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Copyrighted Software and Tying Arrangements: A Fresh Appreciation for Per Se Illegality, 10 Computer L.J. 413 (1990)

Daniel Dik

COPYRIGHTED SOFTWARE AND TYING ARRANGEMENTS: A FRESH APPRECIATION FOR *PER SE* ILLEGALITY*

The computer industry embodies what has been called "innovational competition."[1] The two components of innovational competition are price performance ("bang for the buck") and functional capability (the services a given product provides). Innovational competition requires that firms develop new products which, when brought to market, will attract customers due to improved features of price performance and/or functional capabilities.[2] Rather than merely matching the advantages of the new product (involving a lag-time during which customer loyalty may erode), competing computer firms prefer to respond by developing even better products.[3] Consumer desires for more powerful and efficient software has increased the demand for more powerful and efficient hardware, and firms have emerged that specialize in products of one or both sorts. The driving force behind this innovational competition has been the intellectual labor of software designers.[4] The production of such intellectual labor is stimulated primarily by the profit motive. The ability to profit from one's intellectual labor is, in turn, protected by copyright.

Copyright and antitrust law use opposing means to, within different facets of economic activity, achieve the larger goal of increasing society's welfare. Kept within their own spheres of influence there is no inconsistency between copyright and antitrust. It is when the advantages and tools appropriate to one sphere of activity are used to upset the workings of another sphere of activity that these two areas of law conflict.

It would be an over-simplification to say that copyright merely protects against copying a work. While copyright does not grant an exclusionary right to an underlying idea or discovery, it does protect an

1. A. CLAPES, SOFTWARE, COPYRIGHT, & COMPETITION: THE "LOOK AND FEEL" OF THE LAW 25 (1989).
2. *Id.* at 25-26.
3. *Id.* at 26.
4. *Id.*

author's expression of that idea. Copyright is used by society to encourage the production of artistic and scholarly works by protecting the monetary rewards for the fruits of intellectual labor.

Antitrust doctrines shape the broad contours of the commercial playing field by seeking to increase competition. Building upon the premise that the spur of competition leads to better products at better prices and improves overall allocative efficiency (as a consequence of choices in the market made by informed buyers), antitrust law seeks to eliminate anti-competitive commercial behavior and concentrations of economic power which could harm free markets.

The potential conflicts between copyright and antitrust may be witnessed through the practice of tying arrangements in the computer industry. A tying arrangement conditions the sale of one item upon the purchase of another item. Such arrangements have been considered antitrust violations under both the Sherman and the Clayton Acts. More recently, allegations of tying have arisen in the computer industry, often involving copyrighted materials. Currently, a disagreement exists between the Sixth and the Ninth Federal Circuit Courts of Appeal regarding computer tying arrangements involving copyrighted disc operating software. The positions of these courts are directly related to the two circuits' different views on copyright. The Ninth Circuit has held that copyright protection of disc operating systems is intrinsically and legally sufficient to rationally presume that sufficient tying product power exists to enact an illegal tying arrangement.[5] The Sixth Circuit has rejected this view.[6]

This Note argues that copyright protection of disc operating software does rationally lead to a presumption of economic advantage sufficient to make a tying arrangement feasible. Such tying arrangements deserve their current status of per se illegality because they are undesirable and unnecessary restraints of trade. In addition, such arrangements involving copyrighted software increase to an unwarranted degree the economic price society must bear in bringing such creative works to general use.

In Section I of this Note, copyright and its history are examined and the conclusion is drawn that copyright grants the holder a bundle of government protected rights to exclusive economic exploitation of a created item, and that as such, copyright is a grant of potential economic power. In Section II, economic arguments which deny the existence and harm of tying arrangements are addressed. Section III traces the development of the unique item tying arrangement doctrine in the

5. Digidyne Corp. v. Data General Corp., 734 F.2d 1336 (9th Cir. 1984), *cert. denied*, 473 U.S. 908 (1985).

6. A.I. Root Co. v. Computer/Dynamics Inc., 806 F.2d 673 (6th Cir. 1986).

United States Supreme Court, concluding that per se illegality has always admitted the possibility of defenses and that to prohibit unjustifiable tying arrangements can best harmonize the different public policies and methods of control behind copyright and antitrust. Section IV draws upon the previous sections and develops the issues discussed in the split between the Sixth and the Ninth Circuits regarding the proper treatment of tying arrangements involving copyrighted software products. The section concludes that the position of the Ninth Circuit is shown to be truer to both Supreme Court precedent and to the essence of copyright itself. Section V of this Note contends that the Ninth Circuit's rules of per se illegality with limited available defenses are rational, particularly appropriate to the computer industry, and should be adopted as the general rules in this area. These rules will preserve the spur of competition which drives continued innovation while allowing society through copyright to spur and reward such innovation without overpaying.

I. COPYRIGHT AS ECONOMIC POWER

A. The History of Copyright

A brief examination of the history of copyright will help reveal the commercial nature of these exclusive rights. Copyright can be traced back to the establishment by royal decree in 1556 of the Stationers Company by which the English Crown sought to check the spread of the Protestant Reformation in England. The decree concentrated publishing in one house and required published works to be entered into the Company's Register. By virtue of this Register and with the aid of the Star Chamber, the Stationer was able to obtain a series of royal licenses entitling the Stationer to the sole right to publish works. Initially then, this government protection extended control of works to the *publisher*; the author's interests were not so protected.[7]

The last Stationer's license expired in 1694. Pirate publishing houses sprang up and began to encroach upon the Stationer's publishing monopoly. The Stationer therefore sought from Parliament a law which would protect its publishing exclusive. Instead, in 1710 Parliament enacted the Statute of Anne[8] which protected both the author and his assignees from competition by outlawing the printing and distribution of copies of a protected work without permission, and by limiting the term of protection to fourteen years, such a term being renewable if the author was still living. The Statute of Anne, with its limited term, ruled the disposition of copies of the work and national registration, and

7. A. Latman & R. Gorman, Copyright for the Eighties 1 (1985).
8. 8 Anne c. 19, 1710.

its penalties for unlawful publication of a protected work[9] became the model from which all subsequent Anglo-American copyright law is derived.[10]

The United States Constitution of 1789 empowered Congress in Article I, Section 8, Clause 8, "to promote the progress of sciences and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." The first federal Copyright Act of May 31, 1790[11] contained provisions analogous to those in the Statute of Anne. Courts strictly construed this Act, and an author had to carefully comply with a tortuous set of requirements or lose protection for the work altogether.[12] Gradually the realm of materials eligible for copyright protection, as well as the privileges associated with such protection, has been expanded.[13] In an effort to bring some order to an increasingly patchwork body of law, a complete revision of subject and language was undertaken and passed by Congress in 1909. Subsequent amendments in 1954[14] and 1980,[15] as well as revision in 1976,[16] account for the current copyright law.

Although Blackstone recognized an author's property interest in their work as the product of intellectual labor,[17] this appeal to natural rights only goes so far toward an understanding of the nature of and rationale for copyright. The preamble to the Statute of Anne states, "For preventing therefore such practices for the future (i.e., unauthorized publishing of another's work), and for the encouragement of learned men to compose and write useful Books; may it please your Majesty

9. *Id.* Unlawful publication penalties included a fine of one penny per page as well as the destruction of infringing copies. A similar remedy appears in the current American copyright law; *see* 17 U.S.C. §§ 503-04 (1976).

10. A. LATMAN, *supra* note 7, at 1.

11. Act of May 31, 1790, Ch. 15, 1 Stat. 124 (1790).

12. A. LATMAN, *supra* note 7, at 5.

13. Expansion of federal copyright protection included addition of the following: prints and engravings (Act of Apr. 29, 1802, Ch. 36, 2 Stat. 171); musical compositions (Act of Feb. 3, 1831, Ch. 16, 4 Stat. 436); dramatic compositions with right of public performance 1856, photographs (Act of Mar. 3, 1865, Ch. 126, 13 Stat. 540); paintings, drawings, sculpture, and models (Act. of July 8, 1870, Ch. 230, 16 Stat. 198). *See* A. LATMAN, *supra* note 7, at 5-6.

14. Act of Aug. 8, 1954, Pub. L. No. 83-743 (1954) (modifying domestic law to conform with the then-signed Universal Copyright Convention).

15. Act of Dec. 12, 1980, Pub. L. No. 96-517 (1980) (adopting provisions of the CONTU Report extending copyright protection to new technology such as computers).

16. Federal protection to works from the moment of fixation in any tangible form, 17 U.S.C. § 102(a) (1976); providing a single term of protection of author's work for author's life plus 50 years, 17 U.S.C. § 302(a) (1976); recognition of "fair use" common law doctrine statutorily; providing for devisability of copyright ownership, 17 U.S.C. § 107 (1976). *See* A. LATMAN, *supra* note 7, at 9-10.

17. 2 BLACKSTONE COMMENTARIES 405; A. LATMAN, *supra* note 7, at 1.

that it (i.e., the Statute) may be enacted. . . ."[18] The United States Constitution seeks "to promote the progress of science and the useful arts" by granting exclusive limited rights to creative individuals for their "writings and discoveries." This right granted by copyright is the right of an author/creator to control the reproduction and distribution of their intellectual creation.[19] Since the Statute of Anne, these rights have been protected by suits for infringement in the form of copying and distributing such protected works without permission of their author.

A copyright grants the creator or holder five basic exclusive rights with regard to their original work.[20] These rights are: the right (1) to reproduce the copyrighted work; (2) to prepare derivative works based upon the copyrighted work; (3) to distribute copies of the work to the public by sale, rental, lease, or other transfer of ownership; (4) to perform the work publicly in the case of literary, musical, dramatic, or choreographic work; and (5) to display the work publicly if it is a sculpture, drawing, or a work within a category in (4) above. There are exceptions to a copyright holder's exclusionary rights, which describe certain uses where an action for infringement will not lie: the "fair use" of a work or excerpts from it for teaching, critical, or scholarly uses;[21] single copy reproduction of the work for library or archival use;[22] and use for certain performances generally in a teaching or worship capacity.[23]

"Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression . . . from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."[24] This fixation requirement was one of the initial stumbling blocks in the way of copyright protection for software and disk operating systems in general, until courts decided that fixation only required that the work be fixed for more than just a transitory period, and that the requirement could be met by a program embodied in read only memory ("ROM").[25]

An important limitation on the exclusive rights granted by copyright is that only the expression of an idea is protected. Copyright does not confer any proprietary or exclusionary rights to any underlying idea, process, method of operation, or discovery. This expression re-

18. A. LATMAN, *supra* note 7, at 2.

19. A. LATMAN, *supra* note 7, at 10.

20. 17 U.S.C. § 106 (1988).

21. *Id.* § 107.

22. *Id.* § 108.

23. *Id.* § 110. 17 U.S.C. § 117 reiterates the "fair use" and single copy archival exceptions and applies them to a computer product.

24. 17 U.S.C. § 102(a) (1988).

25. Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 870 (3d Cir. 1982); *see also* 17 U.S.C. § 101 (1988).

quirement raised two questions concerning software: was software eligible for copyright at all, and if so, how does the term "expression" relate to the essential communicative function of the work.

The court in *Apple Computer Inc. v. Franklin Computer Corp.*[26] provided answers to both questions. After analyzing the definition of copyrightable works in the statute,[27] the CONTU Final Report of 1979,[28] and Congressional action, the court found operating system programs copyrightable as literary works.[29] The communicative hurdle had been braced by an old precedent which had limited copyright protection to works designed to be read by a human reader.[30] The *Franklin* court found that the language of the statute setting forth the protection granted,[31] and the legislative history[32] allowed, the copyright of a program in object code since the expression of the program could be perceived with the aid of the computer machinery.[33] Copyright protection has since been extended to visual display of the program separately from the software producing such display[34] and has even been extended beyond the program's literal code to the program structure and organization.[35]

B. THESE RIGHTS GRANTED ARE COMMERCIAL IN NATURE

Looking once again at the rights granted by copyright, it is clear that those rights are intimately related to the commercial exploitation of the protected work. Excluding any "psychic income" or benefit from creating and showing any original work, a right to reproduce[36] and produce derivatives of a given original work,[37] to distribute,[38] perform,[39] or

26. 714 F.2d 1240 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984).

27. 17 U.S.C. § 101 (1988).

28. THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 1 (1979) [hereinafter CONTU FINAL REPORT].

29. *Franklin*, 714 F.2d at 1249.

30. White-Smith Music Publishing Co. v. Apollo Co., 209 U.S. 1 (1908) (holding that a piano roll was not in a copyrightable form since without a player piano only a few experts could "perceive" the music).

31. 17 U.S.C. § 102(a) (1988).

32. CONTU FINAL REPORT, *supra* note 28, at 21.

33. *Franklin*, 714 F.2d at 1247-49; *see also Williams Elecs.*, 685 F.2d at 876-77.

34. Stein Elecs., Inc. v. Kaufman, 523 F. Supp. 635 (E.D.N.Y. 1981), *aff'd*, 669 F.2d 852 (9th Cir. 1982); Digital Communication Assoc. v. Softklone Distrib. Corp., 659 F. Supp. 449 (N.D. Ga. 1987).

35. Whelan Assoc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222, 1236-39 (3d Cir. 1986); *see also* NEC Corp. and NEC Elecs., Inc. v. Intel Corp., 2 Copyright L. Dec. (CCH) ¶ 26,379 (N.D. Cal. Feb. 6, 1989).

36. 17 U.S.C. § 106(1) (1988).

37. *Id.* § 106(2).

38. *Id.* § 106(3).

39. *Id.* § 106(4).

publicly display[40] such a work is *only of value* to an author insofar as he or she might reap an *economic reward*. One must eat in order to live and to create, and eating costs money. Society's interests, however, are not so much with the artist's appetite. More cynically, since time immemorial it has been an observed fact that humans are subject to motivation by monetary reward; "every man has his price," often to the detriment of society at large. Perhaps Article I, Section 8, is a shrewd harnessing of this baser human nature to actually effectuate social benefit instead. Granting a circumscribed right to commercial exploitation then uses the available tool of individual greed to advance society's knowledge.

Copyright seeks to enrich society as a whole by encouraging creative and learned individuals to create novels, treatises, musical and dramatic works and, more recently, computer software. To reap these benefits, governments grant limited rights to the exclusive commercial exploitation of such works to those who create them, thus creating a limited monopoly. This bundle of rights regarding a given work has potential market power, limited, of course, by the ingenuity of the exploiter (i.e., marketing), the usefulness or intelligibility of the work, and the public demand. Copyright interest vests not so much in the work itself as it does in the distribution of that work;[41] a suit for infringement lies not against one who goes to the store, purchases a book, and takes it into possession, but for copying and distributing the original aspects of another's protected work. Copyright protects duplication of a work or derivations of it without permission, and in doing so and protecting an author's exploitative rights, copyright encourages not only future works from the same author, but also fosters the independent creation by others of competing works. Thus, the real danger of the government granted and protected rights arises when these exclusive rights are used to decrease competition and reap a greater reward for the grant-holder than society reaps from the work.[42]

Early American cases construing Article I, Section 8 consistently held that the grant-holder's interests were secondary to the interests of the *public* at large (i.e., the public benefit derived from the grant-holder's inventiveness) and that where the two interests clashed the interests of the public would prevail.[43] Modern cases have reached the

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40. *Id.* § 106(5).

41. White-Smith Music Publishing Co. v. Apollo Co., 209 U.S. 1, 19 (1908) (Holmes, J., concurring); 17 U.S.C. § 202 (1976); *see also* Gilliam v. Am. Broadcasting Co., 538 F.2d 14, 24 (2d Cir. 1976) (copyright in the United States being exclusively economically based, "moral rights" of authors are to be vindicated in other tort actions).

42. A. LATMAN, *supra* note 7, at 12; *see also* Kaplow, *The Patent Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1815, 1821-22 (1984).

43. Pennock v. Dialogue, 27 U.S. (1 Pet.) 1, 19-21 (1829) (holding that an inventor who

same conclusion.[44] Thus, the subordination of private exploitation rights to public welfare is an established part of the law. Consistent with this hierarchy of interest, courts may, and will, withdraw the protection of legal rights to commercial exploitation of an article when such rights have been misused to the detriment of public welfare as a whole; infringement suits then will not be entertained by the court.[45]

C. JUSTICE O'CONNOR'S CONCURRENCE IN JEFFERSON PARISH

Justice O'Connor, in a footnote to her concurrence in *Jefferson Parish Hospital No. 2 v. Hyde*[46] (discussed more fully in Section III, *infra*), states that it is a common misconception that patent, copyright, high market share, or uniqueness suffices to demonstrate market power.[47] This footnote, completely unrelated to the case before the Supreme Court at the time, has provoked widespread agitation and has been seized upon by both courts[48] and the scholarly literature[49] to support the notion that tying arrangements should be analyzed under a

allowed public sale and use of an invention, and only later applied for a patent could not sue for infringement of any protected right); Shaw v. Cooper, 32 U.S. (7 Pet.) 292, 320 (1833) (patent protection being a reward for inventiveness, the legal grant of exclusive rights to an item thought to be novel yet previously available overseas would serve no public purpose); Kendall v. Winson, 62 U.S. (21 How.) 322, 328-29 (1858) (while withholding an invention defeats the public interest in promoting the progress of science, delaying the patent application and marketing in order to test and perfect it serves a higher public good and thus infringement suit was upheld).

44. Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156, 164 (1975).

45. *E.g.*, Mercoid Corp. v. Mid-Continent Co., 320 U.S. 661, 665-67 (1943); United States v. Paramount Pictures, 334 U.S. 131, 159 (1948); Morton Salt v. G.S. Suppinger Co., 314 U.S. 488, 491-92 (1942).

46. 466 U.S. 2 (1984).

47. *Id.* at 37 n.7 (O'Connor, J., concurring). Justice O'Connor appears to contradict herself in measuring the economic power potential in a copyright grant when writing for the majority in *Harper & Row Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539 (1985). There the Court held that the fair use doctrine did not excuse the unauthorized publication of excerpts from Gerald Ford's memoirs. Justice O'Connor found an infringement due to The Nation (the publication of Nation Enterprises) taking for itself the "right of first publication, an important marketable subsidiary right." 471 U.S. at 549. Justice O'Connor found the author had a "property interest in exploitation of prepublication rights, which are valuable in themselves and serve as a valuable adjunct to publicity and marketing." 471 U.S. at 555. If copyright grants a valuable market interest which, prior to publishing, can support an infringement action in a non-fiction work, then it appears inconsistent for Justice O'Connor to say that this same right or others granted by copyright, when marketed together with another separate product, is insufficiently powerful to support an allegation of illegal tying.

48. A.I. Root Co. v. Computer/Dynamics, Inc., 806 F.2d 673 (6th Cir. 1986).

49. Note, *The Presumption of Economic Power for Patented and Copyrighted Products in Tying Arrangements*, 85 COLUM. L. REV. 1140, 1144 n.31 and 1149 nn. 60-61 (1985); Thompson, *Old Laws v. New Technology: Antediluvian Antitrust Tying Prohibitions and Operating System Software*, 2 SOFTWARE L.J. 221 (1988).

rule of reason rather than a per se approach, since it is not clear that copyright implies sufficient tying market power. Although perhaps marginally true in its abstract form, this footnote and its unfortunate language adds little to the discussion of tying illegality. Of course, it is true that an unexercised and unmarketed copyright confers no market power. Competing substitutes, *if they exist*, may pave inroads into a given grant-holder's economic return. However, it is also true that a car not taken out of the garage is not part of the problem of Los Angeles traffic congestion. But just as the statement about cars gets us no further toward a concrete settlement of a transportation nightmare, so too do Justice O'Connor's off-handed comments as to copyright and market power move us no further toward resolution of the legality or illegality of tying with respect to copyright.

Her comments fail to perceive that copyright grants a prospective property, a potential for exploitation, and a potential market power. The real question is not so much *what* has been initially transferred in the abstract as it is *how* these rights to commercial exploitation have been *exercised* and what limitations a society ought to put upon such commercial exploitation.[50] Justice O'Connor also fails to deal with *United States v. Loew's, Inc.*[51] (discussed *infra* Section III), a case squarely on point, and which is cited in conjunction with patent tying cases by the majority in *Jefferson Parish* in support of the notion of economic power available through copyright.[52] Therefore, any judgment or article relying too heavily upon such footnote authority should be deemed immediately suspect. It is not the copyright in a vacuum, but the exercise of exclusive exploitative rights that is the cause for concern.

II. THE ECONOMICS OF TYING ARRANGEMENTS

In an influential 1957 article,[53] Bowman coined the term "leverage" to describe the increase in monopoly power in a second market due to the extension of previously existing monopoly power in a first market. Bowman believed that such leverage, if existent, was at worst a neutral

50. Justice O'Connor also relies heavily upon R. BORK, THE ANTITRUST PARADOX (1978) and Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937 (1981); *see Jefferson Parish*, 466 U.S. at 36-38. For a systematic deconstruction of Bork, Posner, and the "Chicago School" of economic-legal theory in general, *see* Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 575 (1985); Slawson, *A Stronger, Simpler Tie-in Doctrine*, 25 ANTITRUST BULL. 671, 685-90 (1980) (criticizing Bowman, *Tying Arrangements and the Problem of Leverage*, 67 YALE L.J. 19 (1957) upon which Bork, Posner, and others of the "Chicago School" heavily rely).

51. 371 U.S. 38 (1962).

52. 466 U.S. 2, 10 nn.13-15.

53. Bowman, *Tying Arrangements and the Problem of Leverage*, 67 YALE L.J. 19 (1957).

phenomena. For purposes of this Note, a broader definition will be seen as more appropriate to real world situations: leverage is the extension of economic advantage in whatever form from one product market to another, including not only market share but also grants of exclusive rights.

Tie-ins are prohibited under Section 3 of the Clayton Act[54] as agreements conditioning the sale of goods upon agreement by the purchaser not to "deal in the goods, wares, merchandise, machinery, supplies, or other commodities of a competitor . . . where the effect . . . may be to substantially lessen competition or tend to create a monopoly in any line of commerce." Tying is also illegal under Section 1 of the Sherman Act[55] as a contract in restraint of trade among the several states. The Supreme Court has pronounced tying arrangements to be illegal per se on several occasions.[56]

The arguments against the existence of leverage and the per se illegality of tying seem to fall into two broad categories, the "Fixed Sum" argument,[57] and the "Comparative Innocuousness" arguments.[58] The Fixed Sum argument focuses on the potential monopolist's return for his or her actions, whereas the Comparative Innocuousness argument compares the effects of various business practices to determine whether distinctions of illegality make any sense.

A. Fixed Sum Argument

Briefly, the Fixed Sum argument states that the market will only allow a monopolist to reap a given fixed reward, no matter how monopoly power is exercised. A party with a legally obtained monopoly may gain profit either all from its own market (tying product), all from another (tied product), or from any combination thereof, but the total amount of profit, or restriction, that a monopolist may derive or impose is fixed regardless of the choice of allocation.[59] Thus, the overall gain derived by a monopolist is fixed and dependent upon the differing demands of the buyers and their responses to the monopolist's pricing policies regardless of allocation.[60] Assuming the original monopoly power

54. 15 U.S.C. § 14 (1988).

55. 15 U.S.C. § 1 (1988).

56. *See infra* Section III.

57. Bowman, *supra* note 53; Bork, *supra* note 50; Posner, *supra* note 50; Thompson, *supra* note 49; *Jefferson Parish*, 466 U.S. at 36 (Justice O'Connor's concurrence).

58. Thompson, *supra* note 49; Blair & Kaserman, *Vertical Integration, Tying, and Alternative Vertical Control Mechanisms*, 20 Conn. L. Rev. 523 (1988); Bays, *Tying Arrangements Should Be Per Se Legal*, 26 Amer. Bus. L.J. 625 (1988).

59. Kaplow, *supra* note 50, at 517-18. *See* Director & Levi, *Law and the Future; Trade Regulation*, 51 Nw. U.L. Rev. 281, 290-92 (1956), and Bowman, *supra* note 53, at 21.

60. Kaplow, *supra* note 50, at 518 (citing R. Posner, Antitrust Law: An Economic Perspective 173 (1976)).

was achieved legally, then such profit maximizing behavior should be deemed permissible, and monopoly extension, although conceptually illegal, is thought to be impossible because of the existence of the fixed sum return.[61] Thus, for a given amount of power, indirect exploitation through restrictive practices can cause no more damage than direct exploitation.

Fixed Sum proponents draw a distinction between profit maximization practices and practices that extend monopoly, calling the former legitimate, and while conceding that the latter practices are illegitimate, conclude that because of fixed sum returns they are impossible. But just as it matters to us as individuals just where a terrorist with a single stick of dynamite places such dynamite,[62] so too does it matter where and how exclusive economic power is exercised.[63]

The distinction between profit maximization and monopoly extension is arbitrary; both practices are initially motivated by a firm's desire to increase profits.[64] Indeed, the distinction seems to be more of a timing situation; profit maximization refers to practices with short run effects; and monopoly extension refers to practices with more long term, downstream effects. As such, it begins to resemble a line-drawing game trying to decide when a firm is profit maximizing, when it is extending power, and whether a welfare loss should be categorized as legitimate or illegitimate.[65] What really occurs is that a firm uses different tools for different time frames with the overall aim of changing market conditions so that the firm may receive a greater return.[66] As well, short run decisions may have long term effects, as is evident in oligopolistic pricing and subsequent market entry foreclosure.[67] Thus, the mere labeling of an act gives no *a priori* reason to permit or prohibit a given act, based merely on time frame.

Similarly, an inability to raise a product's price does not necessarily imply a lack of monopoly power. Indeed it may be that this simply marks the limit of a successful and complete exercise of monopoly power. A firm has completely exercised its power and is now extracting maximum profits; this tells nothing about the relationship between a firm's marginal costs and its marginal revenue.[68]

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61. Kaplow, *supra* note 50, at 519-20.

62. Kaplow, *supra* note 50, at 516, 520.

63. Kaplow, *supra* note 50, at 525.

64. Kaplow, *supra* note 50, at 523.

65. Kaplow, *supra* note 50, at 523-24.

66. Kaplow, *supra* note 50, at 523-24.

67. *See* J. DALTON & S. LEVIN, THE ANTITRUST DILEMMA 118-20 (1974).

68. *See generally* Stocking & Mueller, *The Cellophane Case and the New Competition*, 45 AM. ECON. REV. 29, 57-62 (1955).

B. COMPARATIVE INNOCUOUSNESS

The comparative innocuousness argument compares tying arrangements to other restrictive practices such as vertical integration,[69] describes the costs and benefits of each, and then concludes that, since the results of both practices are often benign to the public, distinguishing between per se illegal tying and rule of reason treatment of vertical integration makes no sense.[70] The problem with this and other economic criticisms of tying is that such criticisms proceed from unrealistic premises which, though perhaps useful as heuristic devices, bear little resemblance to real business world practices.[71] For example, vertical integration (and, it is argued, tie-ins) can be seen as a method by which a manufacturer may achieve economies of scale in production, thereby lowering marginal costs and thus unit costs to downstream purchasers. However, if a manufacturer has achieved a dominant market position, or the product provided is unique, there is no reason why a manufacturer should now swallow any production costs savings as extra profits, and no inherent reason to pass such savings on to buyers. In fact, in Japan, where the home stereo market is highly integrated (with manufacturers controlling production, distribution, and retail sales), Japanese consumers pay 60% more for Japanese-produced goods than do consumers in neighboring Asian countries or in the United States.[72]

C. INFORMATION IMPERFECTIONS

Another premise of economic models is that all market participants have perfect information on both products and market conditions and that their actions are directly influenced by such information. Certainly this is not true for real world buyers. Buyers may lack adequate information on prices or on the quality of competing products to intelligently compare them.[73] It is also possible that buyers simply do not understand what it is that they are agreeing to, either because of ignorance, or because of failure to read contracts. In specific, buyers might have difficulty calculating, in advance of a sale, just how much a tie-in is likely to cost over the course of the contract. This in turn requires the buyer to guess how much more he will pay under this contract than on the open market, the likely future price of a product, the possibility of a

69. Vertical integration exists where one large firm owns the means of production and/or distribution at several levels of the chain connecting raw material to finished product in the consumer's hands. *See* BLACK'S LAW DICTIONARY 1401 (5th Ed. 1979).

70. Blair & Kaserman, *supra* note 58; DALTON & LEVIN, *supra* note 67, at 37-56 (discussing the return in terms of social welfare among various types of antitrust suits).

71. Kaplow, *supra* note 50, at 535-38.

72. *Japan's Consumer Boom: The Pricey Economy*, ECONOMIST 21-24, Sep. 19, 1989.

73. Craswell, *Tying Requirements in Competitive Markets: The Consumer Protection Issues*, 62 B.U.L. REV. 661, 676-78 (1982).

product proving to be inferior, and the possibility that other sellers might be easier to deal with.[74] The probability of such precise prognostication is in reality practically nil.[75] A manufacturer may misconceive its own interests or misjudge a market for its own product.[76]

Even if such wide information dissemination existed, it is not clear that buyers make their choice in the market based solely upon such information. Sellers may impose a tie-in by threatening a cutoff of the tying product. If the buyer already has a substantial investment in the tying goods and may experience severe transaction costs from switching to another supplier (if available), then the buyer will have little choice but to go along with a tying arrangement.[77] Even though buyers may learn that a tying arrangement has been imposed upon them they may not, as envisioned by economists, rise up and reject such arrangements either collectively or individually. Because of transactional costs involved in switching suppliers, a "locked-in" buyer may grudgingly go along with a deal which in the aggregate costs him more or provides him with unwanted goods. Collective rejection of a tying arrangement should not be expected because of the difficulties of organizing and enforcing such a group boycott. Any individual buyer is likely to expect to reap the same benefits of a successful boycott whether or not he joins. Thus, if the harm to him is relatively small, or he is just not sufficiently motivated, he may attempt to free ride upon other supposed boycotters. In the event of widespread tying by a manufacturer to dispersed buyers, transactional costs make free riding almost irresistible.[78] Therefore, arguments that see customer acquiescence as a means of making a tie appear more "reasonable" should be suspect. Acquiescence does not imply a lack of harm.

D. Other Unrealistic Assumptions

Another icon of economic argument, the profit maximizing firm, is not necessarily something that a firm may wish to emulate and thus should not be taken as a given in deciding upon the legality or illegality of a given practice. Short term profit maximization may not even be in a firm's competitive interest. For example, Motorola, by foregoing short term profitability and concentrating on research and development, upgrading product quality, decreasing production costs, and pursuing increased market share has become a major competitor in both Japan and

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74. *Id.* at 672-73.

75. Slawson, *Eliminating the Forcing Requirements for Tying Arrangements*, unpublished manuscript, Sep. 28, 1989.

76. *E.g.*, Coca-Cola enraged its customers by substituting New Coke for its popular traditional formula (now sold as Classic Coke).

77. Craswell, *supra* note 73, at 674-75. *See also Digidyne*, 734 F.2d at 1342-43.

78. Slawson, *supra* note 75, at 28-29.

Southeast Asia in telecommunication and semiconductor chips.[79]

Moreover, it is not true that monopoly power in the classic sense of a dominant tying market percentage or a power to raise prices is necessary to impose a tie-in. Defining the relevant market for a product based upon available competing substitutes is at best an arbitrary process[80] which may greatly influence the perception of a firm's market power. "[S]uch all or nothing choices often generate misleading inferences even when the market chosen is best in that it mismeasures power less than any alternative."[81] "Notwithstanding the accepted principle that market shares must be interpreted in their context, courts tend to focus on the share yielded by a market definition and then to assume that any percentage figure means the same thing in every industry."[82] The connection between market share and market power is a very loose one, involving an enormous range of uncertainty.[83]

E. The Harmfulness of Tying

Professor Slawson has recently made the legally novel but common sense point that no tying product market power at all is necessary to impose a tying arrangement.[84] All that is necessary is that a seller be willing to *lower* prices in the tying product, this being directly counter to the classical picture of a monopolist using power to raise prices. Instead of making up the difference by increased tied product prices, a seller might forego short term profits or even incur losses in order to cement a place for its product in the tied market. Later, after driving out tied market competitors, the seller could raise prices and reap a second monopoly windfall. Alternatively, sellers can use tying arrangements to begin receiving a supra-competitive profit upon a tied product right away, rather than subjecting the product to the market forces of competition which would yield a more accurate measure of the product's value.

Even though not harmful to buyers, such tying arrangements can harm tied market competitors by removing buyers from that tied market on the basis of the packaged deal. In other words, a segment of the consumer world is foreclosed from these tied market sellers for reasons that have little to do with the competitive merits of products in the tied market, at little or no expense to the perpetrator of the tying

79. *The Rival Japan Respects*, BUS. WK., 108-18, Nov. 11, 1989.

80. *See* United States v. Aluminum Co. of Am., 148 F.2d 416 (2d Cir. 1945).

81. P. AREEDA & L. KAPLOW, ANTITRUST ANALYSIS 572 (1988).

82. *Id.* at 572-73.

83. *Id.* at 574.

84. Slawson, *supra* note 75.

arrangement.[85]

"[T]ie-ins are almost invariably used only when competing sellers in the tied product market cannot feasibly counter them by offering lower prices, so that their almost invariable effect is to eliminate this competition entirely."[86] A large multi-product firm using tying arrangements could thus prevent "the world beating a path to the doorstep." Preventing the small firm from profiting as a result of its innovation by injecting this alien element into the tied market is not only unfair, but also comprises a drag on innovation itself.[87] Such conduct may thus injure competition without necessarily injuring a particular consumer.[88]

Per se proscription of tying arrangements is a legislative and judicial response to the failure of economics to provide workable tools for grappling with the observed anticompetitive effects of this practice. In addition to taking advantage of imperfect buyer knowledge to increase sales, tying harms competition by foreclosing the tied market to competing products. The tied product, by borrowing name recognition or desirability or advantage from the tying product, is sheltered from competition strictly on the merits of its own quality versus other tied market products. Existing competitors then must either slash prices and hope to retain their market share, or offer a similar deal, thereby entering a second product market (the tying market) that they may not have desired to enter or may lack the expertise to succeed. This requirement for simultaneous performance in two markets may raise entry barriers (financial, psychological, production) such that new competitors are effectively prevented from entering the market. Thus, long term competitive pressure in the tied market will be lessened such that there is less of a spur from firms to improve products and lower prices. Because of the potential for competitive and consumer harms, the ambiguity of economic data and analysis, and the huge costs in court time required to perform a Rule of Reason analysis, per se proscription of tying has been chosen by courts as an efficient means of discouraging this anticompetitive behavior.

III. SUPREME COURT CASES INVOLVING UNIQUE PRODUCTS AND TYING ARRANGEMENTS

The Supreme Court since 1917 has declared tying arrangements to be illegal, especially when such arrangements involve patented or copy-

85. Slawson, *supra* note 75, at 9; *see also* International Salt Co. v. United States, 332 U.S. 392, 396-97 (1947) (salt price assurance aspect of the contract).

86. Slawson, *supra* note 75, at 12.

87. Slawson, *supra* note 75, at 14.

88. Slawson, *supra* note 75, at 24-25.

righted materials. Although developed over a number of decades, several themes emerge. Tying arrangements are per se illegal because the risk of harm from them is so likely, and the economic justification for them so slight, that elaborate investigation into the economic conditions of a given market is deemed unnecessary as a waste of judicial resources.[89] A plaintiff must prove three elements to establish per se illegal tying. There must be separate products with the purchase of one conditioned upon purchase of the other; sufficient economic power with respect to the tying product to appreciably restrain competition in the tied product; and an effect upon a not insubstantial amount of commerce in the tied market.[90] The Court has further defined the meaning of these three requirements and has entertained the possibility of defenses to tying liability, approving some and disapproving others.

In *Motion Picture Patents Co. v. Universal Film Mfg. Co.*,[91] the first post-Clayton case, plaintiff licensed the use of its patented movie projector on the condition that it be used only to show films made by plaintiff. Defendant was sued for using the projector outside the scope of its license by showing other films. At the time, plaintiff's projector was essential to the operation of a movie theatre. The Court found the restriction imposed by plaintiff extended his granted monopoly or economic power beyond that given by the patent from the projector market into the film maker, and refused to hold defendant for patent infringement.

In *United Shoe Machinery Corp. v. United States*,[92] the Court found a Section 3 Clayton Act violation where United Shoe leased its patented machines to shoe manufacturers upon the condition that the lessee not use the machinery of any competitors, upon threat of lease cancellation. At that time United Shoe enjoyed a dominant position in the production of shoe machinery.[93] The mere failure to enforce in some cases the restrictive practice was found to be no defense; this partial foreclosure of the market to competitors was no more reasonable than a total foreclosure.[94]

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89. Standard Oil Co. of Cal. v. United States, 337 U.S. 293, 305-06 (1949); Northern Pacific Railway Co. v. United States, 356 U.S. 1, 5 (1957); United States v. Loew's, Inc., 371 U.S. 38, 44-47, 49 (1961); Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2, 9-11. 15-16 (1984).

90. Fortner Enterprises v. United States Steel Corp., 394 U.S. 495, 499 (1969), [*Fortner I*]; Digidyne Corp. v. Data General Corp., 734 F.2d 1336, 1338 (9th Cir. 1984); A.I. Root Co. v. Computer/Dynamics, Inc., 806 F.2d 673, 675 (6th Cir. 1986); *Jefferson Parish*, 466 U.S. at 16-21.

91. 243 U.S. 502 (1917).

92. 258 U.S. 451 (1922).

93. *Id.* at 457-58.

94. *Id.* at 458-64.

International Business Machines Corp. v. United States,[95] was a significant step toward a per se rule.[96] IBM leased its patented computing machines upon condition that they be used only with punch cards made and marketed by IBM. Not only did IBM have a patented product but it had garnered 81% of the punch card market. The Court entertained two defenses to per se illegality: that the restriction was necessary to preserve the good name of IBM by minimizing downtime due to card jamming (a quality control argument); and that the arrangement allowed IBM through the sale of cards to meter the amount of use by a lessee and thereby discriminate among users, presumably to pass on the lower costs of the system to lighter users. In rejecting the former, the Court said "there is no contention that others than applicant . . . cannot meet these requirements. It affirmatively appears, by stipulation, that others are capable of manufacturing (suitable) cards . . . ."[97] Price discrimination as a defense was simply rejected out of hand. The Court suggested that a less restrictive alternative would be for IBM to publish specifications for cards to be used with the machines.[98]

In *International Salt Co. v. United States*,[99] the owner of patents on two machines utilizing salt leased the machines subject to the condition that the lessee use salt purchased from the patent owner, International Salt. The machines were used to inject salt during the commercial food canning process. The Court found this lease agreement to be illegal declaring that "it is unreasonable per se to foreclose competitors from any substantial market."[100] The Court interpreted the Clayton Act as having a broader mandate than just outlawing gross acts of trade restriction. "Under the law, agreements are forbidden which tend to create a monopoly, and it is immaterial that the tendency is a creeping one rather than one that proceeds at full gallop; nor does the law await arrival at the goal before condemning the direction of the movement."[101]

The Court in reaching the patent issue enunciated a point similar to that developed in Section I *supra*, that the grant of a patent entitles the patent holder to protection from infringement so long as the holder extracted his pecuniary reward from exploitation of the patented item *alone*, not from a combined sale of patented and unpatented items re-

95. 298 U.S. 131 (1936).

96. L. SULLIVAN, ANTITRUST 436 (1978).

97. 298 U.S. at 139.

98. *Id.* at 138-40.

99. 332 U.S. 392 (1947).

100. *Id.* at 396 (citing Fashion Originator's Guild v. F.T.C., 114 F.2d 80, 85 (1940), *aff'd*, 312 U.S. 457 (1941)).

101. 332 U.S. at 396 ("Nor is it determinative . . . that petitioners may not yet have achieved a complete monopoly. For it is sufficient if it really tends to that end, and to deprive the public of the advantages which flow from free competition.").

straining trade in a second item.[102] Although the term "limited monopoly of the invention" was used, it will become clear that the Court had another kind of economic power in mind; not an economic power by virtue of monopoly by market percentage, but rather by virtue of the fact that a unique product was insulated by government patent decree from competitive pressures. It was the extension of advantage gained by protected uniqueness that the Court declared illegal.[103]

The Court in *International Salt* entertained three defenses from a decree of illegal tying and rejected all three. International Salt claimed that lessees had the choice of buying salt at a lower price on the open market so long as International Salt could not furnish the salt at an equal price; this was part of the lease agreement. Far from being a defense, the Court found that this acted to stifle salt competition. To capture any market share, a competitor would have to undercut International Salt's price, whereas International Salt could hold its market share merely by meeting the competition.[104] The company also claimed its machines required extremely pure (98.2%) salt in order to function properly; thus, such a restriction was justified on grounds of protecting International Salt's goodwill through customer satisfaction and low maintenance costs.[105] The Court accepted this premise for argument's sake but failed to find "that the machine is allergic to salt of equal quality produced by anyone except International."[106] Other salt competitors did offer such pure salt, therefore International Salt, like IBM, could furnish specifications as a less restrictive alternative to tying.[107]

During the same term, the Court addressed the question of tying arrangements involving copyrighted materials and declared them an illegal restraint of trade. In *United States v. Paramount Pictures, Inc.*,[108] the defendants engaged in "block-booking," which involved licensing one feature film or group of films on the condition that the exhibitor also license another feature in a given time period. The exhibitors objected to such licenses because the arrangement often required them to accept inferior films in order to get a license to show a highly popular film.[109] The Supreme Court *approved* of the district court's reasoning from previous patent tying and patent misuse cases[110] and affirmed that

102. *Id.* at 395-96.

103. *Id.*

104. *Id.* at 396-97.

105. *Id.*

106. *Id.* at 398 (citing I.B.M. v. United States, 298 U.S. 131 (1936)).

107. *Id.* at 398.

108. 334 U.S. 131 (1948).

109. United States v. Paramount Pictures, Inc., 66 F. Supp. 323, 348-49 (S.D.N.Y. 1946), *aff'd in part and rev'd in part*, 334 U.S. 131 (1948).

110. 334 U.S. at 157-58; 66 F. Supp. at 348. A more recent example of a copyright issue

tying copyrighted products to the lease of another product, whether or not copyrighted, was illegal.[111] In the Court's view such arrangements contravened public policy in two respects: they prevented competition on the merits of a product;[112] and enlarged the gains that a copyright holder could garner beyond that entitled to them by their copyright. This in essence forced the public to pay too much for a given measure of inventiveness.[113]

The Supreme Court once again faced the block-booking of copyrighted films in the sale of films to television in *United States v. Loew's, Inc.*[114] The Court again held that such contracts violated the Sherman Act and observed that "[t]ying agreements serve hardly any purpose beyond suppression of competition."[115] The Court gave two reasons for concern over tying agreements: "[T]hey may force buyers into giving up the purchase of substitutes for the tied product . . . and they may destroy the free access of competing suppliers of the tied product. . . ."[116] The Court went on to make explicit (by citing both *International Salt* and *Paramount Pictures*) what had been implicit in all the previous decisions involving government-granted exclusive exploitative rights and tying: market dominance alone is not the sole measure of the requisite economic power to effect a tie-in. Such power could be inferred from the tying product's unique protection.[117] No Sherman Act Section 2 monopolization needed to be shown since a different kind of economic advantage in the tying product, here copyright, could effect an illegal tie-in.[118]

Northern Pacific Railway Co. v. United States[119] involved another unique product, several million acres of land, given by government grant to a railway. These lands were within easy reach of the rail line[120] and were extensively leased out for grazing, mineral, timber, and petroleum development.[121] In return for these valuable leases, the lessee was required to ship all commodities produced on the land by

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resolution through reasoning from patent law is found in *Sony Corp. of America v. Universal City Studios Inc.*, 404 U.S. 417 (1984) (manufacture and sale of home video tape recorders is not contributory infringement of television program copyright).

111. 66 F. Supp. at 348-49.

112. 334 U.S. at 156-57; *see also* 66 F. Supp. at 348.

113. 334 U.S. at 158.

114. 371 U.S. 38 (1962).

115. *Id.* at 44 (quoting Standard Oil of Cal. v. United States, 337 U.S. 293, 305-06 (1949)).

116. 371 U.S. at 45.

117. *Id.*

118. *Id.* at n.4.

119. 356 U.S. 1 (1958).

120. *Id.* at 7.

121. *Id.* at 7 n.6.

way of Northern's rail lines.[122] The Court found the railway had "substantial economic power by virtue of its extensive landholdings"[123] which were "strategically located . . . within economic distance of transportation facilities," land "often prized by those who purchased or leased it."[124] This focus on the location of the land and the obvious fact that no two solid bodies (or land parcels) may occupy the exact same position in space at the same time, is another example of recognition of economic power by virtue of uniqueness.

The Court, citing to *International Salt*, found tie-ins to be "unreasonable in and of themselves whenever a party has sufficient economic power with respect to the tying product to appreciably restrain free competition in the market for the tied product, and a *'not insubstantial'* amount of interstate commerce is affected."[125] The Court went on to say that the harm of tying results from the expansion of economic power "regardless of the source from which the power is derived and whether the power takes the form of a monopoly or not."[126] This seemingly open-ended statement of the law is actually the Court's most lucid to date. Whether economic advantages derive from pure percentage market share, government grant of exclusive advantage, inherently unique products, or otherwise, the harms of foreclosure of buyer choice, inhibition of competition on the merits, and increased entry barriers to competitors are manifested when such economic advantage extends through tying from market to market. The Court here[127] and in *International Salt*[128] has shifted the focus to the market where the harm has been done, once economic advantage has been shown.[129]

Although not involving a unique product, *Times-Picayune Publishing Co. v. United States*[130] recognized a defense relevant to this discussion. The Court found that a 40% share of the New Orleans newspaper advertising market was too small to support an inference of sufficient economic power to find a tying arrangement.[131] As a separate ground for its decision, however, the Court accepted[132] the defendant's argument[133] that a morning and evening paper published by a single corpo-

122. *Id.* at 3.
123. *Id.* at 7.
124. *Id.*
125. *Id.* at 6 (emphasis added).
126. *Id.* at 11.
127. *Id.* at 6, 8-11.
128. 332 U.S. 392, 396.
129. This is exactly where the focus of such inquiry should be according to Slawson, *supra* note 75, at 29-32.
130. 345 U.S. 594 (1952).
131. *Id.* at 611-13.
132. *Id.* at 613-14.
133. *See* defendant's argument summary, 97 L. Ed. 1282 (1952).

ration were really one product. Consequentially, that advertisers were required to take space in both papers violated no antitrust law. "[N]othing in the record suggests that advertisers viewed the city's newspaper readers, morning or evening, as other than fungible customer potential. We must assume, therefore, that the readership 'bought' by advertisers in the Times-Picayune was the self-same 'product' sold by the States."[134]

The *Fortner* cases present a confused combination of facts and judicial reasoning from which it is difficult to determine the cases' precedential value. In *Fortner Enterprises Inc. v. United States Steel*[135] (*Fortner I*), Steel sold prefabricated housing to developer Fortner and provided 100% financing for acquisition of land and the housing. Fortner, believing that the housing was substandard and overpriced, yet contractually bound to purchase from Steel until repayment of the loan, alleged that Steel used "unique credit" as a tying product to sell pre-fab housing. In *Fortner I* the Supreme Court reversed the district court's grant of summary judgment for defendant Steel, and remanded for a showing of Steel's power in the credit market, having found credit terms and housing to be separate products and a not insubstantial amount of tied trade ($689,000 of housing) to be affected. Upon remand, the district court found not only sufficient tying product power to impose a tie, but also a Sherman Act Section 2 monopolization violation.[136] The Sixth Circuit affirmed the findings of sufficient credit market power on the part of Steel.[137]

In *U.S. Steel Corp. v. Fortner Enterprises* (*Fortner II*),[138] the Court rejected the finding of a monopolization violation, and also rejected the finding of Steel's tying market power in credit due to: (1) the influence of Steel's size on its ability to provide such credit through a subsidy; (2) that two-thirds of Steel's customers had such arrangements; (3) an alleged non-competitive price for the homes; and (4) the "uniqueness" of 100% financing. It is beyond the scope of this Note to try to derive some orderly rules from these cases. This Note takes the position that Justice Fortas, in his dissent to *Fortner I*, was correct when he concluded "[T]his is a sale of a single product with the incidental provision of financing."[139] This Note will only refer to *Fortner I* and *II* to the mini-

134. 345 U.S. 594, 613.

135. 394 U.S. 495.

136. "The sole purpose of the loan programs . . . was specifically and deliberately to increase the share of the market of U.S. Steel . . . in pre-fabricated house packages." United States Steel v. Fortner Enterprises, 429 U.S. 610, 612 n.1 (1977) (Stevens, J. quoting *Fortner I*, 394 U.S. 495, 500, while rejecting monopolization allegation).

137. 523 F.2d 961 (6th Cir. 1975).

138. 429 U.S. 610 (1977).

139. 394 U.S. at 522 (Fortas, J., dissenting); *see also* L. SULLIVAN, ANTITRUST 439-40 & n.21, 469-70 (discussing the reasoning and result in *Fortner I* as "absurd").

mal extent necessary to make the positions of the Sixth and Ninth Circuits' cases intelligible.

The last Supreme Court decision on tying was *Jefferson Parish Hospital No. 2 v. Hyde*[140] in which the alleged tying product was hospital services and the tied product was anesthesiological services from a single professional group.[141] In a rambling decision, the Court found these to be two separate products[142] despite no evidence of any adverse effect in the tied market.[143] It further found that a 30% share of the patient market for the parish was insufficient indicia of economic power.[144] The Court in *Jefferson Parish* decided that tying arrangements need only be condemned if they restrain competition on the merits by "forcing" purchases that would not otherwise be made.[145] Whether this language was necessary for Justice Stevens to get an accord on the Court or whether it states a new requirement is an open question;[146] it is certainly not to be found as a requirement in the cases prior to *Jefferson Parish*. The Court forcefully reaffirmed its belief in per se illegality for tying.[147] The single product defense was recognized,[148] but the separateness of the products was to turn on the consumer *demand* for the items, not their *functional* relationship.[149]

From these cases we can derive that the essential violation which tying embodies is the unbridled use of economic power or advantage to foreclose competition. There are two independent means by which such power can be demonstrated: percentage market share and uniqueness of the tying product. These need not be shown to exist together to demonstrate a tying arrangement; it is sufficient that economic advantage, whatever its form, is being exploited contrary to the public good. There is no need for a Sherman Act Section 2 monopoly to effectuate a tying arrangement, and in light of the possibility of effecting a tie-in by simply lowering prices, such a focus on absolute monopoly market power is grossly misplaced.

The Court has declared tying arrangements to be per se illegal, but such a rule as applied really means that it is presumptively illegal and

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140. 466 U.S. 2 (1984).

141. *Id.* at 4-5.

142. *Id.* at 23. *Cf.* Slawson, *supra* note 75, at 12 (ridiculing this distinction).

143. 466 U.S. at 29-31.

144. 466 U.S. at 26-27. Slawson argues that the Court decided this case as it did because the government's brief mislead the Court into believing that per se illegality admitted of no defenses. *See* Slawson, *supra* note 75, at 33-36.

145. 466 U.S. at 13, 15.

146. *See generally* Slawson, *supra* note 75.

147. 466 U.S. at 9-10, 12-15 n.25.

148. *Id.* at 19-21 & n.39.

149. *Id.* at 19 & n.30.

that it shifts the burden of raising a defense to the accused.[150] The Court has consistently entertained, discussed, and admitted defenses to per se illegality, approving some and disapproving others. Two approved defenses are the single product defense,[151] and a variation of that, the new product defense.[152] Further, the Court may have recently added a third defense, lack of commerce foreclosure in the tied market.[153] If so, this leaves unanswered the question of why it is not illegal for a firm to inflict several individual small harms. The defense of quality control maintenance has been rejected by the Court several times,[154] but such rejection has turned upon the factual situation present in those cases. The Court has both implicitly and explicitly entertained the possibility of such a defense, but ruled against the defendants because they did not prove that less restrictive means than tying were unavailable or unsatisfactory. If the seller could show that selling product A together with either a service or product B was the only feasible means of assuring that product A performed satisfactorily, the seller might have a valid defense.

Defenses which have been rejected as a matter of law include metering customer product use to aid price discrimination,[155] a right of first refusal to meet market price for tied items,[156] mere fulfillment of legitimate contractual obligations giving rise to restrictive arrangements,[157] and the defense of occasional enforcement of the tying arrangement.[158] In rejecting each of these defenses as insufficient, the Court has seen through the rhetoric to view the essential nature of these situations; such arguments are nothing but smoke screens behind which sellers have attempted to justify anticompetitive behavior.

Requirements that a buyer purchase two products together, as opposed to legitimate single products that provide cost benefits, serve no legitimate purpose. Such arrangements are only likely to appear when they benefit the seller by increasing his total pecuniary return, and for

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150. D. BENDER, PATENT ANTITRUST 67-68 (1982).

151. Times-Picayune Pub. Co. v. United States, 345 U.S. 594 (1952); United States v. Jerrold Elecs. Corp., 187 F. Supp. 545 (E.D. Pa. 1960), *aff'd per curium*, 365 U.S. 567 (1961); Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2, 19-21 (1984).

152. *Jerrold*, 187 F. Supp. at 556-58.

153. *Jefferson Parish*, 466 U.S. at 19 and 30-31. *But see* Northern Pacific Railway Co. v. United States, 356 U.S. 1, 11 (1957); International Salt Co. v. United States, 332 U.S. 392, 396 (1947); Slawson, *supra* note 75, at 29-32.

154. I.B.M. v. United States, 298 U.S. 131 (1936); *International Salt*, 332 U.S. at 397-98; Standard Oil of Cal. v. United States, 337 U.S. 293, 305-06 (1949).

155. Mercoid Corp. v. Mid-Continent Co., 320 U.S. 661, 666-67 (1944).

156. *International Salt*, 332 U.S. at 396-97; *Northern Pacific*, 356 U.S. at 10-11.

157. United States v. Loew's, Inc., 371 U.S. 38, 51 (1962).

158. United Shoe Machinery Corp. v. United States, 258 U.S. 45, 458-64 (1922); *International Salt*, 332 U.S. at 398.

that reason such arrangements deserve per se condemnation. Taking advantage of imperfect consumer information, of the inertia of the free rider problem, and of the elimination of both buyer choice and the possibility of entrance to a competitive market should not be countenanced. The spur of competition leads to rough overall allocative efficiency, stimulates innovation and customer service as a means to gaining market share, and approximates the goal of providing the best products for the lowest price.

Copyright and antitrust both serve important public policies in the overall goal of allocative efficiency. In copyright, the public reaps the benefit of creativity,[159] and many societies, including this one, have chosen to stimulate creativity by limited grants for exclusive commercial exploitation of the created item. Antitrust seeks to maintain competition in the marketplace as a means of allocating resources and final products, while safeguarding as much as possible individual liberty.[160] These two tools of public welfare only come in conflict when they are wielded together for individual gain, when copyrighted goods are tied to other goods as a tool to restrict competition. Outlawing tying arrangements restores the ability of these two tools of public welfare to work together harmoniously.

IV. TYING ARRANGEMENTS IN THE COMPUTER INDUSTRY

Allegations of illegal tying arrangements have arisen in the computer industry, often as a counterclaim in copyright infringement actions. The Sixth and the Ninth Circuit Federal Courts of Appeal have taken diametrically opposite positions on computer tie-ins involving software, and these positions are directly related to the two circuits' different views of copyright. The Supreme Court, although once given an opportunity to review a computer tying case,[161] has declined to rule on this issue. Not surprisingly, the lower federal courts inconsistently rule on the issue as well.

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159. Shaw v. Cooper, 32 U.S. 292, 320 (1833); Kendall v. Winsor, 62 U.S. 322, 328-29 (1858); Morton Salt Co. v. G.S. Suppinger, 314 U.S. 488, 491-92 (1941); Mercoid Corp. v. Mid-Continent Co., 320 U.S. 661, 665-67 (1943); United States v. Paramount Pictures, 334 U.S. 131, 159 (1948); *Loew's*, 371 U.S. at 46-50.

160. *United Shoe*, 258 U.S. at 458-64; *Mercoid*, 320 U.S. at 666-67; *International Salt*, 332 U.S. at 396-98; *Northern Pacific*, 356 U.S. at 4-5, 9-11; *Loew's*, 371 U.S. at 44-45; Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2, 10, nn.12-15, n.19 (1984).

161. Digidyne Corp. v. Data General Corp., 734 F.2d 1336 (9th Cir. 1984), *cert. denied*, 473 U.S. 908 (1985).

A. COMPUTER TYING CASES FROM THE SIXTH CIRCUIT

1. *3 P.M. v. Basic Four Corp.*[162]

Plaintiff 3 P.M. sold, installed, and serviced small business computer systems in the Detroit area. Defendant Basic Four designed and manufactured computer systems consisting of a central processing unit and any number of peripherals, all sold as a unitary system under trademark. Basic Four executed a dealership agreement with 3 P.M. giving plaintiff an exclusive territory in the Detroit area. In the agreement was an extensively negotiable clause that gave Basic Four the right to terminate the dealership agreement if 3 P.M. did not meet specific purchasing quotas. Over a period of six months, 3 P.M. sales were approximately 23% of the agreed upon quota, and after a warning Basic Four terminated the agreement. 3 P.M. sued for alleged Sherman Act Section 1 and Clayton Act Section 3 violations.[163] The tying product was Basic Four's computer system, the tied product was the maintenance and service of such systems.

The court, after citing the three part rule of tying from *Northern Pacific*[164] and examining the confused *Fortner* cases,[165] discussed possible methods of demonstrating a dominant market position in the tying product.

The court accepted defendants' evidence that their market share for such computer systems in Detroit was less than 1%. Plaintiff offered only an affidavit alleging a *California* market share for Basic Four of 10%. Not only was this evidence irrelevant, it was insufficient as a matter of law to demonstrate dominance, and the court perfunctorily rejected this evidence.[166]

Plaintiff then argued that Basic Four's system was unique in that it was exceptionally easy to use. As evidence, plaintiff cited defendant's own promotional literature and the court rejected this weak evidentiary offer.[167] Plaintiff raised the argument that Basic Four's uniqueness was due to copyright and trademark. While easily disposing of the trademark argument,[168] the court gave a restricted reading to *Loew's* and the *Fortner* cases such that it required 3 P.M. to show Basic Four's competitors were *incapable* of producing similar systems.[169] The court ignored the extensive language in *Loew's*[170] which found that copyright did ra-

162. 591 F. Supp. 1350 (E.D. Mich. 1984).
163. *Id.* at 1353-55.
164. *Id.* at 1355.
165. *Id.* at 1356-57.
166. *Id.* at 1357-58.
167. *Id.* at 1358.
168. *Id.*
169. *Id.* at 1359-60.
170. United States v. Loew's, Inc., 371 U.S. 38, 45-47 (1962).

tionally lead to an inference of economic power, did not examine any of the cases presented in Section III *supra*, and relied on *In Re Data General Corp. Antitrust Litigation*[171] for its contention that copyright does not establish economic power, a case that had been overruled by the Ninth Circuit two months earlier. Rather than launching into this exploratory dicta, the court here could simply have rested on its own findings that once again plaintiff had produced no evidence.[172]

The court also found that mere acceptance by buyers of a tying arrangement does not suffice to show illegal tying,[173] although it failed to perceive that such acceptance could merely be due to free rider inertia. *3 P.M. v. Basic Four*, apart from its dicta on copyright, is not so much an "alternative" to the Ninth Circuit[174] as it is a case of a court dismissing an action simply because of a woefully inadequate evidentiary presentation. Although the court reached the correct result, its reasons for doing so are questionable.

2. *A.I. Root Co. v. Computer/Dynamics, Inc.*[175]

A.I. Root, a manufacturer of beekeeping supplies and ecclesiastical candles, had been using Basic Four computer equipment and operating software manufactured by Management Assistance, Inc. ("MAI"). Root had over the years purchased computer equipment from Computer/Dynamics Inc. ("CDI"), an authorized MAI dealer, as well as from other authorized MAI dealers in Ohio. To upgrade its inventory and manufacturing processes, Root purchased new MAI hardware from a dealer other than CDI. Root then sought to purchase a reconfigured version of the Basic Operating Software System ("BOSS") Root had been using. CDI refused to sell the reconfigured BOSS software (tying product) unless Root signed a "licensing agreement" (tied product) requiring first that Root use only MAI hardware with any application software Root might acquire, and second, that Root purchase CDI's programming services whenever Root acquired updated or different Basic Four hardware.[176]

The Sixth Circuit upheld the district court's memorandum decision granting summary judgment for CDI and found no illegal tying ar-

171. 591 F. Supp. at 1359 (citing In Re Data General Antitrust Litigation, 490 F. Supp. 1089, 1112-14 (N.D. Cal. 1980)).

172. *Id.* at 1360.

173. *Id.* at 1360-61.

174. *Cf.* Note, *Unravelling Copyrighted Software From a Tying Arrangement Presumption; 3 P.M. v. Basic Four Corp., An Alternative to Digidyne v. Data General*, 12 RUTGERS COMP. & TECH. L.J. 447 (1987).

175. 806 F.2d 673 (6th Cir. 1986).

176. *Id.* at 674-75.

rangement under Sherman Act Section 1.[177] The court's decision rested on three grounds: that CDI possessed insufficient market share in the small business computer market to support a tie-in;[178] a disbelief that copyright confers economic power;[179] and the prospective rather than contemporaneous nature of the tied license agreement.[180]

The court found that the relevant tying product market was for small business computers and that the MAI system had only a 2-4% market share, insufficient under *Jefferson Parish* to support a finding of market power. Competitors of the MAI system sold by CDI included IBM, NCR, and Seiko.[181] The Root argument that the relevant market was for BOSS based systems as unique products was rejected, partially on the basis of product interchangability and partially because of the court's view of copyright.[182]

While acknowledging that BOSS was copyrighted, the court rejected out of hand the *Loew's* rule that "the requisite economic power is presumed when the tying product is patented or copyrighted."[183] "[W]e find the pronouncement in *Loew's* to be overbroad and inapposite to the instant case."[184] The Sixth Circuit all but attempted to overrule the Supreme Court's holding in *Loew's*, ignored the line of Court cases (see Section III *supra*) dealing with copyrighted, patented, or unique products which lead up to *Loew's*, and finally did not address the reaffirmation of such a line of reasoning by the majority in *Jefferson Parish*. The Sixth Circuit's authority for this rejection was *In Re Data General*, (overruled two *years* earlier by the Ninth Circuit), Justice O'Connor's *Jefferson Parish* footnote (see Section I *supra*), and a student Note relying heavily upon the O'Connor footnote.[185]

The court distinguished *Digidyne Corp. v. Data General Corp.* (see *infra*) in which a copyrighted operating program was found "unique" due to its "special attraction" for consumers; Root introduced no evidence to prove that BOSS was uniquely desirable.[186] In light of the Sixth Circuit's cryptic footnote, which focused on an applicability argument in *Digidyne* and the pointed discussion of copyright by the Ninth Circuit in *Digidyne*, this distinction is unsatisfying.

177. *Id.* at 675.

178. *Id.* at 675-76.

179. *Id.* at 676.

180. *Id.* at 677.

181. *Id.* at 675-76.

182. *Id.*

183. *Id.* at 676 (citing United States v. Loew's Inc., 371 U.S. 38, 44 (1962)).

184. *Id.*

185. Note, *The Presumption of Economic Power for Patented and Copyrighted Products in Tying Arrangements*, 85 COLUM. L. REV. 1140 (1985).

186. 806 F.2d at 677.

Based only upon its own precedent,[187] the Sixth Circuit found a third basis for rejecting a tying arrangement in that the "tied" license "product" involved prospective rather than contemporaneous obligations. This requirement for contemporaneous purchase of products is simply not to be found elsewhere in the law. Indeed, the very transportation contracts tied to the land leased or sold in *Northern Pacific Railway* included movement of "all commodities produced or manufactured on the land."[188] There was no requirement that such minerals, lumber, or products be available for shipment immediately upon signing the lease. These contracts looked forward in time to when such products would be available to be shipped, and when tied to the land, comprised a per se illegal tying arrangement.[189]

The decision in *A.I. Root* was based upon a law review Note, dicta by a single Supreme Court justice in a footnote unrelated to the case decided, an overruled district court decision, a disingenuous distinguishing of a contrary Ninth Circuit decision squarely on point, and a rule of its own making with no basis in Supreme Court antitrust law.[190] Except for its pronouncements on summary judgment procedure unrelated to its antitrust arguments, *A.I. Root* is seldom cited. The case still remains the law in the Sixth Circuit on tying arrangements involving copyrighted products.

B. Computer Tying Cases from the Ninth Circuit

In Re Data General Corp. Antitrust Litigation[191] and *Digidyne Corp. v. Data General Corp.*[192] will be considered together since they are essentially the same case presented at two different judicial levels.

Competitors brought suit against Data General, alleging that Data General would not license its disk operating software ("RDOS") nor sell its memory boards unless the buyer also purchased Data General's central processing unit ("CPU").[193] After extensive discovery, the district processing court refused to grant either plaintiff or defendant motions for summary judgement, stating that a material fact in controversy was whether Data General possessed sufficient market

187. White & White, Inc. v. American Hospital Supply Corp., 723 F.2d 495, 506 (6th Cir. 1983).

188. Northern Pacific Railway Co. v. United States, 356 U.S. 1, 3 (1957).

189. *Id.* at 9.

190. Surprisingly, this contemporaneous sales requirement has been followed by at least one lower court. *See* Kellam Energy Inc. v. Duncan, 723 F. Supp. 861, 881 (D. Del. 1987).

191. 490 F. Supp. 1089 (N.D. Cal. 1980).

192. 734 F.2d 1336 (9th Cir. 1984).

193. 490 F. Supp. at 1097.

power in the tying markets to effectuate a tie.[194] In a painstaking decision the Court found all the elements of an illegal tying arrangement except the requisite tying market power.

The court found that separate product markets were evident and that the standard for such determination was "not whether the two items must be used together, but whether they must come from the same dealer."[195] Ample evidence showed that different manufacturers produced CPU's, memory boards, and disk operating programs. Thus, the court concluded that since they were not normally sold as a unit, they were different products.[196] The court then concluded that a tying arrangement existed. Since both Data General and the competitors had and currently did sell memory boards and CPU's separately, and since it was undisputed that a given CPU need not always be used with a given memory unit, the Ninth Circuit found that the challenged sales constituted a tie-in.[197] Data General's argument that technological modifications might be required or that servicing problems would be encountered was rejected by the court as immaterial, conclusory, self-serving, and insufficient to support a finding that CPU's and memory boards are a single product.[198] "It remains undisputed that at least some customers do not view CPU's and memory boards as a single product."[199] Mere customer acquiescence to the tying scheme did not establish legality, no fixed proportions of product and CPU were necessarily dispositive, and alleged economic efficiencies from such sales did not materialize in the form of lower customer costs.[200]

The third prong of the tying rule, the foreclosure of tied market commerce, was also found. The rule the Ninth Circuit applied was from *Fortner I*[201] where the threshold is simply that more than a *de minimis* volume of tied business is affected. Data General had admitted sales of 52,700 CPU's at a value of 254 million dollars; since proof of actual foreclosure need not be shown, this easily fulfilled the requirement. Additionally, the plaintiffs needed only to show that they were in fact foreclosed, not that all possible competitors of Data General were damaged.[202]

Three "business justifications" closely related to these unitary prod-

194. *Id.* at 1098.

195. 490 F. Supp. at 1104 (citing Siegal v. Chicken Delight Inc., 448 F.2d 43, 49 (9th Cir. 1971), *cert. denied*, 405 U.S. 955). For a parallel rule *see* Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2, 19 (1984).

196. 490 F. Supp. at 1105-06 & nn.20-21.

197. *Id.* at 1108.

198. *Id.* at 1109.

199. 490 F. Supp. at 1109.

200. *Id.* at 1109, 1111.

201. Fortner Enterprises v. United States Steel Corp., 394 U.S. 495, 501 (1969).

202. 490 F. Supp. at 1117.

uct arguments were rejected by the court as defenses. Data General raised a protection of goodwill defense based upon difficulties in servicing its products when they were coupled to "foreign CPU's."[203] The court replied that two less restrictive alternatives were available: publishing specifications for the type and quality product to be used with Data General's CPU; or providing a lesser warranty when "unbundled" Data software was sold for use with such foreign, non-Data General CPU's.[204] Data General then claimed that such bundled sales were necessary to recoup its heavy investment in software development. However, the court found that this justification had been explicitly rejected in an earlier case. "If the demand for [defendant's] equipment was so great, it could recover its investment by raising its prices. Admittedly, the return would not be as great, but it provides sufficient protection to serve as a more reasonable and less restrictive alternative to a tying arrangement."[205] Finally, Data General argued that bundled software-CPU sales would avoid a finger pointing situation when such a system malfunctioned. The court rejected this as a mere repackaging of Data General's earlier arguments, and pointed out that different warranty practices could less restrictively serve clients preferring either bundled or hybrid systems.[206]

Where the district court got into trouble was in its treatment of copyright and the economic power in the tying product necessary to implement a tie-in. The court cited *Fortner II* in which the Supreme Court recognized that uniqueness in a tying product could be found due to such a product's legal, physical, or economic advantages.[207] The court conceded that copyright on software created legal barriers preventing competitors from producing competing products and thus economic power could be inferred.[208] The court recognized that such a presumption of economic power due to legal uniqueness had been recognized in *Loew's*, *Paramount Pictures*, and *International Salt.* The court interpreted the *Loew's* decision to have rested upon not only the existence of copyright, but also upon the inherent unique attractiveness of the films themselves. Thus, since the plaintiff had not shown in the instant case that RDOS was as desirable as "Gone With the Wind" and Data General's CPU as undesirable as "Getting Gertie's Garter" (two films mentioned by the *Loew's* court), the presumption of economic power from

203. *Id.* at 1120-21.

204. *Id.*

205. *Id.* at 1122 (citing United States v. Jerrold Elecs. Corp., 187 F. Supp. 545, 560-61 (E.D. Pa. 1960)).

206. *Id.* at 1123.

207. *Id.* at 1112 (citing United States Steel Corp. v. Fortner Enterprises, 429 U.S. 610, 621 (1977) (Fortner II) (quoting with approval *Fortner I*, 394 U.S. at 505 n.2)).

208. *Id.* at 1112.

the existence of software copyright was not conclusive.[209]

Upon completion of the trial, a jury found that Data General had indeed engaged in an illegal tie-in. However, the district court overruled the jury and granted defendant's motion for a judgment notwithstanding the verdict or new trial.[210]

The Ninth Circuit reversed the district court and reinstated the jury verdict against Data General in *Digidyne Corp. v. Data General Corp.*[211] The appeals court accepted the district court's findings that a substantial effect upon commerce existed in the tied CPU market and that there existed separate products due to the demonstrated separate demand for RDOS and CPU's.[212] The court added that *Jefferson Parish* supported the district court's view of separate products. The recovery of investment argument for the software-CPU tie was rejected as too restrictive a rationale. The less restrictive alternative of separately pricing and marketing RDOS and CPU's would avoid the anticompetitive affect of requiring the expensive simultaneous entry into both markets by a would-be competitor, an anti-foreclosure rationale.[213]

The appeals court found that RDOS conferred sufficient economic power upon Data General to produce a tying arrangement because RDOS was unique in several ways, and because of applied Supreme Court doctrine regarding unique products. The court found error in the district court's requirement that Digidyne prove that the copyright and trade secrets of RDOS *prevented* competitors from developing comparable systems.[214] This would have required Digidyne to prove not only power due to copyright, but also power throughout the disk operating market. The court essentially said that the focus of inquiry in the lower court was incorrect. "The concern is not with the restraint on competition in the tying product, but on competition in the market for the tied product. What is required is not monopoly power in the tying product market, but only sufficient power to enable the seller to restrict competition in the tied product."[215] Citing *International Salt* and *Loew's* for this rejection of the relevance of competing substitutes when the tying product is legally unique (patent and copyright), the court went on to find it reversible error to require a Sherman Act Section 2 monopoly in order to find tying arrangement market power.[216]

Even assuming the district court's requirement for copyright and

209. *Id.* at 1112-13.
210. Digidyne Corp. v. Data General Corp., 734 F.2d 1336, 1338 (9th Cir. 1984).
211. 734 F.2d 1336 (9th Cir. 1984).
212. *Id.* at 1338-39.
213. *Id.* at 1343-44.
214. *Id.* at 1344.
215. *Id.* at 1345.
216. *Id.* at 1345; *see also* United States v. Loew's, Inc., 371 U.S. 38, 45, 49 (1962).

added uniqueness was correct, the Court went on to find other indicia of RDOS uniqueness. "There is abundant evidence . . . that defendant's RDOS could not be produced without infringing defendant's copyright and utilizing defendant's trade secrets." "[C]reating and testing a compatible system would require millions of dollars and years of effort."[217] Effectively then, Digidyne *had* fulfilled the lower court's requirement that competing substitutes for RDOS were nonexistent.

RDOS was also actually unique for two related reasons. First, at that time RDOS was a quantum improvement in disk operating systems. It was impossible at the time for competitors to develop operating system software that would not infringe upon Data General's copyright.[218] Testimony indicated that RDOS was the best in the industry, running four times faster than any similarly priced program.[219] It was factually unique to the marketplace in the same sense as land was in *Northern Pacific.*

Second, RDOS was desired by customers wanting its unique capabilities.[220] Since increased customer demand for a product with no available substitutes implies low elasticity of demand, and therefore power over price, RDOS, from a combination of its inherent superiority and its great customer attractiveness conferred economic power upon Data General.

The Ninth Circuit found yet another way RDOS conferred economic power upon Data General, and this was in the concept of "lock-in" of both end-line users and downstream applications as well as systems producers. It is prohibitively expensive, once a system is in place in a given business, to decide to replace it with another system. Such a replacement results in lost data processing time, which could cripple a user business, and high conversion costs. The downstream system and applications producers were a special concern of the court; since RDOS with CPU's were sold to original equipment manufacturers ("OEM") who combined them with applications software to resell the endusers, these OEM's were doubly locked-in. Because of RDOS' Superiority and customer demand for RDOS, a rational OEM had to offer RDOS to his customers. Further, these OEM's developed applications software specific to RDOS at a huge cost to themselves, a cost that could *only* be recouped by bringing RDOS to market. However, these OEM's could only get RDOS to market from Data General if they would also take the CPU.[221] The Data General CPU was inferior to that offered by

217. 734 F.2d at 1342 & nn.3-4.

218. *Id.* at 1342 n.3.

219. *Id.* at 1341 n.2.

220. *Id.* at 1341; *see also In re* Data General Corp. Antitrust Litigation, 529 F. Supp. at 816.

221. 734 F.2d at 1342-43.

other CPU manufacturers[222] and thus, not only were competitors foreclosed from the CPU market,[223] but OEM's were required to take undesirable Data General CPU's to get desirable RDOS. Data General further enhanced its bargaining power and total return by requiring the purchase of peripherals as well.[224]

The Ninth Circuit decision in *Digidyne* was true to both form and to substance. It was true to form in that the court accurately applied long standing Supreme Court precedent and had ample reasons to find an illegal tying arrangement. Two separate products were linked, disk operating systems and CPU's, separated evidently by differential customer demand and the existence of competition in the CPU market. Five-hundred-twenty million dollars worth of tied market CPU commerce was affected, and other firms were foreclosed from effective competition with Data General by the effective requirement for simultaneous multimarket entry, an impossibility given Data General's copyright.

The decision was also true to substance in the recognition of the way copyright confers economic power. RDOS provided economic advantage to effectuate a tie due to: (1) its government protected grant of exclusive economic exploitation via copyright; (2) the factual nonexistence of competing substitutes and due to copyright the impossibility of producing substitutes; (3) RDOS' vast superiority over other disk operating systems at the time; and (4) customer demand, either outright or as a result of lock-in for RDOS, its product differentiation. These findings reflect an accurate intrinsic and practical understanding of the economic nature of copyright.

Justice White's dissent from denial of certiorari for *Digidyne*[225] reproaches the Ninth Circuit for a failure to do "sufficient market analysis," yet Justice White ignores the long settled Supreme Court view that uniqueness is a separate means to economic advantage.[226] This criticism simply misconceives the nature of the question: Does copyright confer economic advantage such that tying arrangements involving copyrighted products should be condemned? Supreme Court precedent, copyright itself, and the Ninth Circuit answer "yes" to this question—such arrangements should be condemned.

222. *Id.* at 1343.

223. *Id.* at 1346-47.

224. *Id.*

225. Digidyne Corp. v. Data General Corp., 473 U.S. 908 (1985) (White, J., dissenting).

226. Justice White's dissent nowhere discusses any of the cases presented in Section III *supra* except *Jefferson Parish Hospital No. 2 v. Hyde*, a case holding on the insufficiency of a 32% tying market share.

C. SUBSEQUENT COMPUTER TYING CASES

The *Digidyne* decision has not been a popular one, and has been criticized by both courts[227] and commentators.[228] The Ninth Circuit itself has drawn the line on uniqueness at the copyright level, finding that trademark, standing alone, is insufficient to presume tying market economic power.[229] The court, apparently stung by criticism, has drawn a rational line here, but its apparent endorsement of conservative economic theory[230] is troubling. Since trademark protects primarily goodwill and goodwill has been found insufficient as a business justification for a tying arrangement, perhaps this is best seen as a rough attempt at judicial symmetry.

Two district court cases deserve mention as exemplifying the current confusion that reigns regarding computer tying arrangements. In *Allen-Myland Inc. v. I.B.M.*[231] the issue was whether a unit sale of upgrade parts and services constituted an illegal tying arrangement. This case, like *3 P.M. v. Basic Four*, essentially was decided on a lack of plaintiff evidence, although the court made some unnecessary anti-*Digidyne* comments. Plaintiff, a possible competitor, failed to establish a demand for computer service (tied market) separate from that for upgrade parts (tying market).[232] Not only was IBM's market share of 32% insufficient as a matter of law to infer market power,[233] but in both markets there was evidence of a complete lack of entry barriers,[234] one of the evils per se proscription of tying seeks to eliminate. The court could have rested upon a finding of insufficient evidence of separate products, supposedly parts and services. Instead, the court launched into a long discussion of the presumption of economic power via copyright, citing *A.I. Root* approvingly and disapproving *Digidyne*,[235] declaring patent mere prima facie evidence of economic power requiring further market inquiry (conceding Supreme Court rules to the contrary in *Jefferson Parish*),[236] and eventually resting on a rule similar to that in *A.I. Root* requiring plaintiff to show competitors *could not* produce

227. A.I. Root Co. v. Computer/Dynamics Inc., 806 F.2d 673, 677 (6th Cir. 1986); Allen-Myland Inc. v. I.B.M., 693 F. Supp. 262, 281 (E.D. Pa. 1988).

228. Thompson, *supra* note 49; Note, *supra* note 174.

229. Mozart Co. v. Mercedes Benz of N. Am., 833 F.2d 1342, 1346 (9th Cir. 1987).

230. *Id.* at 1345. *Cf.* Kaplow, *supra* note 50; Slawson, *supra* note 50.

231. 693 F. Supp. 262 (E.D. Pa. 1988).

232. *Id.* at 282-83.

233. *Id.* at 278 (citing Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2 (1984), and Times-Picayune Publishing Co. v. United States, 345 U.S. 594 (1952)). *See supra* Section III.

234. 693 F. Supp. at 278-80.

235. *Id.* at 281-82 & nn.41-42.

236. *Id.* at n.41.

rival tying products.[237]

The discussion of copyright economic power was skirted by the court in *Telerate Systems, Inc. v. Caro*.[238] Telerate claimed that Caro infringed Telerate's copyright by selling software which allowed Telerate subscribers to copy its computerized financial data. Caro counterclaimed an illegal tying arrangement by Telerate, tying financial data to the purchase of a given computer terminal. The court found that there was no demand for Telerate terminals ("STN") apart from the demand for Telerate data.[239] Telerate marketed financial information in a number of formats, only one of which required an STN terminal. Not only was the same information available from Telerate in different formats,[240] but Telerate would allow subscribers to use their own terminals to receive STN format financial data.[241] Therefore, not only was there no separate terminal market foreclosed, but the STN format was only one of several products sold by Telerate, a product in competition with other financial formats. This availability of alternatives did not lead to a *Digidyne*-like lock-out effect,[242] and thus the single product defense was successfully raised here in Telerate.

D. Applying the Ninth Circuit Rules to the Sixth Circuit Cases

Section IV-A *supra* has shown that the most rational basis for the decisions by the Sixth Circuit in *3 P.M.* and *A.I. Root* were inadequate evidentiary showings by the plaintiffs. Applications of the rules of per se illegality for tying, a presumption for tying market power for desirable copyrighted software, and the availability of a single product or quality control defense would not have necessarily led to different outcomes in both cases. Nevertheless, the basis for such decisions would be more in line with prior understandings of both copyright and tying arrangements.

In *3 P.M. v. Basic Four* the termination of the distributorship would once again be upheld on the basis of plaintiff's inability to market the BOSS systems in sufficient numbers to fulfill their distribution contract. Basic Four's provision of maintenance and service to purchasers of the BOSS system could benefit purchasers if, due to Basic Four's part inventory and experience with the system, Basic Four could offer a package of "BOSS computing services" with an overall lower price than the cost of the computer and a separate maintenance contract from another provider, if indeed such a maintenance market even existed sepa-

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237. *Id.* at 282.
238. 689 F. Supp. 221 (S.D.N.Y. 1988).
239. *Id.* at 235.
240. *Id.* at 236.
241. *Id.* at 235.
242. *Id.* at 236.

rate from the system. Buyers of the system as well, having spent large sums of money for their computer, might naturally expect the seller to provide such accompanying services. This application of a single product defense would not alter the result of the case, nor require extensive dicta as to copyright power.

Alternatively, assuming such a maintenance market did exist, if defendant Basic Four could demonstrate the superiority of such "in-house" maintenance contracts over other providers, Basic Four might prevail under a quality control defense. Such maintenance being necessary to the functioning of the BOSS system, and not being adequately available elsewhere, Basic Four then was only responding to legitimate customer needs for quality maintenance of a quality computer system. This would assume, however, that the less restrictive alternatives of publishing maintenance instructions or offering the services contract as a possible alternative warranty program would be unsatisfactory.

Applying these rules to the *A.I. Root* case could well lead to a different outcome than that reached by the Sixth Circuit. It certainly appears abrupt for the court to affirm a memorandum summary judgment, having recognized that contrary case law existed from both the Supreme Court and another federal circuit. Clearly, two markets were linked, and copyrighted operating systems and programming services and apparently competition existed in the programming services market. CDI requested that A.I. Root not deal in the programming services of other suppliers and that Root use only MAI hardware in return for which CDI would sell reconfigured BOSS to Root.

If the presumption of copyright as economic power had been accepted by the court, the burden would have shifted to CDI to show that such a linked sale was quality control motivated or was a single product. There are insufficient facts in the record to predict whether CDI would have prevailed with such a defense. The case would turn on whether consumers perceived that BOSS software and programming services were two different products that need not come from the same dealer, and if in fact such separate providers existed in Detroit. Certainly a full trial is a more appropriate forum for settling such matters than in a memorandum decision.

V. CONSEQUENCES FOR THE COMPUTER INDUSTRY

The rights granted in copyright (to reproduce, distribute, prepare derivatives, perform and display a work) are only of value to copyright holders insofar as they provide them with monetary gain. Society has struck a Faustian bargain with a creator, granting exclusive rights to the economic exploitation of a creative work in order to foster overall societal welfare for continued creativity. These rights at the instant granted provide prospective market power, and when exercised by the holder, provide true market power. Would-be competitors (unless they independently come up with a compatible program without using the original as a guide) are prevented by the law of infringement from offering the same product. Since copyright protects an author's expression of an idea, further works by other author's may not be marketed when they contain protected expressive elements of the prior author's work.[243] Copyrights may be so extensive in themselves or may be so combined with other protective rights that they effectively prevent the rise of competing substitutes due to the impossibility of "engineering around" such blocks of government protected ingenuity.[244] Copyright then leads rationally to a presumption of sufficient economic advantage to enact a tie-in.

Copyright confers a "uniqueness" in that an area of economic control and power with regard to a creative work is carved out of the public domain and given exclusive governmental protection. In the case of operating systems software, this legal protection of economic rights combined with the costs of software research and development, the requirements of compatibility between applications programs and operating systems, and high customer demand for "better" program leads rationally to a presumption of the existence of a discrete focus of economic power in the hands of the one who controls the rights to the production, distribution, and derivation of future works for that operating system. In other words, the copyrighted software, while legally protecting the expression, but not the underlying idea, results in a unique center of economic advantage.

In addition to its legal and inherent uniqueness, copyrighted work may provide economic advantage due to its desirability to consumers, whether they be remarketers or endline users. This desirability may simply be due to an effective advertising campaign or it may be due to the work being a quantum improvement over pre-existing products. In either case, the desirability of the product should be seen as additional evidence of a copyright holder's ability to enforce a tie-in.

Society, by this bargain with creators, has itself created individual foci of exclusive economic advantage in order to gain an overall collective good. Such foci of advantage are strictly circumscribed since they run counter to the general practice of encouraging open competition to achieve allocative efficiency. The focus of inquiry needs to be not only on the reward to the grantee, but also takes into account the monopoly loss borne by society as a whole. Only to the point that the net gain to

243. Note, *The Logic of Foreclosure*, 79 YALE L.J. 86, 90, 94 (1969).

244. Kaplow, *supra* note 42, at 1869-72 (discussing the undesirability of costly "inventing around").

society is positive should a given grant of exclusive right be allowed.[245] Educational or archival use of copyrighted works also advance the goal of wide dissemination of such creative works or information. Likewise, society is concerned when a copyright holder seeks to bind or restrict entry to markets other than for the copyrighted work itself because such acts increase the overall payment that society must make to encourage creativity.

Tying arrangements involving copyrighted works thwart both the goals of copyright and of competition, harming both competitors and consumers. Competitors are harmed by the narrowing or foreclosure of the tied product market. In order to effectively compete, another producer must either cut prices and endure a loss or, more likely, enter into the tying product market. A new competitor almost certainly would need to enter both markets simultaneously, multiplying both costs and uncertainties involved in bringing a new competing product to market. This foreclosure results from a tied product borrowing some of the cachet of the tying product, whether that be tying product superiority, brand recognition, or other marks of differentiation. Thus, competition in the tied market is no longer based on the product's merits because the market has been skewed by the introduction of an outside economic advantage having little to do with the comparative quality of the item. Buyers then make choices in the tied market that they would not have otherwise made; in order to get a unique or desirable tying product, buyers purchase tied items which may not be as well suited for their needs as other competing items. Sellers using tying arrangements take advantage of imperfect buyer knowledge, the inertia of free rider thinking by buyers expecting others to rectify these harms, and the protected status of their copyrighted item which competitors cannot produce for fear of infringement. Tying arrangements expand market share for future price increases or reap immediate super-competitive profits.

The policy against foreclosure can be seen as a common sense judicial reaction to the failure of economic theory to provide workable standards for measuring such broad effects. "[T]he Court is responding to economic indeterminacy with a method of analysis placing primary emphasis on equality of opportunity, free access to markets by competitive sellers, and complete freedom of choice by buyers."[246] The Court's per se illegality rules make both economic and administrative sense. Where any degree of market power over the tying product exists, foreclosure of tied market competition is possible.[247] Given the uniqueness and eco-

245. Kaplow, *supra* note 42, at 1827-31.

246. Note, *supra* note 243, at 93; *see generally* Slawson, *supra* note 50.

247. Note, *supra* note 243, at 100.

nomic advantage inherent in copyright, the existence of a copyrighted tying good does rationally lead to a presumption of sufficient market power. The availability of less restrictive alternatives to achieve the supposed benefits of tying had led the Court to rightly question and reject such "benefits" when offered as excuses for tying behavior. The rules of per se illegality with limited recognition of defenses are both simple for courts to enforce and for business-people to order their affairs around.[248] Such per se illegality avoids the necessity of attempting to apply an economic theory that tends to be vague, abstruse, and devoid from reality to economic data that tends to be voluminous and ambiguous[249] in order to pass upon the legality of a practice with few or no demonstrated redeeming qualities.

The Ninth Circuit in *Digidyne* showed an understanding superior to that of other circuits of the economic advantages inherent in copyright, the underlying policies and current law of antitrust, and the harms that can arise from computer tie-ins. The computer industry is one in which product development occurs at a rapid pace and although there are large firms occupying major market positions, much of the software innovation and user friendly applications have been because of small firm innovation. Competition from small firms specializing in a given software or hardware market has lead to three consumer advantages: rapid product improvement, wide choice of products, and lower prices.

Computer products, whether hardware, software, or information itself, are sold individually and packaged together, and there is customer demand at different times for different product sizes. But it is as nonsensical to say that a disk operating system and computer hardware are *inherently* a single product[250] as it is to say that a videotape and a monitor are a single product.[251] The mere chance that the two might be used together does not mean that they must be used together or are subject to the same regulatory scheme. Copyright and demand can and does exist for programs and videotapes apart from the apparatus with which they are perceived. In light of the competitive harms possible from tying, per se illegality with defenses of "single product" and "quality control," when justified, should be the rule applied. The proof of separate or single status should not turn on whether the products are functionally related (for all components in a computer system are functionally linked), but on whether there is differential customer demand

248. Slawson, *supra* note 50, at 671.

249. Slawson, *supra* note 50, at 671. *See generally* W. HUDSON, BUSINESS WITHOUT ECONOMISTS 15-44 (1987).

250. *See Buyers Guide and Handbook, 1990 Computer Review*, COMPUTER 79-130 (examples of the huge number or possible combinations of hardware and software).

251. CONTU FINAL REPORT, *supra* note 28, at 21.

for the items apart from one another. Such a rule has already been successfully applied in *Telerate* and elsewhere.[252] If such a single product is being sold, it likely saves consumers costs or serves their needs and therefore should not be condemned. Treating components of a computer as separate products allows small firms to concentrate upon improvements in quality or service in a narrow field. This in turn keeps the pressure on large firms to likewise innovate rather than sit back complacently.

Justice O'Connor's concern over per se semantics[253] reveals her true interest. She seeks to subject tying arrangements to rule of reason scrutiny only, with all its attendant analytical ambiguities, in order to effect a de facto legality for tying. "With only slight exaggeration, there is really only one thing one needs to know about the rule of reason: when the rule is applied, the defendant virtually always wins."[254] The Sixth Circuit, by adapting Justice O'Connor's reasoning, has set forth a rule of tying involving copyrighted goods which does have this effect. Neither rule shows any concern for the competitive harms of tying nor for the fact that the Clayton Act proscription was enacted precisely to replace such a judicial sieve with a legislative wall.

VI. CONCLUSION

The Supreme Court has long recognized that tying serves hardly any redeeming purpose and that the practice is only likely to be found when it is of particular benefit to the seller. Per se illegality has always admitted the possibility of defenses and, this concern for the Court's grammar is really a subterfuge to undermine the proscription itself. Per se illegality will harmonize the policy concerns of copyright and antitrust by not allowing these two different methods of insuring societal welfare to overlap and thus conflict. The current rule is simple, effective, and responsive to the realities of the computer industry as evidenced by *Digidyne* and *Telerate*. Such a rule should remain the law.

*Daniel K. Dik**

252. ILC Peripherals Leasing Corp. v. I.B.M., 448 F. Supp. 228 (N.D. Cal. 1978) (head/disk assembly and disk drive from one product because it satisfies consumer need, saves cost, and are normally used, purchased, and expected to be sold together).

253. Jefferson Parish Hospital No. 2 v. Hyde, 466 U.S. 2, 34-35 (O'Connor, J., concurring).

254. Foer, *The Political-Economic Nature of Antitrust*, 27 ST. LOUIS U. L.J. 331, 337-38 (1983); *see also* Posner, *The Rule of Reason and the Economic Approach; Reflections on the Sylvania Decision*, 45 U. CHI. L. REV. 1, 14 (1977).

* Mr. Dik is currently a third year law student at The Law Center, University of Southern California, Los Angeles.