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Rethinking Consideration in the Electronic Age

Robert A. Hillman
Cornell Law School, rah16@cornell.edu

Maureen O'Rourke
Boston Univeristy School of Law, morourke@bu.edu

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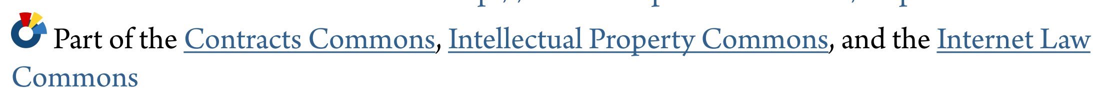
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Articles

Rethinking Consideration in the Electronic Age

ROBERT A. HILLMAN* AND MAUREEN A. O'ROURKE**

Our fast-paced age of electronic agreements that ostensibly govern transactions as diverse as downloading software, ordering goods, and engaging in collaborative development projects raises questions regarding the suitability of contract law as the appropriate legal framework. While this question arises in many settings, we focus here on the free and open source software (FOSS) movement because of the maturity and success of its model and the ubiquity of its software. We explore in particular whether open source licenses are supported by consideration, and argue that they are, and that open source licenses are contracts. We further argue that a contractual framework working in tandem with the intellectual property laws is the appropriate legal structure to govern FOSS transactions. Our discussion holds implications for the understanding of consideration doctrine and contract law generally outside of the FOSS example and, indeed, for collaborative development and electronic agreements generally. The Article is thus an exercise in understanding consideration doctrine's past and future.

* Edwin H. Woodruff Professor of Law, Cornell Law School.

** Dean, Professor of Law & Michaels Faculty Research Scholar, Boston University School of Law.

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INTRODUCTION

The age of electronic communication and digital products creates new challenges for contract law. Novel methods of doing business and new kinds of products raise substantial issues of contract formation, enforcement, and remedy. Because of the importance to our economy of the industries involved, perhaps no other set of commercial legal issues requires greater attention.[1]

Indeed, one important set of issues is whether some transactions are, or should be, encompassed within a contractual framework at all.[2]

1. *See, e.g.*, U.S. CENSUS BUREAU, U.S. DEP'T OF COMMERCE, SERVICE ANNUAL SURVEY 2005, at 29–30 tbl. 3.1.6 (2007), *available at* http://www2.census.gov/services/sas/data/Historical/sas-05.pdf (listing the operating revenue of the United States software industry as over $119 billion in 2005).

2. *Compare* José J. González de Alaiza Cardona, *Open Source, Free Software, and Contractual Issues*, 15 TEX. INTELL. PROP. L.J. 157, 185–209 (2007) (arguing generally that the Free Software Foundation's (FSF's) General Public License (GPL) is a contract), *with* Sapna Kumar, *Enforcing the GNU GPL*, 1 J.L. TECH. & POL'Y 1, 16 (2006) (arguing that the GPL lacks consideration and should be "properly characterized as a failed contract"). For discussions of related issues, see Michael J. Madison, *Reconstructing the Software License*, 35 LOY. U. CHI. L.J. 275 (2003) (evaluating different software licensing regimes and their effectiveness); David McGowan, *Legal Implications of Open Source Software*, 2001 U. ILL. L. REV. 241 (analyzing the GNU/Linux system and the organization of the open-source community); Daniel B. Ravicher, *Facilitating Collaborative Software Development: The Enforceability of Mass-Market Public Software Licenses*, 5 VA. J.L. & TECH. 11 (2000), http://www.vjolt.net/vol5/issue3/v5i3a11-Ravicher.html (exploring the history of software licensing and current law); Greg R. Vetter, *"Infectious" Open Source Software: Spreading Incentives or Promoting Resistance?*, 36 RUTGERS L.J. 53 (2004) (examining infectious license terms of expansive scope and the incentives such terms create for open source and proprietary software); Jason B. Wacha, *Taking the Case: Is the GPL Enforceable?*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 451 (2005) (arguing that the GPL is an enforceable agreement).

For example, what is the appropriate legal framework to govern the licensing of open source software that is collaboratively developed and powers ever-more machines?[3] Steven Weber aptly captures the nature of the open source software movement:

> Open source collaboration depends on an explicit intellectual property regime, codified in a series of licenses. It is, however, a regime built around a set of assumptions and goals that are different from those of mainstream intellectual property rights thinking. The principal goal of the open source intellectual property regime is to maximize the ongoing use, growth, development, and distribution of free software. To achieve that goal, this regime shifts the fundamental optic of intellectual property rights away from protecting the prerogatives of an author toward protecting the prerogatives of generations of users.[4]

Although there are many different open source licenses, the General Public License (GPL) is likely the most common.[5] To achieve the goal of creating a software commons, the GPL authorizes copyholders to transfer, copy, or modify the software subject to a series of restrictions. The restrictions are designed to further an environment of openness by requiring copyholders to reveal the source code to transferees of any software products that are derived from the original source code (often referred to as the "copyleft" provision)[6] and to

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3. For a discussion of the nature of source code, see Jyh-An Lee, *New Perspectives on Public Goods Production: Policy Implications of Open Source Software*, 9 VAND. J. ENT. & TECH. L. 45, 49 (2006).

> Software developers write software in various programming languages.... The original format they write is called source code, which is easy for trained programmers to read and understand. This source code has to be compiled or translated into an object code ... before it can be processed by a computer.... Source code enables users to extend or modify the software for their own needs, while object code is understood only by computers.
>
> "Open source software" is software, the source and object code of which are distributed and made available to the public allowing for free modification by other programmers. In contrast, most commercial software is proprietary software, and is distributed only with the object code so that competitors are prevented from reusing the source code to develop the software.

Id. (footnotes omitted).

4. STEVEN WEBER, THE SUCCESS OF OPEN SOURCE 84 (2004).

5. *See* Stephen J. Davidson & Nathan Kumagai, *Developments in the Open Source Community and the Impact of the Release of GPLv3*, *in* OPEN SOURCE SOFTWARE 2007: RISKS, REWARDS, AND PRACTICAL REALITIES IN THE CORPORATE ENVIRONMENT 137 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 11418, 2007) ("[T]he GPL license covers a solid majority of open source software. According to one source, around two-thirds of all open source projects use the GPL."); Kumar, *supra* note 2, at 1, 3 & n.14 ("Between sixty-five and seventy percent of open source software is GPL[Version 2]-licensed.").

6. *See generally* Ira V. Heffan, Note, *Copyleft: Licensing Collaborative Works in the Digital Age*, 49 STAN. L. REV. 1487 (1997) (reviewing shrinkwrap cases, exploring the implementation of copyleft under GNU GPL, and examining the similarities between copyleft, shrinkwrap, and shareware license agreements).

transfer such software under the same terms as the GPL ("same terms" provision), making the terms themselves "viral" in nature.[7]

Historically, some open source vendors and enthusiasts insisted that such arrangements were merely limited licenses to use the software and were not contracts in large part because they do not require acceptance of the terms[8] nor require the copyholder to furnish consideration to support the grant of use.[9] If the user violated the restrictions in the license, licensors could seek redress in an intellectual property infringement proceeding, but not for breach of contract. The advantages of this legal framework perceived by these advocates include the absence of worrisome formation, liability, privity, and remedial rules of contract law and the availability of injunctive relief under intellectual property law.[10] Perhaps even more important, open source visionaries believe their arrangements create a new framework of sharing and openness that is impervious to, and on a higher plane than, contract law.[11] On the other hand, others maintain—although without much analysis—that the typical open source license, such as the GPL, constitutes a contract because of the nature of the restrictions and other provisions in the license.[12]

In this Article, we focus on the consideration issue and show in some detail that open source licenses that contain restrictions, such as the copyleft and the "same terms" restrictions described above, do not lack consideration, and are therefore not precluded from treatment as contracts on that ground.[13] More important, we assert that contract law *should* govern these transactions because contract law best facilitates the goals of the open source movement while at the same time protecting the interests of open source end users. Indeed, contract working with copyright law better enables the open source movement to realize its goals than reliance on copyright law alone.

But as the title to this Article suggests, we have another important goal beyond analyzing the legal framework of the open source movement. This Article illuminates the meaning and role of the consideration doctrine as we move from a paper to an electronic world.

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7. WEBER, *supra* note 4, at 49.

8. For example, the GNU GPL states that the copyholder is "not required to accept this License in order to receive or run a copy of the Program." Free Software Found., GNU General Public License, Version 3 (June 2007), http://www.fsf.org/licensing/licenses/gpl.html [hereinafter GNU Version 3].

9. *See, e.g.*, Eben Moglen, *Enforcing the GPL, I*, LINUXUSER MAG., Aug. 2001, *available at* http://emoglen.law.columbia.edu/publications/lu-12.html. We focus on the consideration issue here, but set forth our view of formation below. *See infra* notes 114–18 and accompanying text.

10. *See infra* notes 81–86 and accompanying text.

11. *See* WEBER, *supra* note 4.

12. *See infra* note 96–118, and accompanying text for our view on the issue.

13. Other terms that constitute consideration, according to advocates of the contract model, include those that require the licensee to waive any infringement claim or breach of warranty complaint. *See, e.g.*, González de Alaiza Cardona, *supra* note 2, at 204–06.

Consideration doctrine has always been something of a mystery and working out how it does or does not apply in the open source software setting increases our understanding of how the principle has served, and should continue to serve society. The Article is thus an exercise in understanding where consideration doctrine has been and where it is going.

We demonstrate that the purpose of consideration doctrine is to enforce promises that benefit society (viewed broadly) and that are capable of judicial administration. Under this pragmatic framework, open source software transactions can and should be administered as contracts because of their economic importance and because of the judiciary's ability to administer them. Further, because contract law clarifies formation requirements, quality obligations, and remedial duties of open source transactions, and generally increases transactional certainty, both providers and end users of open source software have an interest in establishing a contractual framework for their transactions. These conclusions have implications beyond the software industry and shed light on the appropriate legal landscape for other movements employing the philosophy of openness.

Part I constitutes a brief primer on the bargain theory of consideration as courts apply it in the paper world. Part II discusses the open source software movement and concludes that open source licenses are contracts under an appropriate understanding of consideration doctrine. Part III makes the normative argument that a contract-based framework makes sense for the open source community. Our conclusion reiterates our view that contract law, working with intellectual property law, is the appropriate legal structure to govern most open source software transactions.

I. THE BARGAIN THEORY OF CONSIDERATION

A. THE MEANING OF "BARGAIN"

As discussed above, an important issue in the electronic age is whether, as a descriptive matter, an open source software license, such as the GPL, constitutes a contract. The issue focuses in large part on whether consideration supports the distribution of the open source software or, on the other hand, whether the license amounts to no more than a "bare license" or gift with restrictions. So we start with a brief primer on the consideration doctrine under traditional contract law.[14]

14. Part I is based on ROBERT A. HILLMAN, PRINCIPLES OF CONTRACT LAW 15–37 (2004).

1. Definitions

In a nutshell, contract law enforces promises if the promise is part of a "bargained-for exchange" or "bargain."[15] A bargain exists if the promisor extracts something from the promisee in exchange for the promise.[16] This price of the promise is called "consideration."[17] Contract law distinguishes a promise supported by consideration from a gift promise, which is not enforceable.[18]

The following example illustrates this distinction:

> Suppose a "benevolent" person, Ron D. Jockefeller, promises to buy clothes for a homeless person if the homeless person walks to a clothing store a few blocks away. If the homeless person walks to the store, is Jockefeller's promise of the clothes enforceable? Only if Jockefeller bargained for the homeless person to walk to the store, which in turn depends on whether Jockefeller's motive was to extract the walk as the price of the promise of clothes. But in order to understand Jockefeller's motive, we need more facts. Suppose Jockefeller owned a restaurant and the homeless person had camped out in front of the restaurant. These facts support a finding that Jockefeller's motive for his promise was to remove the homeless person from the vicinity of the restaurant and we can therefore say that Jockefeller bargained for the homeless person's walk to the clothing store. But if Jockefeller did not own a restaurant and made the promise, not because he would get something in return, but simply because he is a wonderful person, the promise would constitute a gift promise and would be unenforceable. The homeless person still must walk to the store to pick up the gift. But those in the know say that the trip to the store is a condition necessary to pick up a gift, not consideration to support Jockefeller's promise.[19]

Of course, distinguishing a condition of a gift from consideration often is no small challenge. In Judge Cardozo's famous decision in *Allegheny College v. National Chautauqua County Bank*, for example, Mary Yates Johnston promised Allegheny College $5000 to establish the "Mary Yates Johnston memorial fund."[20] After contributing $1000, Johnston repudiated her promise, which led to a lawsuit by the college.[21] Judge Cardozo held that the college assumed a duty "to perpetuate the name of the founder of the memorial," which was "sufficient in itself to give validity to the subscription within the rules that define consideration

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15. *Id.*

16. *Id.*

17. *Id.*

18. *Id.*

19. *Id.* at 16 (footnote omitted); *see also* Plowman v. Indian Ref. Co., 20 F. Supp. 1, 5 (E.D. Ill. 1937) (employees' obligation to visit employer's office to pick up checks merely a condition for a gift). This example was inspired by a similar problem posed by Williston in 1 SAMUEL WILLISTON, THE LAW OF CONTRACTS 232–33 (1924).

20. 159 N.E. 173, 174 (N.Y. 1927).

21. *Id.*

for a promise of that order."[22] However, the dissent argued that "[t]he sum offered was termed a 'gift' by [Johnston]. Consequently, I can see no reason why we should strain ourselves to make it, not a gift, but a trade."[23] In short, the majority and dissent disagreed over Johnston's motive—was the use of her name the price of her promise or did she simply want to make a gift, with the suggestion that the college use her name? Both interpretations seem reasonable.

By drawing on the murky gift-versus-consideration distinction, contract law leaves plenty of room for courts to decide whether to enforce promises for other reasons. In short, Cardozo's conclusion likely was motivated more by his sense of the importance of facilitating charitable donations than on the strictures of consideration doctrine.

2. *More on the Promisor's Motive*

So far, the discussion illustrates that traditional contract law's "bargain" concept focuses on the promisor's motive for making the promise and that this determination is often a challenge. Adding further to the confusion, the promisor's actual motive does not control, but what a *reasonable person* with knowledge of the circumstances would believe is the promisor's motive.[24] This is consistent with contract law's general focus on the apparent rather than subjective meaning of the parties' language in negotiating and forming their contract.[25] Another wrinkle is that a promisor's motive to extract something from the promisee can be very minor among a host of reasons for making the promise (as determined objectively) and that motive can change over time.[26] Receiving something in return "does not have to be the primary or even a substantial reason for making the promise, it simply has to be one of the reasons."[27] This maneuver, of course, affords courts even more leeway to manipulate consideration doctrine and to decide on other grounds.

B. WHY NOT ENFORCE GIFT PROMISES?

Theorists have spilled a great deal of ink trying to understand why contract law generally enforces bargains but not gift promises.[28] Why is

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22. *Id.* at 176.

23. *Id.* at 177 (Kellogg, J., dissenting).

24. *See* WILLISTON, *supra* note 19, at 232; *see also* RESTATEMENT (SECOND) OF CONTRACTS § 81 cmt. a (1981) ("[T]he promisor must *manifest* an intention to induce the performance or return promise and to be induced by it, and . . . the promisee must *manifest* an intention to induce the making of the promise and to be induced by it." (emphasis added)).

25. HILLMAN, *supra* note 15, at 37–40.

26. *Id.* at 18.

27. *Id.*; *see also* RESTATEMENT (SECOND) OF CONTRACTS § 81(1) ("The fact that what is bargained for does not *of itself* induce the making of a promise does not prevent it from being consideration for the promise." (emphasis added)); *supra* notes 20–23 and accompanying text.

28. *See* HILLMAN, *supra* note 15, at 23–25.

my "bargain" to sell my piano to Alice in exchange for $400 enforceable, but my promise to give Alice my piano is not?[29] Before enforcing a promise, why bother to determine whether one of a potential host of reasons for making a promise, viewed objectively, was to extract something from the promisee?

Contract law analysts have offered many disparate answers to this question.[30] Professor Lon Fuller's set of explanations[31] is perhaps the most prominent, arguably the most persuasive, and although sometimes recast in different terminology, the most repeated.[32] Nevertheless, even Fuller's reasons leave much open to debate.

In his 1941 article *Consideration and Form*, Professor Fuller presented what he called "formal" and "substantive" reasons for enforcing promises supported by consideration, but not gift promises.[33] In the "formal" reason category, Fuller thought that, as a general matter, promises supported by consideration generate more evidence than gift promises that a promisor actually made the promise.[34] Enforcing only bargains thus satisfies "[t]he need for evidentiary security."[35] Of course, contract law also could have enforced written gift promises, which would have satisfied Fuller's "evidentiary function." The evidentiary role of consideration therefore cannot constitute a sufficient explanation for enforcing bargains and not gift promises.

Fuller explained further that people take their bargains more seriously than gift promises.[36] He reasoned that people often make gift promises impulsively or improvidently.[37] As with Fuller's "evidentiary"

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29. For further obfuscation, see the RESTATEMENT (SECOND) OF CONTRACTS § 71 cmt. c.

> [A] gift is not ordinarily treated as a bargain, and a promise to make a gift is not made a bargain by the promise of the prospective donee to accept the gift, or by his acceptance of part of it. *This may be true even though the terms of gift impose a burden on the donee as well as the donor.*

Id. (emphasis added). The best explanation for this language is that some burdens constitute only what is necessary to complete a gift. For example, a donee who must travel to a store to receive a gift experiences the burden of the travel, but the travel ordinarily would not constitute consideration. *See supra* Part I.A.

30. HILLMAN, *supra* note 15, at 23–25.

31. Lon L. Fuller, *Consideration and Form*, 41 COLUM. L. REV. 799 (1941).

32. *See, e.g.*, Baehr v. Penn-O-Tex Oil Corp., 104 N.W.2d 661 (Minn. 1960).

33. Fuller, *supra* note 31.

34. *See id.* at 799–800.

35. *Id.* at 800; *see also* Mark B. Wessman, *Retraining the Gatekeeper: Further Reflections on the Doctrine of Consideration*, 29 LOY. L.A. L. REV. 713, 829 (1996) (noting that the requirement of a bargain avoids enforcement of "too easily fabricated" gift promises).

36. Fuller, *supra* note 31, at 816–17 ("[T]he fact that the transaction is an exchange and not a gift . . . does offer some guaranty so far as the cautionary and channeling functions of form are concerned . . . ." (footnote omitted)).

37. In the famous case of *Dougherty v. Salt*, 125 N.E. 94, 94 (N.Y. 1919), Helena Dougherty promised her nephew, Charlie, $3000 because she wanted to "take care" of him. The facts reveal that, before Helena's promise, Charlie's guardian told Helena not to "take . . . out in talk" her appreciation

function, however, the "cautionary" role of consideration cannot fully explain the bargain requirement. Enforcing written gift promises arguably also would serve the same purpose because most people believe that written promises are more important and serious.[38] In fact, many people probably believe such promises are already legally enforceable.[39]

Fuller also set forth "substantive" explanations for the gift-consideration division that concern "the significance of the promise made and not merely the circumstances surrounding the making of it."[40] For example, Fuller thought that enforcing bargains enhances "private autonomy."[41] According to Fuller, "the law views private individuals as possessing a power to effect . . . changes in their legal relations" every bit as effective as a legislature.[42] In addition, people can rely on their bargains with the knowledge that contract law will enforce them. Further, where one party has relied in a manner that benefits the promisor, the reason for enforcing promises is strongest because one party's detrimental reliance results in the other's unjust enrichment.[43]

Fuller's substantive reasons for enforcing bargains thus far are of limited help in explaining why contract law enforces bargains but not gift promises.[44] For example, contract law could enforce gift promises to facilitate people's freedom to make and receive gifts.[45] Private autonomy therefore cannot be the primary reason for the distinction between gifts and bargains. Fuller's reliance and unjust enrichment arguments also fail to explain very well why contract law enforces bargains even if the promisee has not relied or conferred a benefit on the promisor.[46]

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for her nephew. *Id.* The court therefore declined to enforce Helena's promise because she was goaded into it. *Id.* at 95; *see also* Wessman, *supra* note 35, at 835 (positing that enforcing gift promises would lead to "inadvertent contracting").

38. HILLMAN, *supra* note 15, at 24.

39. Fuller also discussed the "channeling" function of consideration. *See* Fuller, *supra* note 31, at 801–03. In a nutshell, a bargain presents parties with a concrete procedure or a "distinct set of instructions" for creating an enforceable obligation. HILLMAN, *supra* note 15, at 24. Gift promises, according to Fuller, are "too amorphous to constitute clear instructions for creating a legal obligation." *See* Fuller, *supra* note 31, at 815 ("As to the channeling function of form, . . . the [gift] promise is made in a field where intention is not naturally canalized. There is nothing . . . to effect a neat division between tentative and exploratory expressions of intention, on the one hand, and legally effective transactions, on the other."). But again, written gift promises would do much of the same "channeling" work as a bargain.

40. Fuller, *supra* note 31, at 799–800.

41. *Id.* at 806–08.

42. *Id.* at 806–07.

43. *Id.* at 815–16.

44. *See* Mark B. Wessman, *Recent Defenses of Consideration: Commodification and Collaboration*, 41 IND. L. REV. 9, 10 (2008) ("[T]he reasons commonly advanced in favor of enforcing bargain promises—the facilitation of exchange, the protection of expectations or reliance, or respect for autonomy—could also be mustered in support of the enforcement of promises traditionally classified as gratuitous.").

45. *See* CHARLES FRIED, CONTRACT AS PROMISE 20 (1981).

46. *But see* L.L. Fuller & William R. Perdue, Jr., *The Reliance Interest in Contract Damages: 1*, 46

But Fuller offered one additional substantive argument for the distinction between bargains and gift promises that is more convincing. He explained that gift promises, more than bargains, are likely to constitute "sterile transmission[s],"[47] meaning that gift promises add less than bargains to the "production of wealth and the division of labor."[48] In short, bargains, better than gift promises, contribute to a prosperous society by moving resources to their highest valued uses.[49]

Others have contributed additional reasons for the distinction between gift promises and bargains that nicely complement Fuller's. Professor Melvin Eisenberg has pointed out that courts lack the capacity to entertain the potential volume of cases that would flood the courts if people could sue for breach of gift promises.[50] Further, he underscored the difficulty of *proving* the deliberativeness of oral gift promises and the challenge of sorting out valid from invalid excuses for nonperformance of such promises.[51] The cost of administering a gift-promise regime, in short, would likely exceed the benefit.[52] In addition, even if Fuller were wrong about the contribution of gift promises to society because, for example, gift promises move resources voluntarily from more to less prosperous citizens, itself a socially beneficial outcome, *legal* enforcement of these promises might decrease their number. Promisors might become wary of making gift promises if they thought that they could not change their minds.[53]

In the next section we reinforce the argument that the value of bargains and the capacity of our institutions to administer them stand out as the most promising explanations for the consideration doctrine.

YALE L.J. 52, 62 (1936) ("To encourage reliance we must therefore dispense with its proof.").

47. Fuller, *supra* note 31, at 815 (quoting CLAUDE BUFNOIR, PROPRIÉTÉ ET CONTRAT 487 (2d ed. 1924)).

48. *Id.*; *see also* HILLMAN, *supra* note 15, at 25.

49. Melvin Eisenberg asserts that gift promises would lose their symbolic meaning if they were legally enforceable. *See* Melvin Aron Eisenberg, *The World of Contract and the World of Gift*, 85 CAL. L. REV. 821, 849 (1997).

> The world of gift is a world of our better selves, in which affective values like love, friendship, affection, gratitude, and comradeship are the prime motivating forces. These values are too important to be enforced by law and would be undermined if the enforcement of simple, affective donative promises were to be mandated by the law.

Id.

50. *See* Melvin Aron Eisenberg, *Donative Promises*, 47 U. CHI. L. REV. 1, 2–3 (1979).

51. *See id.* at 4–6.

52. Enforcing only written gift promises would alleviate some of these concerns. *See supra* notes 37–39 and accompanying text.

53. Wessman, *supra* note 44, at 16 (discussing Eisenberg, *supra* note 49, at 828). Still others have contributed enlightened explanations for the bargain-gift promise distinction. *See, e.g.*, FRIED, *supra* note 45; Charles J. Goetz & Robert E. Scott, *Enforcing Promises: An Examination of the Basis of Contract*, 89 YALE L.J. 1261 (1980); Roy Kreitner, *The Gift Beyond the Grave: Revisiting The Question of Consideration*, 101 COLUM. L. REV. 1876 (2001); Richard A. Posner, *Gratuitous Promises in Economics and Law*, 6 J. LEGAL STUD. 411 (1977).

C. IS THE BARGAIN THEORY COHERENT?

The bargain theory is neither descriptively nor normatively very coherent. As Professor Charles Fried pointed out and as the discussion above intimates, the theory leaves ample room for courts to dodge issues and for theorists to ponder.[54] Courts sometimes police the adequacy of consideration despite contract law's freedom-of-contract norm to leave that issue to the parties.[55] Courts enforce gift promises that induce reliance or for a benefit already received despite the absence of a bargain.[56] Courts enforce without consideration contract modifications, option contracts, waivers, and promises made to charitable institutions.[57] Courts enforce promises even if the return consideration is only an ephemeral reason for making the promise.[58] Courts manipulate or dispense with consideration if they believe a gift promise is important enough to enforce.[59] Consideration to support a promise can come from a party other than the promisee.[60] Theorists offer conflicting moral, economic, and libertarian theories, among others, to "explain" promise enforcement.[61] No wonder Professor Grant Gilmore was moved to announce the wholesale demise of the bargain theory of consideration.[62]

Notwithstanding Gilmore, we believe that the bargain theory survives as the best the law can do at line drawing between those promises that should be legally enforceable and those that should be left to the promisor's "*foro conscientiae*."[63] Despite its malleability, consideration serves a minimal gatekeeper role, corralling the large category of gift promises in which the cost of enforcement outweighs the benefit. Nevertheless, the bargain theory's relative indeterminacy means that courts can enlarge the category of promises within its ranks if they

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54. *See* FRIED, *supra* note 45, at 35; *see also* Randy Barnett, *A Consent Theory of Contract*, 86 COLUM. L. REV. 269 (1986); Wessman, *supra* note 35.

55. *See, e.g.*, Jones v. Star Credit Corp., 298 N.Y.S.2d 264, 266 (Sup. Ct. 1969) (finding a contract unconscionable when it specified the sale of a freezer worth $300 to a low-income buyer for $900).

56. FRIED, *supra* note 45, at 25, 31–32.

57. *See, e.g.*, U.C.C. § 2-209 (2005) (contract modification); RESTATEMENT (SECOND) OF CONTRACTS § 87(1) (1981) (option contract); HILLMAN, *supra* note 15, at 274 (waiver); *cf.* Allegheny Coll. v. Nat'l Chautauqua County Bank of Jamestown, 159 N.E. 173, 176 (N.Y. 1927) (charitable institutions).

58. *See supra* note 26 and accompanying text.

59. *See supra* notes 20–23 and accompanying text.

60. RESTATEMENT (SECOND) OF CONTRACTS § 71(1), (4) ("To constitute consideration, a performance or a return promise must be bargained for.... The performance or return promise may be given to the promisor or to some other person. It may be given by the promisee or by some other person.").

61. *See generally* ROBERT A. HILLMAN, RICHNESS OF CONTRACT LAW (1997).

62. *See* GRANT GILMORE, THE DEATH OF CONTRACT 111 n.34 (1974) ("*Hamer v. Sidway* ... illustrates ... that the New York Court of Appeals ... rejected the so-called bargain theory of consideration.").

63. Mills v. Wyman, 20 Mass. (3 Pick.) 207, 208 (1825).

believe a promise is important and enforcement is administratively feasible.

Two examples of the latter should suffice. To preserve the flexibility of contracting parties in the face of changed circumstances, contract law recognized the importance of enforcing contract modifications that are not supported by consideration. Courts therefore devised mutual rescission, waiver, and other theories within the framework of the consideration doctrine to allow for enforcement of such modifications.[64] Similarly, contract law began to enforce promises not to revoke offers (option contracts) in the absence of consideration because of the importance of options to our economy: "The fact that the option is an appropriate preliminary step in the conclusion of a socially useful transaction provides a sufficient substantive basis for enforcement. . . ."[65]

In short, under the rubric of "consideration," twentieth-century courts enforced promises that increased society's welfare, interpreted broadly, and that were capable of judicial administration.[66] Lines were drawn, but courts could adjust them if necessary. In Parts II and III of this Article, we argue that open source licenses nicely fit in the category of agreements that consideration doctrine, as it is currently understood, encompasses. Further, we argue that contract law *should* enforce such licenses as contracts.

II. The Paper World's Conception of Contracts Includes Open Source Licenses

A. The Nature of the Open Source Movement

The notion that sharing software might be a successful technical and business strategy began somewhat earlier than many might think. In 1955, users of one of IBM's early systems organized a user group called SHARE in which members exchanged ideas and software.[67] IBM at the

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64. *See, e.g.*, Robert A. Hillman, *Contract Modification Under the Restatement (Second) of Contracts*, 67 CORNELL L. REV. 680 (1982); Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1700 (1976).

65. RESTATEMENT (SECOND) OF CONTRACTS § 87 cmt. b; *see also* David Gamage & Allon Kedem, *Commodification and Contract Formation: Placing Consideration Doctrine on Stronger Foundations*, 73 U. CHI. L. REV. 1299, 1318–19 (2006) ("Since option contracts and guarantee contracts are socially valuable in substance, any imperfections in form can be ignored. Ironically, whereas these authorities normally prioritize substance over form, they are willing to accept form over substance for promises that they recognize as sufficiently valuable."); James D. Gordon III, *Consideration and the Commercial-Gift Dichotomy*, 44 VAND. L. REV. 283, 292–96 (1991).

66. *See* Wessman, *supra* note 44, at 14–15 (observing "the trend in modern contract law to enforce all commercial promises—even though some are technically gratuitous").

67. *See* About SHARE, Organization, http://www.share.org/AboutSHARE/Organization/tabid/66/Default.aspx (last visited Nov. 17, 2009) ("In 1955, just two years after the release of IBM's first computer, a handful of the earliest IT professionals collaborated to form SHARE."); *see also* Mary Brandel, *1955: IBM Customers Form the First Computer User Group*, CNN.COM, May 5, 1999, http://

time distributed some source code with its hardware and encouraged the formation of the group because the more utilities that would run on IBM's hardware, the more attractive its machines became.[68]

Computer technology has of course changed dramatically since 1955 with the advent of mini-computers and later the PC.[69] A mass market for software grew up in response, and vendors protected their software with a panoply of legal methods that made sharing not simply unlikely but potentially a breach of contract, misappropriation of trade secrets, copyright infringement, and/or patent infringement.[70]

Most place the origin of what is now known as FOSS (free and open source software) not with SHARE, but substantially later. In the mid-1980s, Richard Stallman founded the Free Software Foundation (FSF) in part as a reaction against the rise of business models that relied on keeping source code proprietary and thus effectively inaccessible to those who wished to modify or otherwise improve on it and share their solutions with others.[71] The acronym FOSS accommodates two visions of the open source movement. Stallman's FSF contends that ethically the copyright system is "inherently divisive and antisocial"[72] while others in the open source community view software sharing as an important development model but compatible with proprietary software.[73] Thus, for

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www.cnn.com/TECH/computing/9905/05/1955.idg/index.html ("[SHARE's] main purpose was to stop reinventing the wheel—at the time, all the 701 users were writing their own utilities and programs. With the impending release of the 704, they faced the giant task of rewriting or porting all those programs to a new machine. So from the very first meeting, the group began to share programming knowledge."); W. David Gardner, *SHARE, IBM User Group, To Celebrate 50th Anniversary*, INFO.WK., Aug. 17, 2005, http://www.informationweek.com/news/showArticle.jhtml?articleID=169400167 (quoting Robert Rosen, SHARE President, as saying "SHARE and its SHARE library invented the open source concept.").

68. *See generally* Michael R. Mattioli, *The Impact of Open Source on Pre-Invention Assignment Contracts*, 9 U. PA. J. LAB. & EMP. L. 207, 223–24 ("[E]arly computer programmers freely exchanged the programs they wrote. Hardware companies bundled software free of charge with computer systems, and users were free to copy code and make modifications.").

69. *See* Maureen A. O'Rourke, *The Story of* Diamond v. Diehr*: Toward Patenting Software, in* INTELLECTUAL PROPERTY STORIES 199, 199–201 (Jane C. Ginsburg & Rochelle Cooper Dreyfuss eds., 2006) (summarizing the evolution of the industry and legal methods to protect software); Ravicher, *supra* note 2, ¶¶ 9–15.

70. *See* O'Rourke, *supra* note 69, at 203–18 (discussing the evolution of patent protection for software); Ravicher, *supra* note 2, ¶¶ 9–15.

71. *See* McGowan, *supra* note 2, at 260–61.

72. *Id.* at 261.

73. *Id.* at 261–62; *see also* Davidson & Kumagai, *supra* note 5, at 125, 133–34 ("There are two primary factions within the open source community. The first is the 'free software movement.' The 'free software movement' is a philosophical and social movement that aims to change the rights of software users.... The second faction of the open source community is the 'open source movement,' which promotes the efficiency and better software development model of open source development, rather than moral or ethical ideals of freedom."); González de Alaiza Cardona, *supra* note 2, at 183 ("[T]he free software movement justifies the freedoms to distribute and access the source code as a matter of social fairness.... [T]he Open Source Initiative agrees with the superiority of an open development process, but they consider it compatible with the commercial software companies, that is,

example, the FSF's GPL contains provisions that require modification and redistribution of the code under terms that keep both the original code and derivative works thereof open, while other open source licenses allow access to source code but do not necessarily place conditions on modification or redistribution that would enforce the norm of openness.[74]

Open source software is developed in a dramatically different way than proprietary code. The open source development model is collaborative, with large numbers of participants ranging from professional programmers to hobbyists contributing to any particular effort.[75] That this development model can be successful is beyond question. Some of the most widely used, important, and complex programs are open source, and many companies that traditionally advocated a proprietary model have embraced open source in one way or another.[76]

Backing up this collaborative development effort are the licenses that accompany the code that enforce the community norm of openness. The licenses do not reject copyright law but instead use the author's copyright rights in the code to keep it open.[77] The GPL, likely the most

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with proprietary software.").

74. González de Alaiza Cardona, *supra* note 2, at 184–85. The major example of an open source license that does not require openness downstream is the Berkeley Software Distribution (BSD) license. *Id.* at 184; *see also* WEBER, *supra* note 4, at 20–53 (chronicling the early history of open source software and discussing the BSD).

75. *See* Douglas D. McGhee, *Free and Open Source Software Licenses: Benefits, Risks, and Steps Toward Ensuring Compliance*, INTELL. PROP. & TECH. L.J., Nov. 2007, at 5, 5 ("Instead of a small team of proprietary developers working on a software product, any programmer with access to the Internet can participate in the development of a FOSS project so long as they agree to make their work publicly available. The hoped-for result of having many sets of eyes on a body of code is that the final result will be superior to what a small group of proprietary developers bound by confidentiality agreements can accomplish."); *see also* Amy Kapczynski, *The Access to Knowledge Mobilization and the New Politics of Intellectual Property*, 117 YALE L.J. 804, 822–25, 869–70 (2008) ("[O]pen-source software . . . offers a model of collaborative, distributed innovation that does not rely on the incentivizing effect of IP rights.").

76. *See* González de Alaiza Cardona, *supra* note 2, at 160–62 (listing some major open source packages including Apache, Firefox, and Linux, and noting that many large companies are supporting the open source movement); *see also* Lee, *supra* note 3, at 53 ("[C]ollaborative OSS projects such as Linux and Apache demonstrate that a large and complex system of software codes can be built, maintained, developed, and extended in a non-proprietary setting where developers work in a highly parallel and relatively unstructured way."); *id.* at 69–97.

> The open source movement has been fairly successful in the development of operating systems and server application systems that respond directly to the needs of sophisticated users, but they have been much less successful in developing end-user applications. Casual observation suggests that [F]OSS is now largely aimed at sophisticated users. This targeting may be explained by the fact that [F]OSS programmers are seeking recognition from their peers, who are sophisticated users.

Id. at 95–96 (footnote omitted).

77. *See* WEBER, *supra* note 4, at 84 ("[O]pen source developers are some of the most vehement defenders of intellectual property rights. Rarely do these developers put their software in the public domain, which means renouncing copyright and allowing anyone to do anything with their work.").

common FOSS license and the subject of our focus here, is a case in point.[78] Much open software is licensed under GPL version two (GPL v 2), first issued in 1991.[79] After an extensive revision process, FSF released GPL version three (GPL v 3) in 2007.[80]

The FSF took the position that GPL v 2 was not a contract. In the words of Eben Moglen, the FSF's attorney:

> The word "license" has . . . a specific technical meaning in the law of property. A license is a unilateral permission to use someone else's property. . . .
>
> A contract, on the other hand, is an exchange of obligations, either of promises for promises or of promises of future performance for present performance or payment. . . .
>
> The GPL . . . is a true copyright license: a unilateral permission, in which no obligations are reciprocally required by the licensor. Copyright holders of computer programs are given, by the Copyright Act, exclusive right to copy, modify and redistribute their programs. The GPL, reduced to its essence, says: "You may copy, modify and redistribute this software, whether modified or unmodified, freely. But if you redistribute it, in modified or unmodified form, your permission extends only to distribution under the terms of this license. If you violate the terms of this license, all permission is withdrawn."[81]

Richard Stallman has also noted policy reasons why FSF prefers that copyright law rather than contract law govern the GPL: "[Contract law] would require every distributor to get a user's formal assent to the contract before providing a copy. To hand someone a CD without getting his signature first would be forbidden. What a pain in the neck!"[82] Additionally, copyright law offers the advantage of injunctive relief and contract law has worrisome liability rules and privity limitations, the latter making remote enforcement of the GPL's provisions possibly more difficult.[83]

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78. *See supra* note 5 and accompanying text.

79. Robert W. Gomulkiewicz, *A First Look at General Public License 3.0*, COMPUTER & INTERNET L., Nov. 2007, at 15, 15 ("Stallman released version 2 of the GPL (GPL 2.0) in 1991 after receiving some input from programmers and legal counsel.").

80. *Id.* (describing the revision process); Sapna Kumar & Olaf Koglin, *GPL Version 3's DRM and Patent Clauses under German and U.S. Law*, 2008 COMPUTER L. REV. INT'L (CRi) 33, 33 (noting GPL v 3 was released on June 29, 2007).

81. *The GPL is a License, Not a Contract, Which is Why the Sky Isn't Falling*, GROKLAW, Dec. 14, 2003, http://www.groklaw.net/article.php?story=20031214210634851.

82. Richard M. Stallman, Don't Let 'Intellectual Property' Twist Your Ethos (June 9, 2006), http://www.gnu.org/philosophy/no-ip-ethos.html.

83. *See* 17 U.S.C. § 502 (2006) (authorizing injunctions in copyright cases); *see also* Phelps & Assocs. v. Galloway, 492 F.3d 532, 542–47 (4th Cir. 2007) (discussing injunction requirements in copyright cases). On privity issues, see McGowan, *supra* note 2, at 297–98.

> GPL may not bind downstream users who take code from someone other than the rights-holder because persons who encounter license terms that run with the code will not be in privity with the rights-holder. . . .
>
> The privity concern might not be dispositive in any event. The GPL is a nonexclusive,

Sapna Kumar has characterized GPL v 2 as a "failed contract," because it lacks "a meeting of the minds with regard to consideration."[84] Although contract law does not require a "meeting of the minds" and formation issues are analytically distinct from the question of consideration, Kumar is rightly concerned that software users do not always have adequate notice of the license to establish the formation of a contract.[85] Another commentator adds that "the licensee's consideration is his promise to abide by the copyleft clause," but notes that the user may not see the terms of use so that no contract is formed.[86] Of course, these observations do not mean that contract law does not apply to open source licenses, only that contract law will not enforce licenses without sufficient notice and assent.

For a time, the FSF insisted, as it had with GPL v 2, that v 3 is not a contract. However, it deleted language to that effect in the final wording of GPL v 3.[87] GPL v 3 deals with a number of issues that arose over time in the licensing of open source software.[88] For example, GPL v 3 requires licensees to license essential patents to downstream users.[89] Kumar states,

> It appears most likely that [breach of contract] is how GPLv3 will be enforced in the U.S. Unlike with GPLv2, a licensee under [v3] has a number of affirmative obligations, such as providing a license on essential patents to all downstream users. Such obligations cannot be enforced by the Copyright Act alone; a state contract action would also be required.[90]

Courts, of course, will ultimately determine whether GPL v 2, v 3, or open source licenses generally are contracts, and results may vary depending on jurisdiction and court. In Germany, where consideration is not required for a contract to be enforceable, courts treat GPL v 2 as "both a contract and license."[91] The most important U.S. case to date is

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> transferable license.... One might view distribution of GPL code as simply a transfer within the terms of a license.

Id. (footnote omitted)).

84. Kumar, *supra* note 2, at 16.

85. *Id.* at 17–19.

86. González de Alaiza Cardona, *supra* note 2, at 194, 200 ("The vulnerabilities of the ... GPL licensing method are: (1) the recipient of the software may not receive a notice of the license before delivery, and (2) no signature or other manifestation of assent is generally required. Moreover ... the recipient may not get a copy, physical or digital, of the ... GPL license." (footnote omitted)).

87. RAYMOND T. NIMMER, THE LAW OF COMPUTER TECHNOLOGY § 10:19 (4th ed. 2009) ("GPL 3.0 retains the general tone that the transactions it governs directly are noncontractual, although in the final draft after a lengthy revision process, the drafters deleted language specifying that the license was not a contract.").

88. *See* Gomulkiewicz, *supra* note 79, at 15–20.

89. *Id.* at 17–19; Kumar & Koglin, *supra* note 80, at 33, 35–37 (discussing GPL v 3's patent provisions).

90. Kumar & Koglin, *supra* note 80.

91. *Id.* at 33–34.

Jacobsen v. Katzer, which addressed not the GPL but another open source license called the Artistic License.[92]

In *Jacobsen*, the defendant failed to comply with a number of provisions of the Artistic License:

> Specifically, [Katzer's] software did not include (1) the author' [sic] names, (2) . . . copyright notices, (3) references to the COPYING file [which contains the Artistic License], (4) an identification of [Jacobsen] as the original source of the definition files, and (5) a description of how the files or computer code had been changed from the original source code. The [Katzer] software also changed various computer file names . . . without providing a reference to the original . . . files or information on where to get the Standard Version.[93]

The district court held that Jacobsen's cause of action was for breach of contract not copyright infringement, holding that the terms Katzer violated were not limitations on the scope of the license (and thus not remediable under copyright law), but contractual in nature.[94]

The Federal Circuit's decision on appeal is noteworthy for two reasons: (1) its commentary on consideration, and (2) its holding that demonstrates the utility of both contract and copyright law in enforcing open source licenses. We concentrate here on the first and turn to the second in Part III below. With respect to consideration, the court stated:

> Traditionally, copyright owners sold their copyrighted material in exchange for money. The lack of money changing hands in open source licensing should not be presumed to mean that there is no economic consideration, however. There are substantial benefits, including economic benefits, to the creation and distribution of copyrighted works under public licenses that range far beyond traditional license royalties. For example, program creators may generate market share for their programs by providing certain components free of charge. Similarly, a programmer or company may increase its national or international reputation by incubating open source projects. Improvement to a product can come rapidly and free of charge from an expert not even known to the copyright holder.[95]

The court thus appeared to recognize that the Artistic License was supported by consideration and a contract. In the next section, we support and supplement the reasons for the *Jacobsen* court's conclusion that open source licenses are contracts.

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92. 535 F.3d 1373, 1376 (Fed. Cir. 2008).

93. *Id.* at 1376–77.

94. *Id.* at 1376.

95. *Id.* at 1379 ("The Eleventh Circuit has recognized the economic motives inherent in public licenses, even where profit is not immediate. *See Planetary Motion, Inc. v. Techsplosion, Inc.*, 261 F.3d 1188, 1200 (11th Cir. 2001) (Program creator 'derived value from the distribution [under a public license] because he was able to improve his Software based on suggestions sent by end-users. . . . It is logical that as the Software improved, more end-users used his Software, thereby increasing [the programmer's] recognition in his profession and the likelihood that the Software would be improved even further.')." (alterations in original) (quoting *Planetary Motion*, 261 F.3d at 1200)).

B. MOST OPEN SOURCE LICENSES ARE CONTRACTS

We believe that the *Jacobsen* court's decision is correct. We also think that although there are a range of open source licenses, most contain terms that should place them within contract law's domain and lack of consideration should not prevent these licenses from being treated as contracts.[96] Here we clarify and elaborate on the type of terms that make open source license contracts. For example, and most obviously, contract law applies to the license if a licensee pays for the software or agrees to pay for maintenance or integration services.[97] Contract law should also apply if the licensor and licensee exchange source code. These transactions mirror the twentieth-century exchange of hard goods for money or other consideration.

More challenging are open source licenses that do not contemplate any of the above exchanges, but simply authorize licensees to transfer, copy, or modify the software, subject to certain conditions. Such "terms of use" often include (and we focus on) the "copyleft" and "same terms" provisions discussed earlier.[98] These terms should also constitute consideration under the bargain theory. Recall that general contract law finds consideration if a condition constitutes more than is necessary to transfer a gift.[99] Terms of use, such as "copyleft" and "same terms," are not necessary to convey software and therefore constitute consideration under general contract law if at least part of the vendor's motive (however insubstantial), judged objectively, is to extract agreement to the terms of use.[100] Vendors in the open source movement make no secret about their desire to create a new paradigm of openness, to enhance the freedom and capabilities of software users, to foster innovation, and to create public acceptance and familiarity with their intellectual property framework.[101] The motive to further one or more of

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96. *See generally* Matthew D. Stein, *Rethinking UCITA: Lessons from the Open Source Movement*, 58 ME. L. REV. 157 (2006) (discussing the range of licenses). As of 2006, there were "nearly sixty separate licenses approved by the Open Source Initiative." *Id.* at 196.

97. *See supra* Part I.A.

98. *See supra* notes 6–7, 13 and accompanying text.

99. *See supra* Part I.A; *see also* Affiliated Enters., Inc. v. Waller, 5 A.2d 257, 259–60 (Del. 1939) (distinguishing "mere incidental or friendly detriments, not intended as ingredients of a bargain" from "bargained for consideration"); Plowman v. Indian Ref. Co., 20 F. Supp. 1, 5 (E.D. Ill. 1937) (retired employees' trip to employer's office to receive their pay not consideration).

100. For a discussion of the position that open source software demands special legal treatment, see Jean Braucher, *New Basics: Twelve Principles for Fair Commerce in Mass-Market Software and Other Digital Products*, *in* CONSUMER PROTECTION IN THE AGE OF THE 'INFORMATION ECONOMY' 177 (Jane K. Winn ed., 2006), *available at* http://ssrn.com/abstract=730907. For another view, see Ieuan G. Mahoney & Edward J. Naughton, *Open Source Software Monetized: Out of the Bazaar and into Big Business*, COMPUTER & INTERNET L., Oct. 2004, at 1,1. "The open source movement may have been born as a political ideology, a communitarian alternative to corporate profit-seeking and the 'privatization' of technical innovation, but it has been transformed into a commercial enterprise." *Id.*

101. *See supra* notes 71–74, 77 and accompanying text.

these goals, without more, should be sufficient to satisfy the bargain requirement. But often there is more. A licensor may benefit indirectly, for example, by entering lucrative service and update contracts or by gaining publicity for other more entrepreneurial projects.[102] Even without such benefits, collaborators work in a "'gift culture' in which members compete for status by giving things away."[103] Contract law (like the court's ruling in *Jacobsen*) long has recognized that a motive to increase one's standing as opposed to pure altruism may be sufficient to constitute consideration.[104] Further, developers learn state-of-the-art technology and gain prestige by participating in the open source movement.[105] Thus, consideration supports open source software license grants under traditional contract law.[106]

But what of Moglen's objection that an open source license is no different from, for example, an invitation (license) to visit an owner's land?[107] The implication of this observation is that even if the invitation includes restrictions concerning, for example, the time of the visit or permitted uses of the land, the restrictions simply define and narrow the scope of the license. Such restrictions should not be treated as a contract if a contract requires a promisor to extract something from the promisee. Open source licenses that contain "copyleft" or "same terms" restrictions, however, go beyond simply defining the boundaries of the license. If the landowner's invitation required the invitee to use knowledge gained by the visit in a special way or restricted the transfer of that knowledge to a third party, then the license to visit the land would constitute a bargain and a contract under traditional contract law.

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102. AM. LAW INST., PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS, § 1.06 cmt. d (Proposed Final Draft Mar. 2009) [hereinafter ALI PRINCIPLES].

103. Lee, *supra* note 3, at 54 (quoting McGowan, *supra* note 2, at 262).

104. *See supra* note 95; *see also* Allegheny Coll. v. Nat'l Chautauqua County Bank of Jamestown, 159 N.E. 173, 176 (N.Y. 1927) (discussed *supra* notes 20–23, 27, 57, 59 and accompanying text).

105. WEBER, *supra* note 4, at 196.

106. *See, e.g.*, Wayne R. Barnes, *Rethinking Spyware: Questioning the Propriety of Contractual Consent to Online Surveillance*, 39 U.C. DAVIS L. REV. 1545, 1597 (2006) ("[B]y clicking that she has accepted [the] EULA from KaZaa, bundled with [spyware], the user has ostensibly struck a bargain. She will receive a program she sought for 'free.' Of course, '[i]n a sense, [she] is paying, but the coin is privacy, not money.'" (first, second, and third emphases added) (quoting Paul M. Schwartz, *Property, Privacy, and Personal Data*, 117 HARV. L. REV. 2055, 2072 (2004))); Stein *supra* note 96, at 194 ("The GPL . . . is not just a mere permission. It imposes obligations upon licensees that must be accepted in order to exercise the rights granted in the license. . . . Given these obligations, many have suggested that the GPL would likely be interpreted as a contract, not a bare license." (footnote omitted)).

Additional helpful commentary includes Lawrence Lessig, *The Limits in Open Code: Regulatory Standards and the Future of the Net*, 14 BERKELEY TECH. L.J. 759 (1999); Margaret J. Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1998); and Jonathan Zittrain, *Normative Principles for Evaluating Free and Proprietary Software*, 71 U. CHI. L. REV. 265 (2004).

107. *See supra* note 81 and accompanying text.

Moreover, as we developed in Part I, contract law has evolved to find consideration when enforcement of promises would increase society's welfare and the enforcement is capable of judicial administration.[108] The social value of the FOSS movement is unquestionable. We have already noted that many of the most important and complex software programs are open source and private companies have embraced the model.[109] Further, without doubt open source has achieved its goal of fostering innovation that makes more and more programs available to the public, often without charge.[110] In addition, the open source philosophy has spread to other frameworks, increasing people's "access to knowledge" in a wide variety of settings.[111] Finally, the collaborative model arguably promotes better quality and reliable software in large part because skilled participants have both a commitment to the enterprise and often the luxury of ample spare time to devote to software development[112] without fear of a lawsuit based on copyright or another intellectual property cause of action.[113]

Not only does open source benefit society, but courts should have little difficulty applying a contractual framework to open source licenses. We have already shown that open source meets the technical requirements of a bargain. We now set forth another example of how open source nicely lends itself to a contract-law analysis.

Even if an open source license is supported by consideration and the licensee has reasonable notice of the terms, a licensor might argue for two reasons that there is no binding contract until the licensee modifies or distributes the software. First, a court might find that the contract

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108. *See supra* note 66 and accompanying text; *see also* Wessman, *supra* note 44, at 14 (observing "the trend in modern contract law to enforce all commercial promises—even though some are technically gratuitous").

109. *See supra* note 76 and accompanying text; *see also* Open Source Initiative, Open Standards Requirements for Software—Rationale (Sept. 19, 2006), http://www.opensource.org/osr-rationale ("As the Internet shows so clearly, there is great social, technical, and financial benefit that comes from massive interoperability.") [hereinafter Open Source Initiative].

110. *See generally supra* note 76 and accompanying text.

111. *See, e.g.*, Kapczynski, *supra* note 75 (situating the open source software movement within a wider "access to knowledge" movement and tracing the open source software regime as a reaction to the strength of intellectual property rights); *see also* Mark J. Jakiela, Abstract, http://law.wustl.edu/crie/index.asp?id=6381 (last visited Nov. 17, 2009) (websites incorporate contributions to content such as T-shirt graphic design); Charles McManis, Abstract, Facilitated Access and Benefit-Sharing under the new FAO Treaty: The Interface of Open Source and Proprietary Agricultural Innovation, http://law.wustl.edu/crie/index.asp?id=6381 (last visited Nov. 17, 2009) (international treaty dealing with plant genetics parallels open source and proprietary software interface); Keith Sawyer, Abstract, http://law.wustl.edu/crie/index.asp?id=6381 (last visited Nov. 17, 2009) (discussing "collaborative webs").

112. ERIC S. RAYMOND, THE CATHEDRAL AND THE BAZAAR 54 (2001) ("[T]he closed-source world cannot win an evolutionary arms race with open-source communities that can put orders of magnitude more skilled time into a problem"); J. T. Westermeier, *Open Source Software*, *in* PRACTICING LAW INSTITUTE FOR INTELLECTUAL PROPERTY LAW 425, 427–40 (2004).

113. Open Source Initiative, *supra* note 109.

lacks mutuality of obligation—the licensee can choose not to modify or distribute the software and therefore have no obligation under the license. Agreements that do not evidence a commitment from both parties are not enforceable as contracts.[114] Second, a court might determine that the licensor made an offer for a unilateral contract—"if you modify or distribute the software, I promise not to sue you for infringement provided you abide by the restrictions."[115] The licensee has not accepted the offer until the licensee modifies or distributes the software.[116]

The better view, however, is that a contract is formed when a licensee acquires the software, such as by downloading it, even if the licensee does not have to manifest assent to the restrictions and even before the licensee modifies or distributes the software. The act of acquiring the software (assuming the licensee has knowledge of the restrictions) constitutes an implied-in-fact acceptance of the terms of use.[117] At that point, the licensee has made a commitment that narrows its freedom, namely to abide by the restrictions if it modifies or distributes the downloaded software.[118]

III. Open Source Licenses Should Be Treated as Contracts

As we have discussed, under the technical rules of consideration doctrine as it has developed, most open source licenses are supported by consideration. Here we turn to broader policy questions and argue that open source licenses nicely fit into the category of promises that contract law *should* enforce.

In short, clarifying the law applicable to open source licenses through enforcement of the licenses as contracts should help to facilitate and encourage open source development. As we noted in Part II, no one should dispute the social utility of open source software development.[119] As a practical matter, however, as vendors market more and more open

114. *See, e.g.*, De Los Santos v. Great W. Sugar Co., 348 N.W.2d 842, 845 (Neb. 1984) (voiding unexecuted portion of beet-hauling contract because sugar company was not required to use hauler's services and therefore could effectively terminate the contract whenever it wanted).

115. This is essentially the strategy of the GPL, which states that the copyholder is

> not required to accept this License in order to receive or run a copy of the Program. . . . However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

GNU Version 3, *supra* note 8, § 9.

116. *See* Hillman, *supra* note 15, at 55–57 (discussing unilateral contract).

117. *See id.* at 43–45 (discussing acceptance).

118. If the court finds that the license is an enforceable contract even before the licensee modifies or transfers the software, then the licensee would have warranty rights unless those were disclaimed.

119. *See supra* notes 109–13 and accompanying text.

source software commercially, disputes will arise. By providing a framework for adjudication that respects the structure of the movement and (as we will shortly show) the importance of intellectual property law to it, contract law provides a measure of certainty that will prevent the inevitable disputes from undermining the movement.

We have noted that some open source proponents adamantly oppose the contract conception in part because of fears about formation requirements, privity rules, liability for defective software, and the lack of injunctive relief (in contrast to copyright law).[120] We have problems understanding these fears.

First, the benefits of a contractual framework for open source distributors outweigh these concerns even if they were well founded. If open source licenses were not contracts and licensors could not disclaim liability contractually, licensors would be more likely to be liable for defective software or intellectual property infringement under theories based on misrepresentation, estoppel, or the like.[121] In fact, under a contract model, even without a disclaimer, many open source collaborators are not likely to be liable for breach of warranty such as UCC section 2-314's implied warranty of merchantability[122] that applies to "professional[s] in business."[123] Hobbyists, by definition, are not in the software business and do not "deal in software of the kind transferred"[124] or hold themselves out "*by occupation* as having knowledge or skill peculiar to the [software]."[125] The hobbyist's "occupation," again by definition, is not engineering the software. Further, vendors of open source software that do not qualify as hobbyists often should have little to fear from contract warranty law because the nature of open source software development—multiple collaborators who often exchange code of software still in development—means that users should reasonably expect that the licensor is transferring the software "as is."[126] Indeed, UCC section 2-316(3)(c) upholds disclaimers of implied warranties based on "course of dealing or course of performance or usage of trade."[127] An open source provider could certainly argue that the relevant usage of trade supports the lack of an implied quality warranty.

Moreover, the fears of contract opponents are *not* well founded. Although under current practices open source licenses rarely satisfy the

120. *See supra* notes 81–83 and accompanying text.

121. Current law is unclear. *See, e.g.*, Herkko Hietanen, *A License or a Contract; Analyzing the Nature of Creative Commons Licenses*, NORDIC INTELL. L. REV. (forthcoming), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1029366.

122. U.C.C. § 2-314 (2005).

123. *Id.* § 2-104(1) cmt. 2.

124. *See* ALI PRINCIPLES, *supra* note 102, § 303(a).

125. U.C.C. § 2-104(1) (emphasis added).

126. *See* ALI PRINCIPLES, *supra* note 102, at 153–63.

127. U.C.C. § 2-316(3)(c).

notice and formation requirement of contract-formation law (that Stallman rather improvidently considers a "pain in the neck"),[128] these would not be difficult to satisfy and would protect distributors and users alike. Courts generally approve of the clickwrap formation process for software downloads that requires for enforcement that a licensee click "I agree" at the end of or adjacent to an e-standard form before completing a transaction.[129] Under current technology, moving to clickwrap should not prove costly to open source transactors, nor would attaching terms of use to packaged software.[130]

Another important reason for recognizing open source licenses as contracts is that contract and intellectual property law (we focus on copyright here) work well together in supporting the FOSS model and provide a useful complement of remedies for failing to comply with a license. In fact, with this complement of remedies, open source licensors should have no misgivings about the availability of injunctive relief or worry about the privity problems of contract law.

Consider first the initial licensee who obtains the code directly from an open source provider. Assume that the licensee fails to comply with a term of the agreement. Depending on the nature of the term, the open source provider may have a cause of action for infringement, breach of contract, or both.

To determine the appropriate cause of action, a court must determine whether a provision constitutes a pure condition defining the scope of the license, a mere promise (also called a covenant), or both (called a promissory condition).[131] Assume, for example, that a license contained a provision that granted the licensee the right to distribute the code further only if the licensee included copyleft terms in its license agreement. If the term is drafted as a pure condition ("you can distribute the software provided that you reveal the source code") but the licensee ignores the term and distributes the software without revealing the source code, the licensee has exceeded the scope of the license, and the licensor may sue for infringement.[132] If the licensee also promises to abide by the copyleft term ("licensee promises to distribute the software only upon revealing the source code") but ignores the term and distributes the software without revealing the source code, the licensor may also sue for breach of contract unless intellectual property law would preempt the claim.[133] Of course, the licensor cannot receive a double recovery.[134] If,

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128. *See supra* notes 81–82 and accompanying text.

129. ALI PRINCIPLES, *supra* note 102, at 110–21.

130. *Id.* § 2.02 cmt. f.

131. *Id.* § 3.11 cmt. b (setting forth the general rules and sources).

132. *Id.*

133. Preemption law is complex. For a summary, see *id.* § 1.09. We do not here address the preemption of contract claims because it is tangential to the main point—i.e., that the licensor is able

instead, the licensee simply breaches a promise not involving an intellectual property right, the cause of action is for breach of contract.[135]

State law determines whether a contractual provision is a pure condition, a promissory condition, or a mere promise.[136] For example, some states consider use of the words "provided that" in a license as making the license conditional on compliance with the proviso.[137] Under this framework, licensors have nothing to fear from contract law, but instead should prefer its application because it allows them to draft agreements that enhance the probability that they can seek redress under intellectual property law.[138] This, in turn, increases the odds that they can obtain injunctive relief as well as other intellectual property remedies.

Consider now the remote licensee who receives the software from the initial licensee. Again assume that the initial license contained a

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to pursue intellectual property remedies if the license fails to satisfy a condition.

134. HILLMAN, *supra* note 15, at 134.

135. ALI PRINCIPLES, *supra* note 102, § 3.11 cmt. b.

136. Courts may look to a variety of factors including the language of the license, course of performance, course of dealing, usage of trade, other extrinsic evidence, and the placement of the term in the license. The *Jacobsen* court's discussion, which looks to the language of the agreement and the structure of the transaction, is not atypical:

> The Artistic License states on its face that the document creates conditions: "The intent of this document is to state the *conditions* under which a Package may be copied." (Emphasis added.) The Artistic License also uses the traditional language of conditions by noting that the rights to copy, modify, and distribute are granted "*provided that*" the conditions are met. Under California contract law, "provided that" typically denotes a condition.
>
> The conditions set forth in the Artistic License are vital to enable the copyright holder to retain the ability to benefit from the work of downstream users. By requiring that users who modify or distribute the copyrighted material retain the reference to the original source files, downstream users are directed to Jacobsen's website. Thus, downstream users know about the collaborative effort to improve and expand the SourceForge project once they learn of the "upstream" project from a "downstream" distribution, and they may join in that effort.
>
> The District Court interpreted the Artistic License to permit a user to "modify the material in any way" and did not find that any of the "provided that" limitations in the Artistic License served to limit this grant. The District Court's interpretation of the conditions of the Artistic License does not credit the explicit restrictions in the license that govern a downloader's right to modify and distribute the copyrighted work. The copyright holder here expressly stated the terms upon which the right to modify and distribute the material depended and invited direct contact if a downloader wished to negotiate other terms. These restrictions were both clear and necessary to accomplish the objectives of the open source licensing collaboration, including economic benefit.

Jacobson v. Katzer, 535 F.3d 1373, 1381 (Fed. Cir. 2008) (citation omitted); *see also* Sun Microsystems, Inc. v, Microsoft Corp., 81 F. Supp. 2d 1026, 1032 (N.D. Cal. 2000) (assessing the language and structure of an agreement to decide the question).

137. *Jacobson*, 535 F.3d at 1381.

138. 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, 347–60 (2009), for a full discussion of the distinction between a condition and a covenant, as well as a consideration of whether there are any limits to making terms conditions.

condition that granted the initial licensee the right to distribute the code further only if the initial licensee included copyleft terms in its license agreement. The initial licensee fails to include the copyleft terms and its transferee, the remote licensee, further distributes the code. The original licensor may sue the remote licensee for infringement because the distribution to it (and license to it to distribute further) was unauthorized. When the initial licensee failed to comply with the copyleft condition, it exceeded the scope of its license. The initial licensee's distribution without the copyleft terms therefore constituted infringement. The remote licensee, albeit innocent, has no license from the original licensor and no effective license from the initial licensee to distribute the code. The remote licensee's distribution is therefore also infringing. Notwithstanding the lack of privity between the original open source licensor and the remote licensee, the licensor does indeed have intellectual property remedies available to it because of the infringement.

Thus, intellectual property law, working together with contract law, results in a legal system that benefits the parties as well as society. A contract framework clarifies rights and duties, protects the interests of both parties, and increases transactional certainty and security. Contract law therefore facilitates and enhances the open source movement that has been enormously instrumental in the successful development of software.

Conclusion

Our fast-paced age of electronic agreements—ostensibly governing transactions as diverse as downloading software, ordering goods, and engaging in collaborative development projects—raises questions regarding the suitability of contract law as the appropriate legal framework for these transactions. While these questions arise in many settings, we focused here on the FOSS movement because of the maturity and success of its model and the ubiquity of its software. We explored in particular whether open source licenses are supported by consideration, and argued that they are, and that open source licenses are contracts. We further argued that a contractual framework working in tandem with the intellectual property laws is the appropriate legal structure to govern FOSS transactions. Our discussion holds implications for the understanding of consideration doctrine and contract law generally outside of the FOSS example and, indeed, for collaborative development and electronic agreements generally. In sum, the malleability of the bargain theory means that contract law can rise to the occasion of important technological and social changes and supply a superior legal framework.

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