of programs...including operating systems, word processors and applications programs.”); Commission Decision C(2004) 900 final of 24 March 2004 relating to a proceeding under Article 82 EC (Case COMP/C-3/37.792 Microsoft), para. 37 (System software and application software.); Reinhard, supra note 3340, at 889–891 (Divides software into: (1) Operational software; (2) utility software; and (3) application software.).

\textsuperscript{3342} See supra section 2.1.6.

\textsuperscript{3343} See supra section 2.1.2.

\textsuperscript{3344} See Principles of the Law of Software Contracts § 1.01(a, d) (2009).

\textsuperscript{3345} Collin, supra note 3294, at 309 (“[A]n agreement between a user and a software house, giving details of the rights of the user to use or copy the software.”).


\textsuperscript{3347} See Id. at § 1.01(a).
Software transfer
“[A] conveyance of rights in software or an authorization to access software, including by way of sale, license, lease, or access agreement.”3348

Source code
Source code is a higher-level set of commands that is written by a programmer in a programming language (for example [ANSI] C or Objective-C).3349 A computer can only natively understand binary values — 0 or 1 — also known as machine language, and source code must therefore be “translated” into a language understandable to the computer.3350 This translation process is often achieved by a compiler,3351 but can also be achieved by an interpreter.3352

Specialized or Standard Software
Software can be divided into specialized software and standard software. The former is customized for individual transferees, with the special needs of each transferee in mind. The latter is mass-produced for all kinds of transferees, and is not customized for the individual needs of transferees, even though the target group for some standard software can be very narrow.3353

Transferee
“A party who, pursuant to an agreement with the transferor, has received or has agreed to receive rights in or access to software.”3354

Transferor
“A party who, pursuant to an agreement with the transferee, has transferred or has agreed to transfer software.”3355

3348 PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 1.01(m) (2009).
3350 Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222, 1230–1231 (3d Cir. 1986); Buckman & Gay, supra note 3349, at 3; COLLIN, supra note 3294, at 311.
3351 Buckman & Gay, supra note 3349, at 3.
3352 See COLLIN, supra note 3294, at 311. See also supra section 2.1.1.
3354 PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 1.01(n)(2) (2009).
3355 Id. at § 1.01(n)(1).
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