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Copyright, Licensing, and the First Screen

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I. INTRODUCTION

As patent, copyright, and other intellectual property rights have assumed greater economic importance, the manner in which those rights are used has come under increased scrutiny. Recently filed antitrust litigation against Microsoft Corporation, for example, focuses on the terms under which Microsoft has licensed its Windows® operating system to

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computer manufacturers (generally referenced as OEMs, for Original Equipment Manufacturers). In particular, parties to the litigation complain about the license agreements' requirement that the first screen to appear when customers initially turn on ("boot up") a computer display certain features common across all Windows-based platforms.[1] The "first screen provision" has been portrayed as evidence that Microsoft seeks to undermine competitors in the computer software market.[2]

For antitrust buffs, there are serious arguments over the "so what" question.[3] One view is that even if Microsoft does whatever it can to undermine competing software producers, it has done nothing that has violated antitrust laws. Everyone knows that Microsoft's Chairman, Bill Gates, is the world's richest man and that Microsoft is one of America's business giants. But neither wealth nor business success confers monopoly power, and monopoly power itself does not violate the antitrust laws. If Microsoft is merely a big, successful competitor, there is no antitrust issue. This view is bolstered by the fact that, notwithstanding its prominence, Microsoft accounts for less than ten percent of computer software sales (suggesting that it has by no means captured the software market or many pieces of it) and faces vigorous competition in every line of business.[4]

Microsoft does supply a very large proportion of operating systems for personal computers, having dramatically outdistanced the competition with its Windows operating system for Intel-compatible computers. All of those challenging Microsoft start with the predicate that its Windows system is the *de facto* standard for most types of personal computer in the U.S.[5] Plaintiffs assume that Microsoft has monopoly power as a result of Windows' success[6] and argue that Microsoft has

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1. *See* U.S. Department of Justice Complaint [hereinafter DOJ Complaint] at 31–34, United States v. Microsoft Corp., Civil Action No. 98-1232 (D. D.C.) [hereinafter *Microsoft*]; State Attorneys General Complaint [hereinafter State's Complaint], State of New York *ex rel.* Dennis C. Vacco, et al. v. Microsoft Corp., Civil Action No. 98-1233 (D. D.C.)[hereinafter *Vacco*].

2. *See* DOJ Complaint, *supra* note 1; State's Complaint, *supra* note 1, at 11.

3. *See, e.g.*, American Enterprise Institute For Public Policy Research, *The Amgen Forum: The Law And Economics of U.S. v. Microsoft*, Federal News Service, June 18, 1998, *available in* LEXIS, Commercial and Trade Speeches or Conferences Library.

4. A survey of 639 leading software firms puts Microsoft at 8.58% of global software sales, well behind IBM's 12.38%. International Data Corp., Worldwide Software Revenues, 1995–1996 (1997).

5. *See* DOJ Complaint, *supra* note 1, at 1; State's Complaint, *supra* note 1, at 11; Declaration of Franklin M. Fisher, *in Microsoft* [hereinafter Fisher Declaration]; Declaration of David S. Sibley, *in Microsoft* [hereinafter Sibley Declaration]; Declaration of Frederick R. Warren-Boulton, *in* State's Complaint.

6. Complainants define a narrowly drawn market in operating systems for personal computers as the arena in which Microsoft allegedly exercises monopoly power and ask that

misused the advantage it enjoys with the success of Windows by various actions, particularly provisions in contracts licensing others to use Windows.

The plaintiffs do not claim that Microsoft is engaged in or is facilitating a horizontal conspiracy—as would occur if Microsoft agreed with competing software firms to restrain output in a given product line. Instead, plaintiffs allege that Microsoft's *vertical* relations with other firms—in which Microsoft contracts with others in a principal-agent relationship—improperly use the power of its copyright for Windows and that system's success in the marketplace. That is the essence of the complaint respecting the first screen provision: that the rights conferred by copyright do not permit Microsoft to ask its licensees to bind themselves in that way.[7]

That complaint is problematic in part because it seems on its face to stand copyright law on its head. Copyright law provides an exclusive right for the owner to decide when and how to allow the copyrighted material to be used. Antitrust law, consequently, long has applied different standards to ordinary vertical agreements and agreements licensing intellectual property rights.[8] Unfortunately, court decisions have not followed a single, straight line respecting the relationship between antitrust and intellectual property right laws, as discussed below,[9] and the Microsoft case requires delineation of the way antitrust law should deal with copyright licensing, if not with contract arrangements more generally.

Even if that issue is resolved favorably to plaintiffs (who dispute Microsoft's contention that intellectual property laws trump antitrust), there is a second problem. Antitrust analysis of vertical relationships under the rule of reason would require evaluation of the efficiency gains and costs of the challenged actions. Although such evaluations are done in many different settings, the complaints' allegations of improper provisions in licensing contracts call for an analysis that parses particular contract terms. That analysis necessarily entails an artificial assignment of effects among contract terms and is likely to be distorted from the considerations informing parties to the contracts.

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the court declares that the relevant market for antitrust analysis. *See* DOJ Complaint, *supra* note 1, at 1; State's Complaint, *supra* note 1, at 6.

7. *See id.*

8. *See, e.g.*, Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 188–93 (1980); United States v. General Elec. Co., 272 U.S. 476, 485 (1926); Bement v. National Harrow Co., 186 U.S. 70, 92 (1902); USM Corp. v. SPS Technologies, Inc., 694 F.2d 505, 510 (7th Cir. 1982).

9. *See* discussion *infra*, text and notes at notes 70–72.

This paper examines the first screen provision in the context of the law and practice respecting computer software licensing. The first section provides background on copyright. The second section explores the considerations relevant to licensing contracts. The third section addresses the intersection between antitrust and copyright licensing. The fourth section directly considers the first screen provision—what it does, what interests it serves, and what efficiencies it generates. A concluding section argues that, while the provision should pass antitrust muster, the process of examining such licensing provisions under the antitrust laws may do more harm than good.

II. COMPUTER SOFTWARE COPYRIGHT

A. *Background*

It is common today (and correct) to speak of "intellectual property" (and, concomitantly, of intellectual property *rights*) as important components of our national endowment. But, despite the long history of such rights, widespread recognition of their importance is a fairly recent development.

In the eighteenth century, copyright and patent were established rights in England and in the American colonies, but many leading authorities placed the labors of literary and inventive creation on a lower rung than other economic activities. Thus, when Adam Smith published *The Wealth of Nations*, he saw the fruits of mental labor as distinctly different from labor in the fields or the foundry. Smith classed the effort that produces intellectual property as "unproductive labour" along with other work that today would be classified as "services," a class that, in Smith's words, includes the work of "churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera-singers, opera-dancers, &c."[10] For Smith, productive labor belonged to the violinist who manufactured the instrument, not to a Mozart or Beethoven whose genius shaped the music or to a Heifetz or Stern whose gifts brought that music to life.

Appreciation of the importance of labor that produced (and performed) creative works grew slowly, alongside the changing focus of work more generally. A snapshot of the United States' economy in 1800, 1900, and today illustrates the broader change. In 1800 two-thirds of the workforce was engaged in agriculture. In 1900, that had declined to one-third, while more than half the workforce was engaged in manu-

10. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 330–31 (R. H. Campbell & A. S. Skinner eds., Clarendon Press 1976) (1776).

facturing. As we approach 2000, a tiny fraction of the workforce is engaged in agriculture, and less than one-third in manufacturing, while more than two-thirds provide services.[11]

The shift from agriculture, to manufacturing, to services was paralleled by an increase in investment, in learning (both formal and on-the-job), in research, and in development of new ideas and means of expression. These in turn have provided returns to investors and supported economic growth. Recently, the trend to greater returns to investment in human capital (whether protected by specific legal entitlements or not) has accelerated, as is typical of periods of great change.[12] It is, as discussed below, more doubtful that returns to innovative activity in general have increased, but public assertions of the importance of knowledge-based activity—including innovative activity—have burgeoned, with references to the "information age" already sounding trite.

B. *Copyright: Constitutional and Statutory Roots*

At law, innovative activity is separated from other types of labor. The Constitution of the United States grants Congress the power "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[13] James Madison explained the constitutional provision as one that both advanced public interests and preserved rights enjoyed by authors and inventors at common law.[14] Madison's assertion about common law is not perhaps sound history, though he can be forgiven—that exact issue divided the English House of Lords at about the same time as the American Revolution (the Lords ultimately concluding that the common law did not support copyright prior to the Statute of Anne in 1710).[15] Madison's assertion that copyright and patent advanced public interests, however, was sufficiently accepted that the constitutional provision was not debated and the nation's first

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11. *See* Ronald A. Cass & Eli M. Noam, *The Economics and Politics of Trade in Services: A United States Perspective, in* RULES FOR FREE INTERNATIONAL TRADE IN SERVICES 43, 45, 46–49 (Daniel Friedmann & Ernest Joachim Mestmäcker eds., Nomos Verlagsgesellchaft 1990).

12. *See* Marvin H. Kosters, *An Overview of Changing Wage Patterns in the Labor Market, in* TRADE AND WAGES: LEVELING WAGES DOWN? 1, 28–31 (Jagdish Bhagwati & Marvin H. Kosters eds., 1994).

13. U.S. CONST. art. I, § 8, cl. 8.

14. *See* THE FEDERALIST, No. 43 (James Madison).

15. For an extended discussion of the English and American authorities, *See* Howard B. Abrams, *The Historic Foundation of American Copyright Law: Exploding the Myth of Common Law Copyright,* 29 WAYNE L. REV. 1119 (1983). *See also* ROBERT A. GORMAN & JANE C. GINSBURG, COPYRIGHT FOR THE NINETIES: CASES AND MATERIALS 1–5 (4th ed. 1993).

federal copyright law, the Copyright Act of 1790, was enacted by the First Congress.

The original copyright law, "An Act for the encouragement of learning," gave authors rights in maps, charts and books.[16] Revisions of the law five times over the next 80 years added new categories of work, beginning with etchings and engravings and expanding through various types of music, drama, paintings, designs, and photographs.[17] A general revision, the Copyright Act of 1909, further expanded the classes of copyrightable work and served for nearly seven decades as the template for American copyright protection. During that time, additional changes in technology brought new subjects—starting with motion pictures, added by statute in 1912—to the copyright table.

The biggest change during the time that the 1909 Act was in force was not in the nature of works that were presented for copyright protection but in the nature of the protection sought by rights holders. The reason is that the primary alterations of the technological landscape over that period, as relevant to copyright, created new means of reproducing, of disseminating, and of exploiting creative works. Radio, television, photocopying, audio recording, video recording, and other technologies were invented or dramatically improved in this era. Efforts to rewrite the copyright law to account for such changes began while some of the technologies that posed the greatest problems for the 1909 regime were in their infancy and finally reached fruition in the new copyright law of 1976.[18] As Professor Ed Kitch and Dean Harvey Perlman explained soon after the law's enactment, the new law shifted the emphasis for copyright analysis:

> Under the old law the starting principle was: the owner shall have the exclusive right to copy his copies. Under the new law the principle is: the owner shall have the exclusive right to exploit his work.[19]

The limits of that right are what is in issue in the litigation against Microsoft.

Of course, the 1976 law did not end the legal story. Statutory amendments in 1980, 1988, 1990, 1992, and 1994 have addressed issues raised by particular technologies, including computer software (though

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16. 1 Stat. 124. *See also* EDMUND W. KITCH & HARVEY S. PERLMAN, LEGAL REGULATION OF THE COMPETITIVE PROCESS 620 (2d ed. 1979).

17. *See id.* at 621 (describing statutes of 1802, 1831, 1856, 1865, and 1870 amending copyright law); *See also* GORMAN & GINSBURG, *supra* note 15, at 7–8.

18. *See* General Revision of Copyright Law, Pub. L. 94-553, 90 Stat. 2541 (1976).

19. KITCH & PERLMAN, *supra* note 17, at 622.

software was already covered by the protections of the 1976 statute),[20] and have altered the law to conform to international treaty obligations. The 1980 amendment clarified the application of copyright to computer software programs and the need for permission prior to inclusion of a program in a computer (with narrowly tailored exceptions).[21] Despite the amendments, copyright law still follows the basic orientation of the 1976 Act.

C. *Copyright: Regime Assumptions*

The copyright law gives to the creator of an expressive work the right to determine how that expression is used during a specified term of years. Typically, the work expresses an idea, though eligibility for copyright is not tied to the clarity or quality of the idea. Copyright protects the *expression*, not the idea expressed.[22] Ideas are in the public domain, but each original expression is protected against replication without the consent of the owner.[23] Protection of the form but not the content assumes that there is an important (if at time modest) creative aspect to the expression itself—that "to be or not to be" is not the same as "should I kill myself?" even if the phrases' meanings are equivalent.

Patent law, in contrast, gives broader protection but for a more limited time. Patent law, like copyright, does not formally protect ideas, but its protection goes well beyond mere intentional use of a prior expression. Patent protection against use of an idea expressed in certain tangible forms without consent includes protection against using forms (machines, processes, and so on) closely related to but different from the patented form.[24] The broader protection demands a higher threshold before protection is obtained. Unlike copyright, which is

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20. 17 U.S.C. § 102 (1976). *See also* H.R. REP. No. 94-1733 (1976); Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1247 (3d Cir. 1983); GINSBURG & GORMAN, *supra* note 15, at 685, 694–95.

21. *See* Pub. L. 96-517, 17 U.S.C. § 101. The rationale for the 1980 amendments was provided in NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT (1978) [hereinafter CONTU REPT.].

22. *See* 17 U.S.C. § 102 (b) (1976).

23. *See, e.g.*, Whelan Assoc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222 (3d Cir. 1986); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1993). *But see* Computer Associates Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 704–12 (2d Cir. 1992) (describing limits on scope of protection).

24. There are competing explanations of the organizing principle behind the scope of patent protection. *See, e.g.*, Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305 (1992); Jack Hirshleifer, *The Private and Social Value of Information and the Rewards to Inventive Activity*, 61 AM. ECON. REV. 561 (1971); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977); Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CALIF. L. REV. 803 (1988).

available without prior screening for any expression, patents are issued only after certain requirements are met, including the requirement that the invention be novel and not be obvious to sophisticated observers familiar with the prior learning on the subject (prior "art").

Because patent requires a greater degree of novelty[25] than copyright, fewer patents are issued and it is less costly to determine what is patented than what is copyrighted. Professor Landes and Judge Posner conclude that the lower cost of identifying patented innovations implies that inventors will be more likely to know about patented innovations relevant to their work than about copyrighted innovations and less likely accidentally to infringe; that, in turn, suggests a greater reason to grant stronger protection to patents than to copyrights.[26] That, indeed, is the way the law has developed. Crudely put, the difference between the two intellectual property rights schemes is this: copyright allows the creator of a new expression of an idea the right to decide how and when that expression is used but no right against innocent or accidental or certain incidental use; patent provides the creator of a new idea, embodied in useful form, the right to prevent all manner of activity that uses that idea without consent.[27]

Despite this distinction, the intellectual property rights regimes are closely related. Both forms of intellectual property protection rest on three assumptions about creative works. First, intellectual property law assumes that the grant of an economically valuable right will increase the rate at which new creative works are produced (and increase the value of those creative works).[28] Second, the law assumes that creative works have "public goods" aspects—that they are costly to protect and can be used by many people at once without affecting the quality of the use (unlike many people trying to share a single automobile).[29] The second assumption suggests that intellectual property produces value substantially greater than its creators could capture without special pro-

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25. In patent law, *novelty* is a separate requirement from *nonobviousness*, but the term novelty is used here to embody both requirements.

26. *See* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325 (1989).

27. *See, e.g.*, Stanley M. Besen & Leo Raskind, *An Introduction to the Law and Economics of Intellectual Property*, 5 J. ECON. PERSP. 3 (1991).

28. *See, e.g.*, Mazer v. Stein, 347 U.S. 201, 219 (1954); Sony Corp. of America v. Universal City Studios, 464 U.S. 417, 429 (1984). *See also* Hirshleifer, *supra* note 24; Kitch, *supra* note 24; Stan J. Liebowitz, *Copyright and Indirect Appropriability: Photocopying of Journals*, 93 J. POL. ECON. 945 (1985).

29. *See* Besen & Raskind, *supra* note 27; Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV.1600 (1982) [hereinafter *Betamax*]; Hirshleifer, *supra* note 24; Landes & Posner, *supra* note 26.

tections. That indicates, in line with the first assumption, that, without such protections, too little creative work will be produced. Finally, the law assumes that the costs of restricting use of new expressions and inventions are less than the benefits of new creativity.[30]

There is a lively academic debate about these assumptions.[31] Fortunately (for the continuing liveliness of that debate) there is no likelihood of proving or disproving the assumptions. They will continue to shape the law while academicians continue to argue their merits.

D. *Copyright in Computer Software*

The protection of computer software through copyright also was a subject that was debated. The debate was *not* whether computer software deserved protection similar to that granted other intellectual property. Both proponents and opponents of copyright protection for software agreed that software development required the same sort of creative activity and depended on the same sort of financial and personal investment as other intellectual property and was no less deserving of legal protection.

The dispute over computer software—so far as it differed from the more general debate over the appropriate scope and duration of intellectual property rights—centered on the question of *which* intellectual property regime best fit the realities of this particular form of creative work.[32] Software consists of two sets of instructions, *source code* and *object code.* The first of these, source code, is the set of directions that a programmer writes indicating what he wants the program to do—start the computer, boot up a screen, put certain images on that screen, and so on. The second instruction set, object code, is the translation of the source code's instructions into the binary language in which computers

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30. *E.g.*, Twentieth Century Music Corp. v. Aiken, 422 U.S. 151 (1975).

31. *E.g.*, Stephen J. Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970); Grady & Alexander, *supra* note 24; Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and "Encouragement" Theory*, 41 STAN. L. REV. 1343 (1989) [hereinafter *Challenges*]; Landes & Posner, *supra* note 26; Robert P. Merges & Richard Nelson, *Market Structure and Technical Advance: The Role of Patent Scope Decisions, in* ANTITRUST, INNOVATION, AND COMPETITIVENESS (Thomas M. Jorde & David J. Teece eds., Oxford Univ. Press 1992); Tom Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 HAMLINE L. REV. 262 (1989).

32. *See, e.g.*, Landes & Posner, *supra* note 26, at 2310 n.1; Pamela Samuelson, et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994) [hereinafter *Manifesto*]; John T. Soma, et al., *Minimizing Reverse Engineering: Sample Language for Dual United States and European Union Software Licenses*, 24 DENV. J. INT'L L. & POL'Y 145, 147–51 (1995).

function, actually speaking to the computer.[33] The argument over software protection largely revolved around the fact that object code is "read" only by computers, and thus seemed to some commentators more appropriately assimilated to the patent regime than to the copyright regime.[34]

The choice between these regimes was central to the work of the National Commission on New Technological Uses of Copyrighted Works (CONTU). The CONTU report in 1978 resolved the matter in favor of copyright protection, concluding that innovation in software worthy of protection tended to occur too rapidly and along too many margins to be suitable to a patent regime. Both source and object code fit better with the copyright model, even though the expressive element of object code is not directly evident to a human audience.[35] Congress, which had included software already as a "literary work" eligible for copyright protection, adopted the CONTU approach two years later, making copyright coverage clearly applicable to software.[36]

III. COPYRIGHT LICENSING

A. *What is Licensed?*

In keeping with the basic approach of the copyright law, copyright owners are given great freedom in deciding the terms on which to license their products. After all, the value of the copyright is the ability of

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33. Source code can be translated into object code through a *compiler* (which generally is a device located outside the computer on which the program will run). The compilation process produces a translation of the source code that can be configured to execute instructions at optimum speed. An alternative to compilation is to use an *interpreter* (which generally is located inside the computer that is running a program) to translate source code into object code on a line-by-line or instruction-by-instruction basis. The interpreter does not retain memory of prior instructions, so that, unlike with a compiled program, repeated functions must be explained to the computer in full detail each time.

34. *See* discussion and citations in U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, FINDING A BALANCE: COMPUTER SOFTWARE, INTELLECTUAL PROPERTY, AND THE CHALLENGE OF TECHNOLOGICAL CHANGE (Gov't Printing Office 1992) [hereinafter OTA REPT.]; at 68–69, 130. Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 978 (1993); Maureen O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 484–85 n. 20 (1995); Samuelson, et al., *Manifesto*, *supra* note 32. *See also* Apple Computer, Inc. v. Franklin Computer Corp., 545 F. Supp. 812 (E.D. Pa. 1982), *rev'd* 714 F.2d 1240 (3d Cir. 1983).

35. *See* Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983); CONTU REPT., *supra* note 21.

36. *See* Pub. L. 96-517, 17 U.S.C. § 101 (1980).

the right owner to set terms expected to maximize the return from licensing.[37]

Licensing agreements cover all manner of terms. Among the subjects to be found in license agreements are: the period of time during which the licensed material can be used, the use allowed of the material (including elaborate restrictions on various aspects of licensed performances), allocation of rights to derivative works, constraints on disclosure of information contained the material or obtained from the material, assignment of liabilities (including some tax liabilities), specifications for (or constraints on) sublicensing, provision for changed circumstances (including changes in corporate identity or ownership), price and payment terms, provisions respecting bankruptcy during the contract period, and survival of obligations (such as nondisclosure) following license term.[38]

Agreements range from the very simple to the incredibly complex, from the painstakingly negotiated to the standard-form contract. As a rule, the market for the particular work or type of work will determine the form in which a licensing contract is crafted. At one end, works that will be used infrequently, in ventures that are idiosyncratic (rather than fitting off-the-shelf patterns), and that could prove highly lucrative are strong candidates for individually negotiated agreements. At the other end, copyrighted works that are likely to have numerous uses by widely scattered entities whose demand for the works is sufficiently elastic that separate negotiations, even fitting well-defined patterns, are inconceivable—most uses of recorded music fit this example—may be handled under a group or blanket license arrangement.[39]

B. *What Interests Does Licensing Serve?*

Although practicing lawyers who write about copyright licensing commonly explain the importance to all contracting parties of careful license negotiation (a subtle reminder of the value of the lawyers'

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37. *See* Besen & Raskind, *supra* note 27; *Betamax* note 29; O'Rourke, *supra* note 34. *See also Challenges, supra* note 31, at 1356–58, 1368–70 (broad privilege consistent with common law property rights doctrine).

38. *See, e.g.*, MARK L. GORDON, COMPUTER SOFTWARE: CONTRACTING FOR DISTRIBUTION AND DEVELOPMENT 243–375 (1985); H. Ward Classen, *Fundamentals of Software Licensing*, 37 IDEA 1 (1996).

39. *See* Broadcast Music, Inc. v. Columbia Broadcasting System, 441 U.S. 1 (1979) (declaring that blanket licenses used by BMI—like licenses used by the American Society of Composers and Publishers, ASCAP—are not *per se* illegal tying arrangements). In some instances, even the blanket license is too burdensome a mechanism. Those instances fall within the "fair use" exception. *See Betamax, supra* note 29.

services),[40] other commentators sometimes assume that copyright license terms are selected solely by the licensor (right owner).[41] At times that assumption is paired with the conclusion that license terms solely benefit the licensor, with the licensee being disadvantaged by them.[42]

The image of an all-controlling licensor is at once a natural outgrowth of the copyright regime and a gross distortion of reality. It is natural in the sense that the copyright regime is a property rights regime: The owner of a copyright has the exclusive right to determine how the right will be exercised, how the copyrighted work will be used, and thus will agree only to license terms that are to the licensor's benefit. Saying that, however, does *not* mean that license terms are unilaterally dictated by licensors independent of the interests and wishes of licensees.[43]

The notion of the licensor acting independent of the preferences of putative licensees is the same as the notion of a grocery store acting solely in its own interest, without regard to the tastes of its potential customers. It is true that the grocery store sets prices for its products without engaging in separate negotiation with each customer. (That generally is not the case for copyright licensing, although it is the case with so-called "shrink-wrap" licenses.)[44] But the licensor, like the grocery store,[45] is limited in what it can charge by what customers are willing to pay, which is dictated by the particular preferences of each customer and the alternatives available to them. The grocery store may set a price for beef or strawberries or milk without negotiation, but setting the *right* price—the one most advantageous to the store—requires that the price also be one that is attractive enough to enough customers that the store could not do better by lowering its price. To do that in a competitive market, the store must set prices that balance the store's interests with the customers' interests in the same way it would if the parties engaged in face-to-face negotiation over prices—regardless of

40. *E.g.*, Classen, *supra* note 38; Thomas Hemnes, *Restraints on Alienation, Equitable Servitudes, and the Feudal Nature of Computer Software Licensing*, 71 DENVER U. L. REV. 577 (1994).

41. *E.g.*, Philip Abromats, Comment, *Copyright Misuse and Anticompetitive Software Licensing Restrictions: Lasercomb Am., Inc. v. Reynolds*, 52 U. PITT. L. REV. 629 (1991).

42. *See Microsoft Accused,* ECONOMIST, May 23, 1998, at 21, 22.

43. *See generally* OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING 85–130 (1985).

44. *See* O'Rourke, *supra* note 34.

45. With apologies, "store" here is used as an anthropomorphism, standing as shorthand for the interests of those who own and operate the enterprise.

the store owner's wishes, those are the only prices that maximize the owner's profit.[46]

What is true for the store owner is true for other sellers and licensors: even where a seller (or licensor) seems unilaterally to be setting the price to be paid by a buyer (licensee), sensible price-setting must reflect the interests and preferences of the other party (the buyer or the licensee). And in ordinary circumstances, the price should be the *best* price that other party could hope to obtain through hard bargaining under the circumstances. The statement holds for the *terms* of a deal (a sale or a licensing agreement) as well as for the *price.* You cannot separate price from what is being bought; the same considerations hold for both.[47] So, even if there were no explicit negotiation, licensing should be seen as a cooperative venture: Getting it right requires integration of the parties' interests.[48]

C. *What's Wrong with this Picture?*

Three caveats need to be offered with respect to the picture drawn above. One addresses the ubiquitous divergence of the real from the ideal. The second concerns the problem of having multiple issues in motion simultaneously. And the third deals with the monopoly component of intellectual property rights. The first two are discussed immediately below, and the third is taken up under the next heading.

The first caveat is that, despite the *incentive* of sellers and licensors to set prices and terms that harmonize the interests of the parties, actual prices and terms may not accomplish that end. The most common reason for the variance is the difficulty of securing the information necessary to get prices and terms that best fit the parties' interests. The obvious point here is that it is difficult to gain information about other people's preferences, which are apt to vary widely. The less evident, but more fundamental point is that we seldom know our *own* preferences with any specificity.[49] I may be willing to respond if asked how much I would pay to obtain particular goods or how much I value specific

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46. *See, e.g.,* ARMEN ALCHIAN & WILLIAM R. ALLEN, EXCHANGE AND PRODUCTION: COMPETITION, COORDINATION, AND CONTROL 85–87 (1977); GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 5–15 (1968) [hereinafter INDUSTRY]; GEORGE J. STIGLER, THE THEORY OF PRICE 88–102 (1966) [hereinafter PRICE]; P. DIAMOND, *Search Theory, in* THE NEW PALGRAVE: ALLOCATION, INFORMATION AND MARKETS 271, 282–85 (John Eatwell, Murray Milgate & Peter Newman eds., MacMillan 1989).

47. *See* ALCHIAN & ALLEN, *supra* note 46, at 185–86; DIAMOND, *supra* note 46.

48. *See generally* William Baxter & Daniel Kessler, *Toward a Consistent Theory of the Welfare Analysis of Agreements,* 47 STAN. L. REV. 615 (1995).

49. *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases, in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 3, 19–20 (Daniel Kahneman et al. eds., 1982).

features—such as the proximity of a grocery store to my house or the layout of the store or its decor or its policy with respect to charge accounts—but there is little basis for crediting my statements. As with merchants who find it necessary to adjust prices over time as they observe customers' behavior, I am likely to learn what value I place on particular goods only from experience. With most matters, trial-and-error is a necessary heuristic.[50]

The second caveat concerns an aspect of reality that exacerbates the general information problems encountered in most markets: although in textbooks, goods are individual, free-standing commodities, in reality we are offered choices that bundle many features together rather than discretely priced, independent goods. Thus, I do not experience separately the proximity, layout, decor, and so on, of a grocery store. I do not experience an infinite number of grocery stores with all possible combinations of these features, as well as of each good offered for sale. Instead, I learn that I generally prefer the store that is more brightly lit and has a better selection, especially of fresh meat, fish and vegetables, even though it has somewhat higher prices on many items and is a block or two further from my home. The same is true for virtually every consumer good and the vast majority of intermediate goods as well.[51]

The information problems that comprise these first two caveats—which apply to market transactions generally, not only to software licensing—do not mean that market prices and terms depart radically from efficient prices and terms. These two caveats merely indicate that real prices (and other terms for market transactions) often diverge somewhat from what might be seen as the theoretical ideal.[52] Prices change over time not only because consumer preferences change and production costs change but also because markets respond to built-in feedback mechanisms—such as the experience of shortages of some goods at prevailing prices and gluts of other goods—that constantly provide information to help buyers and sellers better identify the right prices and terms.[53] The basic market story, hence, is not the Panglossian "best of all possible worlds" story but a story of incremental movement in that direction in a world where the information needed to reach our

50. *See id.*

51. *See, e.g.*, STIGLER, INDUSTRY, *supra* note 46, at 14. The information problems presented by the typical market's bundling of goods also would exist (albeit in different form) for segregable goods. ALCHIAN & ALLEN, *supra* note 46, at 110–15.

52. *But see* STIGLER, INDUSTRY, *supra* note 46, at 117–20 (explaining that departures from notions of perfect efficiency are ubiquitous so that efficiency truly should be understood not in terms of abstract ideal but instead in terms of ordinary market functions).

53. *See* ALCHIAN & ALLEN, *supra* note 46, at 85–87; STIGLER, PRICE, *supra* note 46.

goal is too costly, too widely dispersed, and too inconstant for any centralized process to do better.[54]

D. *What's Different About Copyright Licensing?*

The third caveat about the general picture of markets tending to set efficient prices and terms draws a distinction among incentives in different market settings. This distinction, which has been a subject of considerable misunderstanding, focuses on market features thought to correlate with the proximity of parties' incentives to those depicted above.

In some settings, there is sufficient competition for the seller's (or licensor's) incentives to approximate those described above, incentives to set prices and terms that are jointly optimal for the parties to the deal and that also are efficient from a broader, social perspective.[55] Frequently, such settings are referred to as ones involving "perfect competition," although far less than *perfect* competition will suffice to assure that sellers have the right incentives. Thus, for example, pricing that looks very much like what would obtain under perfect competition can, and often does, occur when there are very few sellers in the market.[56] Indeed, such pricing *can* occur even when there is only one seller; the potential ability of others to offer closely competing goods is enough to constrain prices to competitive norms.[57]

In some markets with limited competition, however, it is possible for sellers to profit from setting prices above the competitive ideal and restricting output below the competitive ideal. This departure from the ideal is more likely when there are few enough sellers (actual or potential) to facilitate collusion,[58] and most likely where a single producer

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54. FREIDRICH A. HAYEK, THE ROAD TO SERFDOM (1944); JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY (Harper & Row 1975) (1942).

55. This definition looks only to allocative efficiency, not to other possible social goals.

56. *See* JOHN S. MCGEE, IN DEFENSE OF INDUSTRIAL CONCENTRATION 16–23 (1971); Eugene F. Fama & Arthur B. Laffer, *The Number of Firms and Competition, in* THE COMPETITIVE ECONOMY: SELECTED READINGS 43, 45–47 (Yale Brozen ed., 1975).

57. *See* WILLIAM J. BAUMOL et al., CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE 349–50 (rev. ed. 1988).

58. *See* George J. Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44, 48–49 (1964) [hereinafter *Oligopoly*]. Although collusion is a major concern when few sellers occupy a market (and, merger considerations aside, tends to be the primary concern), actual collusion is not necessary to produce supra-competitive prices and sub-competitive output. *See, e.g.*, JEAN TIROLE, A THEORY OF INDUSTRIAL ORGANIZATION (MIT Press 1988); Jonathan B. Baker, *Symposium on Tacit Collusion*, 38 ANTITRUST BULL. 1 (1993).

occupies the field.[59] (Put aside, for now, the question of what this means from either a legal or policy vantage.)

Is this the sort of market in which owners of intellectual property rights compete? Commentary often assumes that the answer is yes.[60] After all, intellectual property rights, like the general run of property rights, are designed to give the rights owner a monopoly over a particular good. The law ascribes to the holders of property rights certain powers that can be (and at times are) described as those accorded a legally sanctioned monopolist. A homeowner, for example, is legally entitled to control access to his property (with few exceptions) even if the terms of this "monopoly" control—the prices for and conditions under which access is granted—do not appear to replicate the operation of a perfectly competitive market.[61] So, too, a patent or copyright owner is legally entitled to control the exploitation of that property, even if this exercise of "monopoly power" results in different prices and terms than those that (observers predict) would obtain in a fully competitive market.[62]

That "monopoly," however, does not suggest any particular change in the marketplace from the competitive paradigm described above. Of course, the right holder is the sole supplier who can serve the artificially delimited "market" for the patented or copyrighted work—or at least the market for *new* access to that work (as old copies of the work may be in existence providing competition, perhaps very substantial competition, to sales or licenses of new copies). But that market is not usefully described.

Consider, for example, that roughly 500,000 books, plays, articles, and stories are registered for copyright in America each year and about 70,000 new book titles are published annually.[63] Each of the authors enjoys a nominal monopoly with respect to his work. If someone wants

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59. *See* Richard A. Posner, *The Social Costs of Monopoly and Regulation,* 83 J. POL. ECON. 807 (1975).

60. *See, e.g.,* Note, *An Economic Analysis of Royalty Terms in Patent Licenses,* 67 MINN. L. REV. 1198, 1221 (1983). The tendency of commentators to characterize markets for goods associated with intellectual property as monopolistic was noted by Professor Stephen Carter: "[C]ommentators constantly refer to intellectual property rights as *monopolies*—all right, *limited monopolies*—even though the typical proprietor lacks the market power (and often, as Edmund Kitch has noted, the incentive) to extract monopoly rents." Stephen L. Carter, *Does It Matter Whether Intellectual Property Is Property?,* 68 CHI.-KENT L. REV. 715, 717 (1993).

61. *See generally,* RESTATEMENT (SECOND) OF PROPERTY: DONATIVE TRANSFERS (1988); RESTATEMENT (SECOND) OF PROPERTY: LANDLORD & TENANT (1977).

62. *See, e.g.,* 17 U.S.C.§ 106 (1994); OTA REPT., *supra* note 34, at 185–86.

63. *See* Gary Ink, *Book Title Output and Average Prices: 1996 Final and 1997 Preliminary Figures, in* THE BOWKER ANNUAL: LIBRARY AND TRADE BOOK ALMANAC 521–22 (Dave Bogart ed., 1998).

to reproduce a book, use passages from a book, or turn the book into a stage or screen play, the person must strike a deal with the "monopolist" who holds the copyright on that work. Yet the book market is intensely competitive, and many, many people are competing to produce books and to turn ideas into stage productions and movies.

The nature of this market (and of markets more generally) often is misconstrued. Casual observers frequently have an unrealistically narrow view of the sources of competitive constraint and an unrealistically expansive expectation of profitability. The most obvious substitute products—the ones apt to be visible to casual observers—will be those that most influence the short-run value of a good but rarely are the only important sources of competition. Indeed, over the longer term, they frequently are not the most important sources of competition. Atari's video game system, for instance, had few immediate substitutes, but it was rapidly supplanted by a better technology.

In the same vein, successful ventures generally are visible to casual observers but are not representative of overall profitability for a given class of goods. That is true for copyrighted goods as well as for others. The most publicized aspect of the book market may be the fact that especially successful authors can reap huge rewards.[64] Once the authors have created a work that is unusually popular—and at times in anticipation of it—the authors are thought of as controlling particularly valuable resources. But the market in which the authors in fact compete is the intensely competitive market to *create* such specially valuable goods. Thinking only of the returns to those who do best in this market dramatically distorts the sense of this market, much as focusing only on Tiger Woods distorts a sense of the market for golf professionals or focusing on Michael Jordan distorts one's sense of the market for professional ball players—or, so far as these two athletes are seen in their role as product pitchmen, focusing on them distorts a sense of the market for American sports figures, or more generally for public figures. Whatever the returns to the top players, the creative markets remain intensely competitive.[65]

Even though they set terms for access to "monopoly" rights, copyright licensing agreements resemble the typical setting in which the

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64. *See* Mark Feeney, *High-Stakes Bookmaking; Huge Advances, Readership Slump Make '90s Publishing a Gamble*, BOS. GLOBE, Dec. 10, 1997, at C1; Bob Hoover, *Best Seller; Michael Crichton Strikes It Rich Before His Latest Book Hits the Stores*, PITTSBURGH POST-GAZETTE, Dec. 7, 1996, at D12; Doyle McManus, *Gingrich Inks a Book Deal for $4 Million*, L.A. TIMES, Dec. 23, 1994, at A1; Jeff Zaleski, *The Grisham Business*, PUB. WKLY., Jan. 19, 1998, at 248; *Clancy Deal Worth $100 Million*, CHI. SUN-TIMES, Sep. 8, 1997, at 32.

65. Even in intensely competitive markets, those who control particularly valuable inputs—for example, especially fertile land—may earn returns above the norm.

terms and price of the agreement harmonizes the interests of the parties (the licensor and licensee) in the same way that a grocery store's prices reflect the interests of the store owner and potential customers. As noted earlier, the prices and terms may not be ideal, but as a rule there should be no greater divergence from the ideal than in the grocery store example. The monopoly in the copyright owner's case is analogous to the grocery store's monopoly over its specific location. Information problems may distort parties' perceptions of what agreement is best—and may account for differences between parties to an agreement during negotiation—but the copyright itself typically is not the cause of any distortion.[66]

The prospect of arrangements between parties accounting optimally for both sets of interests does not, of course, suggest that the interests of the parties are identical, either before *or* after agreement. The extensive literature on "agency costs"—which encompasses writing about production by teams, supervision of employees by managers and investors, and other activities that take place in principal-agent settings—takes as a given the continued separation of interests even among closely cooperating parties operating in a single, commercial enterprise.[67]

Nonetheless, this literature explains that, despite the divergence of parties' interests, each party in such settings has reason to account for the interests of other parties. Consequently, an extensive variety of agreements and non-negotiated (but mutually accepted) arrangements are used to align parties' incentives more closely.[68] There appears to be every reason to presume that software licensing contracts, like other contracts generally, represent as good an accommodation of the interests of the contracting parties as can be found.[69]

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66. *See, e.g.*, George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970) (exposing effects of information problem in market without intellectual property or other monopoly rights).

67. *See, e.g.*, Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972); William J. Carney, *Controlling Management Opportunism in the Market for Corporate Control: An Agency Cost Model*, 1988 WIS. L. REV. 385; Frank H. Easterbrook & Daniel R. Fischel, *Close Corporations and Agency Costs*, 38 STAN. L. REV. 271 (1986); Eugene F. Fama & Michael C. Jensen, *Separation of Ownership and Control*, 26 J.L. & ECON. 301 (1983).

68. *See, e.g.*, Alchian & Demsetz, *supra* note 67; Kenneth J. Arrow, *The Economics of Agency*, *in* PRINCIPALS AND AGENTS: THE STRUCTURE OF BUSINESS 37 (John W. Pratt & Richard J. Zeckhauser eds., Harvard Bus. School 1985); Carney, *supra* note 67; Michael C. Jensen & William Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

69. The one arena in which there is appreciable question about this assertion is the use of so-called "shrink-wrap" contracts with ultimate consumers of software. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996); O'Rourke, *supra* note 34.

IV. ANTITRUST AND COPYRIGHT

A. *Antitrust Law and Intellectual Property Right "Misuse"*

Antitrust law reflects concerns about business practices that undermine competition. Discussion of the overlap between antitrust and intellectual property law frequently observes that the former opposes monopoly, while the latter confers monopoly rights.[70] That observation does not, however, resolve the questions about how far the monopoly rights extend and in what circumstances concerns about competition can limit those rights. Those questions evoke widely varied answers from experts in antitrust and intellectual property as well as from the courts.[71]

Courts struggling with the questions have found life complicated by decisions expanding antitrust law to reach matters that previously might have been addressed by equity doctrines and other decisions extending equity doctrines to subjects squarely within the purview of antitrust. Defenses to actions for enforcement of patent rights—now termed "patent misuse"—later extended by analogy to copyright (under the heading of "copyright misuse") encompassed attempts to use the intellectual property rights in ways that seemed inimical to public policy (or other traditional equity concerns for enforcers to come before the equity court with clean hands).[72] The only issues dealt with under the "misuse" headings, however, look very much like staple problems of antitrust law, which today has evolved into a relatively well-developed body of law.

That overlap does not mean that the two bodies of law—antitrust and intellectual property "misuse"—followed similar paths in resolving the issues both address. Assumptions about market operations that informed the contours of intellectual property rights "misuse" doctrines—such as the assumption that award of these rights automatically conferred meaningful power over market prices—survived in misuse

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70. Justice Oliver Wendell Holmes, for instance, suggested that patentees enjoy a monopoly over their invention that includes the right to withhold a license to use it, making antitrust inquiry into that decision inapposite. Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 519–21 (1917) (Holmes, J., dissenting).

71. *See, e.g.*, Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984); USM Corp. v. SPS Technologies, Inc., 694 F.2d 505 (7th Cir. 1982); Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813 (1984) [hereinafter *Intersection*]; Robert P. Merges, *Reflections on Current Legislation Affecting Patent Misuse*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 793 (1988) [hereinafter *Misuse*]; William F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267 (1966); Mark A. Lemley, Comment, *The Economic Irrationality of the Patent Misuse Doctrine*, 78 CAL. L. REV. 1599 (1990) [hereinafter *Irrationality*].

72. *See* Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942).

doctrine long after they were abandoned in antitrust litigation.[73] Judges' resistance to efforts to bring misuse doctrine into line with a body of antitrust law more sensitive to evolving economic learning led Congress to intervene in the late 1980s, amending the Patent Act to bring that body of law into line with antitrust on the issue of market power.[74]

That change has not sufficed to eliminate conflict between intellectual property law and antitrust law. Some courts and commentators maintain that a defense of copyright or patent misuse still exists separate from the antitrust law and extending to actions that do not violate antitrust law, even if similar to conduct subject to antitrust attention.[75] But the patent law amendment has reinforced arguments that antitrust should set the outer limits of whatever misuse doctrine is retained. To a significant extent, the argument over a separate misuse doctrine now has become more a matter of aesthetics than substance, given the nature of the claims advanced under the misuse doctrine.[76]

B. *Vertical Relations in Antitrust and Copyright*

The more trenchant questions are what the content is of whatever legal rule does govern, and what substantive rule *should* govern, business behavior central to the intellectual property laws and especially to copyright: licensing others to use the protected work. Plaintiffs in the Microsoft litigation have urged that intellectual property licensing be treated no differently from any other activity, while Microsoft has argued in effect that intellectual property licensing should be immune from antitrust scrutiny.[77] Apart from citations to precedent, Microsoft's argument stresses licensing arrangements' centrality to the scheme of the copyright law. Licensing surely tends to provide efficient means of exploiting intellectual property rights. So far as efficiency defines what is socially beneficial in business, and intellectual property laws define what is socially beneficial for creation and exploitation of innovative talents, one might expect that antitrust-type concerns would play no role.[78]

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73. *See* Kaplow, *Intersection*, *supra* note 71; Lemley, *Irrationality*, *supra* note 71.

74. Patent Act, Pub. L. No. 100-703, 102 Stat. 4676 (1988).

75. *See* Practice Management Info. Corp. v. American Medical Ass'n., 121 F.3d 516 (9th Cir. 1997); Merges, *Misuse*, *supra* note 71.

76. *See, e.g.*, Judge Posner's majority opinion in USM Corp. v. SPS Technologies, Inc., *supra* note 71.

77. *See Vacco v. Microsoft*, Defendant's Memorandum in Support of Motion for Summary Judgment and Plaintiffs' Joint Response to Microsoft's Motion for Summary Judgment and Reply in Support of Motions for Preliminary Injunction.

78. *See Intersection*, *supra* note 71 (arguing that the scope for antitrust concerns depends on the gap between intellectual property laws' ambit and socially optimal protection for inventive activity).

It is hard to know how far one can push that expectation. After all, antitrust laws have been used to regulate a range of business conduct that commentators find more likely to be beneficial than harmful.[79] Most of the complaints have focused on specific applications of the antitrust laws, rather than on its broader contours,[80] and commentators find much antitrust law tailored to protect efficient business practices.[81] Still, antitrust law surely is not entirely congruent with efficiency.[82]

Among the most questionable applications of antitrust is its use to police vertical relationships.[83] Although some practices in vertical dealings can be cleverly disguised horizontal restraints, cogent economic explanations have been offered for many more vertical arrangements that have been subject to antitrust scrutiny. These arrangements tend to promote efficiency, as one should expect with contracts between principals and agents (buyers and sellers, licensors and licensees).[84] The essence of such contracts is the apportionment of responsibilities between parties with different competencies and the selection of mechanisms that will align the parties' interests at the lowest possible cost—goals oriented to the attainment of efficiencies.[85] Consistent with the efficiencies that can be expected with vertical arrangements, courts generally have been more willing to weigh explanations for provisions in vertical arrangements than in horizontal agreements.[86] Yet courts have not put vertical arrangements entirely off limits for antitrust.[87]

If courts do not always shape doctrine in ways that fit efficiency considerations, they do take account of efficiencies in many settings.

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79. *See, e.g.*, THE CAUSES AND CONSEQUENCES OF ANTITRUST: THE PUBLIC CHOICE PERSPECTIVE (Fred S. McChesney & William F. Shughart II eds., 1995).

80. *See, e.g.*, Paul H. Rubin, *What Do Economists Think About Antitrust?: A Random Walk Down Pennsylvania Avenue*, *in* McChesney & Shughart eds., *id.*, at 33, 36–61.

81. *See, e.g.*, RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976). *See also* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1993) (often supporting, but also condemning, antitrust doctrine).

82. *See, e.g.*, McChesney & Shughart eds., *supra* note 79.

83. *See, e.g.*, BORK, *supra* note 81, at 245, 288–98, 379–81; Don Boudreaux & Robert B. Ekelund, Jr., *Inframarginal Consumers and the Per Se Legality of Vertical Restraints*, 17 HOFSTRA L. REV. 137 (1988); Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 28 J.L. & ECON. 265 (1988).

84. *See, e.g.*, Baxter & Kessler, *supra* note 48, at 627 (arguing that confusion on this point traces to courts sometimes mistaking vertical relationships—those involving parties engaged in production of *complements* not *substitutes*—for horizontal relationships and vice versa); Boudreaux & Ekelund, *supra* note 83; Klein & Murphy, *supra* note 83.

85. *See* WILLIAMSON, *supra* note 43, at 85–130; *see also* Baxter & Kessler, *supra* note 48, at 620.

86. *Compare* Continental T. V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1977), *with* Dr. Miles Med. Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911).

87. *See, e.g.*, Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984); Continental TV, Inc. v. GTE Sylvania, Inc., *supra* note 86.

Courts have given special attention, at least at times, to the efficiency arguments of patent or copyright licensing arrangements challenged on antitrust grounds.[88] Of course, efficiency concerns are only put in issue when two requisites of antitrust claims are established: first, that the licensor exercises monopoly power. Second, that the licensor has taken actions proscribed by antitrust law (unless justified) because of their untoward effect on competition. These are substantial hurdles. In numerous cases, even where monopoly power was proven (or assumed) courts have expressed concern to keep antitrust law from becoming a vehicle for second-guessing technical and product design decisions, especially of intellectual property rights owners.[89] And, more generally, courts specifically have vouchsafed the propriety of steps by rights owners to protect the integrity of their products.[90]

If Microsoft correctly interprets the relation of antitrust to copyright law, or if these hurdles of antitrust law are not cleared, the inquiry is at an end. If, however, plaintiffs persuade the court in this case and similar future cases on the threshold issues of law and fact, courts considering challenges to copyright license provisions will ask a question similar to the question presented when technological integration is challenged. Courts will ask if there is a reasonable explanation (not directed at subverting competition) for the contested choice. In the contract setting, courts will assess the plausible efficiencies from the contested provisions. In the usual case, the contracts can be expected to reflect efforts to achieve efficiencies, to exploit the benefits of copyrighted work, and to distribute responsibilities between licensor and licensee in a cost-effective manner.

C. *The Problem of Contract Deconstruction*

Unfortunately, the complexity of the considerations of contracting parties and the number of terms that tend to comprise the bundle of rights subject to contract make it difficult for non-parties (and perhaps for parties as well) readily to explain what work one term taken alone

88. *See* USM Corp. v. SPS Technologies, Inc., *supra* note 71.

89. *E.g., Microsoft*, 1998 WL 327855 at *13–*19; Foremost Pro Color, Inc. v. Eastman Kodak Co., 703 F.2d 534, 542–44 (9th Cir. 1983); California Computer Prods., Inc. v. IBM, 613 F.2d 727 (9th Cir. 1979); International Data Processing, Inc. v. IBM, 585 F. Supp. 1470, 1471–76 (D. N.J. 1984); ICL Peripherals Leasing Corp. v. IBM, 448 F. Supp. 228, 230–34 (N.D. Cal 1978), 458 F. Supp 423, 439–41 (N.D. Cal. 1978).

90. *E.g.*, Community for Creative Non-Violence v. Reid, 846 F.2d 1485 (D.C. Cir. 1988); WGN Continental Broadcasting Co. v. United Video, Inc., 693 F.2d 622 (7th Cir. 1982); Gilliam v. American Broad. Co., 538 F.2d 14 (2d Cir. 1976); National Bank of Commerce v. Shaklee Corp., 503 F. Supp. 533 (W.D. Tex. 1980). These decisions are straightforward applications of U.S. intellectual property law, not European-style "moral right" determinations.

performs or how eliminating that term would affect price.[91] That should not be a surprise—after all, those were exactly the problems identified as the ubiquitous reasons for the real world being so troublesome and messy a place. That is why the game of picking apart complex contracts *ex post* invariably resembles efforts to articulate the distinctive contribution each particular ingredient in a cake mix (eggs, flour, etc.) makes to the cake. How much of the cake's success *can* we say is attributable to the eggs? Of course, we can't say.[92]

But there is considerable temptation to try anyway. The same is true of efforts to deconstruct licensing agreements, identifying the role played by specific license provisions. That effort will be a standard part of antitrust challenges to copyright agreements.

V. THE FIRST SCREEN

One licensing term that has been challenged as specially troublesome is the provision in contracts between Microsoft and OEMs that is known as the first screen provision. Plaintiffs assert that Microsoft alone benefits from this term and that OEMs, consumers, and other software producers are harmed. Before discussing the provision, it is helpful to spell out its *do*s and *don't*s.

A. *What Is the First Screen Provision?*

The first screen provision in Microsoft's contracts with OEMs specifies what must appear on the computer screen at the end of the boot-up sequence when a consumer first turns on (boots up) a computer on which Microsoft Windows has been installed as the operating system.[93] The provision has three components: two components that address the style of the screen and a mandatory content component. For

91. *See generally* Ronald A. Cass & Clayton P. Gillette, *The Government Contractor Defense: Contractual Allocation of Public Risk*, 77 VA. L. REV. 257 (1991); Oliver E. Williamson, *Assessing Contract*, 1 J.L. ECON. & ORG. 177 (1985).

92. This example of fruitless analysis is a long-time favorite of Professor James A. Henderson, Jr., who kindly has not sought copyright protection.

93. When a user turns on a typical computer with a program such as Windows 98 installed, the computer will initially load and run a program that is part of the computer's basic input-output system (BIOS) to test the system hardware and look for additional routines in the system. The BIOS then turns control over to a program located in the "master boot record" of the disk drive being used to boot the system, and that program will load the operating system. Control then passes to the operating system, which goes through another sequence of locating and/or activating various hardware and software. The entire process commonly is referred to as the "boot-up" sequence.

ease of discussion, the *scope* of the provision (what it applies to) will be treated as a fourth element of the first screen provision.

1. Style—Desktop: The first, and most basic, style component is that the first screen must contain the familiar Windows "desktop." The desktop is a layout for the screen. It consists of a background (which can be configured in a variety of designs, sometimes called "wallpaper") on "top" of which are visual cues (icons). Each icon can be activated by moving a pointer to it and clicking on it (one click or two, depending on the version of Windows and the system's configuration). The Windows system then inaugurates operation of the relevant program. This point-and-click procedure replaces the earlier DOS operating system commands, which required users to memorize the particular word-commands for specific functions (in application programs, the older system required users to know particular keys and combinations of keys). In addition to the icons, a bar runs across the bottom of the screen that allows users (with the same point-and-click system) to find and inaugurate the full panoply of programs contained in the computer. Features such as an "active channel bar" can be added to the desktop without violating the style constraint.

2. Content—Icons: The second component of the first screen provision is a requirement that the desktop for that screen include particular icons that serve as entry points for certain functions. The desktop must display icons for eliminating files or programs (the "Recycle Bin"), for transferring files or programs ("My Briefcase"), for access to the different files and programs on the hard drive and in other locations ("My Computer"), for access to local networks ("Network Neighborhood"), and for file management as well as access to the Internet ("Internet Explorer"). This component is a *mandatory* one, not a *prohibitory* one. The provision does not preclude the addition of other icons to the screen, including icons for technologies that duplicate functions represented by the mandated icons and icons that permit users to change the configuration of the desktop. The contract language respecting icons on the first screen only lays out the minimum requirements for the first screen desktop.

3. Style—Icons: The third component of the provision also relates to the icons but, like the first component, is a matter of style. It specifies that any icons added to the desktop on the first screen must conform to the size and general style of the mandated icons. It does not modify the content component by prohibiting any icons, programs, or functions.

4. Scope: The first screen provision has a very limited scope. It applies to the first screen that appears when a consumer first boots up a computer that has been set up with the Windows operating system. It

does not regulate what consumers can do in subsequent uses of the computer (though it would proscribe an automatic change programmed by the OEM to occur on subsequent uses). The screen can be reconfigured by any user so that, after the very first use, the nature and arrangement of the items on the desktop changes, the features and programs that are enabled by the simplest (one step) point-and-click process changes, the background of the desktop changes, and so on, from merely aesthetic alterations to complete substitution of the entire user interface structure represented on the screen. The provision does not require that consumers be left wholly on their own in conceiving and making such changes. OEMs can facilitate changes—large or small—by placing an icon on the first screen that can change the default first screen with a single click, substituting another first screen, or OEMs could put an icon on the first screen that reveals a menu of possibilities for changing the first screen. The consumer not only is in control of what appears on subsequent boot-ups of the computer; the consumer is in charge and not restricted to any preset list of options. The provision, in other words, is a first-screen/first-time term of the license agreement so far as consumers are concerned.

B. *Why Have a First Screen Provision?*

The point made at the start of this section, picking up the thread of discussion in sections 2 and 3, was the difficulty of decomposing agreements to assign separate functions to each provision. Sometimes provisions do have specific, independent functions that can be discussed meaningfully apart from an overall sense of the contract, but the venture typically risks misconstruction. In the licensing contracts, as a rule, no provision will have effects independent of other terms; the trade-offs implicit in such contracts almost assures that analysis of any single provision will not capture the net effect of its inclusion.

Evaluation of the purposes served by the first screen provision is not quite so problematic as evaluation of the provision's effects. Purpose does not require the same netting out of other terms as is required of effects analysis. But such evaluations still should be proffered with considerable caution. That said, the first screen provision seems on its face to serve three purposes.

1. Training Cost Reduction: The first purpose is simple and powerful: to reduce the cost to consumers of using the new product. Newness is an attraction in some arenas, but it more commonly discourages. This is most easily seen with children. Anyone who has children has observed how much they depend on familiarity. They like to have the same routines, to do the same things, to read the same books, to watch

the same shows. Familiarity gives a sense of comfort, of confidence, of mastery over the external world, of security in doing something that is already within one's experience. In economic terms, familiarity reduces the cost of the activity, which makes it more attractive.

Though we seldom attribute to adults the need for security we see in children—for whom so much of the world is novel and inexplicable—we do see a ubiquitous interest in lowering costs of our activities. At times, this cost-lowering impetus looks quite similar to a child's search for familiarity. How many of us choose the same foods from foreign language menus so that we will not have to master new terms? How many of us go to the same places (restaurants, vacation spots, etc.) and do the same things at them so that we will not have to learn what is to our liking there or risk disappointment at discovering that the new experience is not what we hoped?

More generally, familiarity reduces the need for an investment in training before a product or service can be used effectively. While the advantage is especially important with products that have large training costs, even a small savings in cost can be important in many settings. Everyday products as well as technologically advanced products provide evidence that we resist investing in training where that is efficiently avoidable, a point that holds in all settings, including where the training is easy and the cost seemingly trivial.

Market responses to this lesson also are ubiquitous. Reduced training costs, for example, explain similarities across numerous products that are provided in highly competitive markets. Consider examples involving two sorts of buttons: conventions that avoid the need to learn and adjust to differences explains why men's shirts all button in the same direction and why telephones tend to have buttons arrayed in the same layout regardless of the phone's size or shape or manufacturer.

In the case of Microsoft's licensing agreements, the first screen provision serves the same purpose as other devices that reduce training costs. It assures that the first screen a user of any Windows-based computer sees provides the accustomed look of a desktop—familiar to anyone who uses any computer with the Windows system—with extremely low-cost methods of gaining access to popular features and programs.

Two primary routes are provided on the first screen for access to programs. The lower-cost access is for programs that have an icon on the desktop already—simply point and click on the icon—and a desktop that has certain icons on it already (the standard, minimum set) nearly eliminates any training time or cost for those programs. Further, making all programs accessible through the "Start" button (the icon at the bot-

tom left of the first screen)—again using point-and-click technology—makes the entire array of programs loaded into the computer accessible at very low cost.

The consequence of this organization of the first screen is that computer users can turn on any computer with Windows and immediately get into the programs they want without learning new or complex commands. In this respect, Windows combines standardization of computers using that operating system with simplification of the interface between user and computer. As has generally been the trend for all advanced technologies, this environment moves complexity into the software program so that the requirements placed on consumers—the training costs, primarily—can be reduced.[94]

Moreover, Microsoft's organization of Windows as a "belt-and-suspenders" approach, providing multiple routes into some key functions, further reduces training costs by allowing unsophisticated users to continue to go through the most familiar route. This approach provides a basis for requiring that an Internet Explorer icon appear on the first screen. Internet Explorer technologies not only provide access to the Internet, but also provides options for file management, transfer, and access. The increasing integration of the Internet into everyday computer use—reflected in Microsoft's decision that technologies associated with Internet access and use should be integrated with other technologies governing computer operation—changes the consumer demand for an operating system. The required inclusion of the Internet Explorer icon, as with the other content-based icon requirements, seems quite clearly driven by a desire to provide a product with features consumers find useful in a sufficiently standardized package to facilitate operation.

2. Quality Control: A second reason for the first screen provision is that it facilitates quality control. If certain features are always present on the first screen and those features are not modified by OEMs, the responsibility for assuring that the features work as intended will lie squarely with Microsoft. Insofar as Microsoft expects to receive the blame for any quality problems and anticipates that OEM modification of the features associated with the first screen could generate problems, it is rational to insist that those features be presented "as is." This is especially true if the features are important to unsophisticated consumers. Those are the consumers least likely to be able to navigate around problems and least likely to be able to assess responsibility for problems.

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94. *See* GEORGE GILDER, MICROCOSM: THE QUANTUM REVOLUTION IN ECONOMICS AND TECHNOLOGY 166–68 (1989) (describing how progress is made in computing).

In many settings, the division of responsibility between one company and another or between a company and its customers is predicated on the expectation that one is better positioned to assure the desired outcome. Professor George Priest's study of consumer product warranties is one example of the business decisions that turn on such considerations.[95] The same principle applies to the relationship among consumers, software companies, and hardware manufacturers.

In principle, quality control can be maintained in other ways. Microsoft could agree with OEMs that, if OEM modification of the operating system software impaired the operation of specified programs or features, the OEM would cover the costs associated with that problem. These costs could include costs of fixing the problem, direct costs associated with loss of consumer confidence in the operating system (costs incurred to boost consumer confidence to prior levels), and indirect costs such as lost sales.

Modest reflection, however, suggests that this alternative, litigation-oriented solution is apt to be less efficient than a precaution-oriented solution. The causation inquiry necessary to a litigation-oriented solution will be difficult as will the calculation of costs. Contracts are written to impose liquidated damages penalties or other litigation-oriented solutions to quality control problems in some circumstances. But circumstances where that is the efficient solution typically involve clear responsibility on one contracting party for performing a task (for which the other party is paying) and some readily ascertained performance measure as a trigger for the damages penalty.[96] That looks very different from the software-OEM-consumer relationship.

The quality control concern seems especially apposite to contract provisions that restrict OEMs' capacity to modify the code embedded in Windows. The challenge to restrictions on deletion of code associated with Internet Explorer's web browsing technologies flies in the face of this concern.[97] Internet Explorer technologies have been integrated into the functioning of Windows 95 and, even more, Windows 98, so that any attempt to modify the system to eliminate code controlling Internet Explorer technologies and substitute code intended to duplicate deleted capabilities is likely to create exactly the sort of problems that give

95. George L. Priest, *A Theory of the Consumer Product Warranty,* 90 YALE L.J. 1297 (1981).

96. *See, e.g.,* Kenneth W. Clarkson, et al., *Liquidated Damages Versus Penalties: Sense or Nonsense?,* 1978 WIS. L. REV. 351; Eric L. Talley, *Contract Renegotiation, Mechanism Design, and the Liquidated Damages Rule,* 46 STAN. L. REV. 1195 (1994).

97. As noted earlier, it also flies in the face of decisions upholding copyright owners' control of modifications of their works and decisions upholding rights to integrate technologies free from judicial second-guessing.

software programs a bad name. The inclusion of the full Internet Explorer technologies safeguards against the problems that, even if caused by an OEM, appear likely to be laid in some measure at Microsoft's door. From Microsoft's vantage, hence, insistence on the full inclusion of the Internet Explorer code solves a potential problem in an efficient manner. Inclusion of the icon representing these technologies, as noted above, provides a low-cost means for users to gain ready access and an efficient method of cueing unsophisticated users to the technologies' availability.

3. Brand Identification: Third, the requirement of a first screen that has certain uniform features helps maintain brand identity for Windows. That brand identity clearly is helpful to Microsoft. Consumers who are familiar with the look and feel of a given brand, who associate easy use of the computer with that brand, plainly will be more likely to support that brand. If there is no obvious similarity from one Windows-based computer to the next, there is relatively little meaning to the brand, so far as a typical consumer could tell. If it were not possible to limit what Microsoft's licensees can do, OEMs might find it advantageous to repackage the Windows program under the OEM label. Though not clearly a step that would serve *either* party's interest, it is the sort of risk principal-agent accords routinely guard against.[98]

The producer-protective aspect of branding is its most obvious feature. Brand identity is created to help market goods—if a brand is familiar to consumers, and especially if it is associated with positive experiences, it will provide a basis for preferring the branded good to competing goods. The brand is designed to advance the manufacturer's (or marketer's) interest.

But the brand also has value to consumers. It conveys information that is important about what consumers will get when they purchase products grouped under a given brand label.[99] The McDonald's restaurant that you have never been to in a city you have never visited has an expected menu, quality, and cost derived from prior experience with that brand. The value that consumers place on that information has earned trillions of dollars for those who have created brand identities over the past few decades in hotels and restaurants and retail stores, among other goods and services. The corollary of the franchise brand value to consumers is that the franchise brand serves interests of the

98. *E.g.*, Jensen & Meckling, *supra* note 68.

99. *See, e.g.*, Ronald H. Coase, *Advertising and Free Speech*, 6 J. LEGAL STUD. 1 (1977); Aaron Director, *The Parity of the Economic Market Place*, 7 J.L. & ECON. 1 (1964); Richard Schmalensee, *Advertising*, *in* 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS 34 (John Eatwell et al. eds., 1987).

franchiser and franchisee as well—or, moving from McDonald's to Microsoft, the interests of Microsoft and the OEMs.

Although the first screen provision should aid brand identity, it is so modest a requirement that its utility at branding is limited. The OEMs have sufficient flexibility to add to the desktop, to customize the desktop with different backgrounds, logos, and added functionality, to reduce the Windows brand identity and to increase the OEM brand identity. The provision, thus, looks to be a compromise between the interests of Microsoft and the OEMs—which, given the nature of copyright licensing, is no surprise.

C. *Exclusion, Externalities, and Party Interests*

The first screen provision serves interests of Microsoft, OEMs, and consumers. So, what is the concern? Assertedly Microsoft has prevented rival software companies from gaining access to customers, precluded OEMs from providing the best software packages for their target customers, and impeded customers' access to the software they prefer.[100] Beyond the assumption that the first screen provision is a unilateral imposition *by* Microsoft *on* other parties (an assumption taken up below), specific aspects of the provision are claimed to generate specific problems and demonstrate an anticompetitive purpose. The claims have the defect of all efforts to deconstruct agreements and depend on "armchair" conjectures rather than on demonstrated effects cognizable within the purview of antitrust laws.

1. OEM Brand Interference: The configuration of the first screen desktop (and its place following the Windows logo), for instance, allegedly impairs the ability of OEMs to create brand identity of their own.[101] That allegation seems implausible, given the success of particular brands, such as Compaq, Dell, IBM, and Gateway, which appeal to different segments of the computer market.

The allegation seems implausible as well because the OEMs have considerable flexibility to differentiate their products. They can do this

100. *See* DOJ Complaint, *supra* note 1; State's Complaint, *supra* note 1, at 11; Fisher Declaration, *supra* note 5; Sibley Declaration, *supra* note 5.

101. *See* Sibley Declaration, *id.* The license agreements between Microsoft and OEMs prohibit OEMs from altering the boot-up sequence for Windows. This has the effect of proscribing OEM use of the screen for other purposes (including advertising purposes) during the Windows boot-up, an effect that is allegedly anticompetitive. *See* DOJ Complaint, *supra* note 1, at 32–34; State's Complaint, *supra* note 1, at 11; Fisher Declaration, *supra* note 5; Sibley Declaration, *supra* note 5. The license agreement does *not*, however, prohibit licensee-OEMs from using a different operating system prior to the inauguration of Windows operation; the Windows license agreement does not regulate what occurs during boot-up if an OEM chooses to use another system in addition to Windows to perform functions prior to starting or switching to Windows.

by the way they present the desktop, the background wallpaper and logos they choose for the desktop (including using the corporate logo in a repeated pattern for the background, as Toshiba and Dell, for example, have done), the software they choose to offer, and the software they choose to highlight through icon placement on the first screen. OEMs also enjoy other opportunities for branding, such as placing logos on the hardware itself, perhaps beside the computer screen where it is most likely constantly to be in view, as well as on the box in which the computer arrives—in other words, on places that are first seen and most obvious to consumers.

If, however, the first screen provision *did* interfere with OEM brand identity, that is not obviously problematic. The conclusion would be that contracting parties would have to decide how much to promote Microsoft brand identity and how much to promote OEM brand identity. Presumably, that is a question, like others in a licensing contract, that turns on the relative value of the competing interests. If OEMs think that a contract provision hurts their brand identity, some offset is required, in price or in other contract terms. There is no reason to believe that contracts between Microsoft and OEMs have not provided that offset, if it indeed is necessary. For those who are concerned about the ability of contract parties to gain terms they desire, it is noteworthy that the OEMs tend to be very large commercial enterprises, some significantly larger than Microsoft. There is no evidence that these companies have had difficulty establishing brand identity or that competition among OEMs has been less than vigorous. And if there is little evidence of any harm here, there is even greater difficulty in bringing such harm to OEM brand identity as might exist within the realm of antitrust concerns.[102]

2. Icon Inclusion/Program Preclusion: Another claim is that requiring all Windows-based systems to include particular icons on the first screen prevents OEMs from offering the array of programs they otherwise would choose to put on the first screen.[103] That may be true. OEMs might choose to omit some icons for programs that duplicate those already required by the Microsoft contract. On the other hand, OEMs might choose to *add* some icons that otherwise would not be on the first screen. For example, if Microsoft wants to have access to Internet Explorer technologies available through an icon on the first screen

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102. For discussion of the peculiar realm of such concerns, see William H. Page, *Antitrust Damages and Economic Efficiency: An Approach to Antitrust Injury*, 47 U. CHI. L. REV. 467 (1980).

103. *See* DOJ Complaint, *supra* note 1, at 32–34; State's Complaint, *supra* note 1, at 11; Sibley Declaration, *supra* note 5.

and the OEM believes that its customers will prefer different browsing software, the OEM may choose to highlight the availability of an alternative browser by placing that icon alongside the Internet Explorer icon. Under the license agreements, OEMs can place additional icons on the first screen.

The argument that icons required by the first screen provision have preclusive effect turns on two claims. First, the desktop is seen as a scarce resource that does not have space enough for all programs. Hence, any icon placed on the desktop must preclude some other icon.[104] That argument is specious. Of course, desktop space is scarce in the same sense in which *every* resource is scarce. But the space used by icons required by the first screen provision is only about fifteen percent of the desktop. The remaining 85 percent is left to the OEMs. It is possible that even that much space is not enough. But look at the desktop screens of different computers as the OEMs have configured them. The OEMs have left a great deal of room on every desktop. That strongly suggests that they believe that customers do not need many icons on the desktop—which, in turn, suggests that the icons Microsoft wants placed on the initial desktop screen do *not* displace other icons.

Maybe, however, the reason OEMs leave desktop space empty is that consumers prefer to add their own icons and dislike a desktop with limited open space. If that is so, the Microsoft icons would be competing *both* with other program icons and with open space. That might mean that Microsoft icons increase the value of remaining icon spaces on the desktop and could preclude the addition of icons that otherwise would be there. Again, this armchair theorizing is not rooted in actual effects. For one thing, if the scarcity problem exists because consumers prefer to have space to *add* icons, that implies that those consumers are in fact capable of moving icons on and off the screen (a task the competent computer user *can* perform given the way the Microsoft first screen is set up). But if that is so, then, again, the presence of the Microsoft icons on the screen is not terribly significant.

Moreover, the program that so much public and legal attention has focused on as one that is precluded by the requirement of an Internet Explorer icon—Netscape's competing browser—is in fact included on a very large number of first screens.[105] Not only is it included in the first screens seen by many consumers who purchase Windows-based personal computers for their own use; it also is loaded onto many such computers at work where a great many computer users do the majority

104. *See* Sibley Declaration, *supra* note 5.

105. Casual inspection of computers at two local stores revealed that many computers come pre-loaded with both Windows (including Internet Explorer) and Netscape Navigator.

of their computer work and where they also frequently acquire computers for work off-site. Whatever OEMs place on the first screen, for those users the first screen they see frequently is configured by someone at the office to have the software and accessibility desired for that workplace.

The second reason given for the assumption that inclusion of Microsoft icons on the first screen excludes other icons is a supposed fear of consumer confusion. The hypothesis is that unsophisticated consumers would be confused by having two programs that perform essentially the same function, and for that reason OEMs would be unlikely to place a second (insert function here: browser program or word processing program or spreadsheet program or financial management program) icon on the desktop.[106] Again, the hypothesis is not logically compelling—there is no explanation *why* consumers would find this confusing, any more than having two types of orange juice to choose from in a grocery store is confusing. Nor is the hypothesis of confusion rooted in fact—there is plenty of evidence that OEMs *do* choose to place duplicate (and at times triplicate) programs on the computer and icons on the first screen.

3. Size Matters?—Icons and Markets: A third alleged problem with the first screen provision is the requirement that all icons have the same size and general style. This supposedly interferes with the interest of OEMs in presenting the best software programs to the consumer. The argument is that OEMs might wish to direct their customers to specific programs that a particular OEM feels work better for those consumers and, without the first screen provision in license contracts, would use a larger icon to prevent consumer confusion.[107]

This argument, too, seems quite weak. First, it is in essence an objection to the inclusion of a Microsoft-designated icon, not to the size constraints. But, as discussed above, the inclusion requirement does not seem to preclude other icons (even though it conceivably could). Second, despite the delivery of many computers there is no evidence that the inclusion of equal sized icons for alternative programs confuses consumers. The hypothetical problem is just that: hypothetical.

Third, it is hard to make this hypothetical problem into a real antitrust concern. Even to come close, the hypothetical must be extended; for example, the argument might be that because the OEM cannot put a larger icon, it chooses not to put in the icon for a duplicate program. That means that the advantage of the other (assertedly better) program is less than the disadvantage of consumer confusion. But the point of the hypothetical is that better programs are being harmed (by the insistence

106. *See* Fisher Declaration, *supra* note 5; Sibley Declaration, *supra* note 5.
107. *See* Fisher Declaration, *supra* note 5; Sibley Declaration, *supra* note 5.

on inclusion of the first program's icon and size-equivalence of the second program's icon). How much better can the second program be if a slight chance of consumer confusion is enough to cause OEMs to drop it?

A different extension of the hypothetical could be that the OEMs put the duplicate program icon on the first screen but consumers are so confused that they flood the OEMs with calls. If that is a problem, it is one that will affect the price OEMs would pay to license Windows with the first screen provision. That, too, is hardly an issue for the antitrust laws.

Perhaps the extended hypothetical would be that the OEMs put the second icon on the screen and consumers who could have been directed toward one program (of the OEM's choosing) instead pick another program, even though the icons are similar in size and placement and both appear on the first screen. The assumption, then, would be that Microsoft gains an illegal advantage over software competitors when both companies' programs are included in computers, are accessible to consumers on the same terms, and are represented on the first screen by the same size icons. That assumption is hard to support.

The difficulty with all of the hypothetical examples is that they begin with a licensing provision that does not lend itself to easy characterization as anticompetitive. It is a far cry from a provision insisting that one firm's programs *only* must be featured first, that no program that duplicates its programs can be included in the computer, that its programs' icons must be twice as big or twice as bright or the only icons to appear in color—in other words, the hypothetical must go very far in order to transmute the actual first screen provision into anything that looks even remotely within the ambit of antitrust.

4. Provision's Provenance: Finally, the first screen provision is questioned on the basis of Microsoft's advocacy of it. The argument goes like this: if Microsoft has to urge OEMs to accept this provision, and perhaps as a result must charge less for licensing the Windows operating system or grant other concessions to OEMs, it must be inimical to Microsoft's competitors—after all, wouldn't the OEMs favor the provision if it served a purpose other than handicapping Microsoft's competition?

Again, the question starts with a plausible predicate and jumps to an illogical—or at least unnecessary—conclusion. Doubtless, the impetus for much of the first screen provision comes from Microsoft. Apart from evidence that some OEMs objected to versions of this provision, it is obviously in Microsoft's interest to have its brand identity strongly established, its key technologies prominently displayed, and its pro-

grams' operations free from quality problems. It obviously is in Microsoft's interest, too, to devise an integrated set of technologies that will appeal to consumers and to insist that OEMs present that as Microsoft's creation, rather than repackaging it as a set of programs or similar offerings from the OEM.

Just as obvious, however, should be the fact that the provision is not simply a presentation of Microsoft's desires: OEM interests and consumer interests also play a hand in shaping the contours of the first screen provision. The provision is tailored to allow variation among OEMs, to allow addition of programs of the OEMs' choosing, to allow more non-Microsoft programs than Microsoft programs to be featured on the first screen, to allow competitors' programs to be featured on an equal basis, to allow substantial opportunity for OEMs to establish brand identity as well as to guide consumers' choices among technologies, and to allow users full flexibility to rearrange the way the screen is configured and the technologies accessed following the initial boot-up.

The essential function of the first screen provision is one that benefits both Microsoft and consumers but that has less importance to others, including OEMs and makers of software that is built on the Windows platform. That function is the facilitation of computer use by creating enough similarity across computer types and manufacturers, the reduction of training costs discussed above. The reduced training cost is experienced directly by consumers and is part of the value of the Windows operating system. But the value is an externality so far as OEMs and other software firms are concerned, as the reduction in training costs applies to all Windows-based computers and all Windows-based software. Some OEMs may want to inhibit consumers from shifting among different brands of computer (from shifting away from their brand); some software producers also may want to make it more costly for consumers to switch away from their products; but Microsoft (in its role as copyright owner on the Windows operating system) and consumers gain value from the reduction in switching costs.

It would be no surprise if Microsoft is the party most interested in having a first screen provision in its Windows licensing contracts with OEMs. It also is of no moment for analysis of the provision's effects. There are legitimate reasons, wholly apart from Microsoft's interest in the integrity of its software, supporting such a provision. And the first screen provision takes a limited approach to assuring that the positive externalities of low training costs are maintained, an approach that gives weight to OEM interests and consumer interests as well as the copyright owner, Microsoft.

VI. CONCLUSION

The challenge to the first screen provision in Microsoft's contracts with OEMs seeks to revisit a complex accord between a principal and its agents. Because the first screen provision does promote efficiency and does not impede competition, this challenge should fail. But it should be understood as part of a pattern of inquiries that take antitrust law down a path that, ultimately, could become a collision course with the rights accorded by our intellectual property laws.

The rights of copyright owners and their ability effectively to contract for licenses that maximize the value of their intellectual property are put at risk by a legal process dependent on picking apart contract provisions *ex post.* This process is fraught with difficulty. And, as many others have noted, that difficulty is conducive to a use of the process that is far from the public-interest image so often associated with antitrust. Indeed, the likely effect of such armchair quarterbacking is that the antitrust laws become captive of well-placed firms in search of an industrial policy that protects declining firms against more successful firms—an outcome likely to frustrate innovation and efficiency and to harm the public.[108]

The *ex post* analysis, of course, *can* be done. And when that task is performed, the first screen provision passes antitrust muster. In fact, none of the criticisms of the first screen provision holds up under scrutiny. The provision serves quite legitimate ends and supports values that are broadly shared among consumers even though those values are not a particular concern for businesses other than Microsoft. In fact, Microsoft's efforts to define its product and to guard against degradation or free riding reflect the difference between interests that a licensor internalizes and those that motivate licensees. The key consumer advantage to which the provision responds is a reduction in training costs. But that same interest, along with complementary interests in providing a valuable product to the consumer and in providing a product that is not

108. *See* William J. Baumol & Janusz A. Ordover, *Antitrust: Source of Dynamic* and *Static Inefficiencies?*, *in* ANTITRUST, INNOVATION AND COMPETITIVENESS., *supra* note 31, at 82, 86–95; Frank H. Easterbrook, *Ignorance and Antitrust*, *in id.*, at 119, 123–32; Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1 (1994); Robert B. Ekelund, Jr. et al., *Business Restraints and the Clayton Act of 1914: Public- or Private-Interest Legislation?*, *in* McChesney & Shughart, *supra* note 79, at 271–86; Fred S. McChesney, *Be True to Your School: Chicago's Contradictory Views of Antitrust and Regulation*, *in id.*, at 323–40; Fred S. McChesney & William F. Shughart, *The Unjoined Debate*, *in id.*, at 341–44; Oliver E. Williamson, *Antitrust Lenses and the Uses of Transaction Cost Economics Reasoning*, *in* ANTITRUST, INNOVATION AND COMPETITIVENESS., *supra* note 31, at 137–58; Ramsey Hanna, Note, *Misusing Antitrust: The Search for Functional Copyright Misuse Standards*, 46 STAN. L. REV. 401 (1994).

merely appropriated by OEMs substituting their individual interests for Microsoft's interests and broader consumer interests, runs through a number of contract provisions.

The important point is not simply that Microsoft's first screen provision is supported by more than plausible efficiencies. Rather, it is the danger of a legal requirement that each contract provision be subject to analysis to identify its singular contribution to the contract. We can be quite sanguine that principal-agent accords will systematically tend to achieve efficiencies,[109] and the terms chosen by the parties will be those best designed to harmonize the parties interests given the state of knowledge at that time. It is another matter altogether, however, to ask parties to provide explanations that will convince non-parties that specific efficiencies are associated with any given term. It is worse yet for parties to be put to the task of proving the magnitude of such efficiencies. A good part of the difficulty of assessing the magnitude of contract-driven efficiencies is a problem common to efficiencies afforded by many conventions. Those efficiencies, including the training cost efficiencies associated with the first screen provision, routinely appear to convey trivial savings in individual cases, even though in the aggregate these efficiencies generate enormous consumer value.

If every copyright licensing provision that confers a benefit on the copyright owner is suspect, the first screen provision certainly can be questioned. If suspicion attaches to every copyright licensing provision that confers a benefit on a copyright owner with a large product market share (in a market drawn around that copyrighted work), the first screen provision can be listed among the suspects. But licensing *should* confer benefit on copyright owners: that is part of the design of copyright law and of contracts. And success in the marketplace does not dispossess a firm of the benefits that copyright law and contract generally convey. Though Microsoft should be able to establish the efficiency-enhancing properties of the first screen provision, litigation over that provision takes the law down a road only America's lawyers should want to travel.

109. *See, e.g.*, BORK, *supra* note 81, at 387–91.