Articles | Faculty Scholarship

1996

Microsoft Corporation, the Justice Department, and Antitrust Theory

Daniel J. Gifford
University of Minnesota Law School, giffo001@umn.edu

MICROSOFT CORPORATION, THE JUSTICE DEPARTMENT, AND ANTITRUST THEORY

Daniel J. Gifford[*]

TABLE OF CONTENTS

I. INTRODUCTION

Microsoft Corporation's jousting with the Justice Department's Antitrust Division over the last two years has been the subject of widespread media interest. The Division has required Microsoft to change its licensing practices; it has thwarted Microsoft's planned merger with Intuit. Furthermore, the Division has threatened to block Microsoft's introduction of its new Windows 95 operating system as a result of a dispute over the lawfulness of Microsoft's incorporation into that program of an icon helping users to sign on to Microsoft's new on-line service. The sparring between the Justice Department and Microsoft over these Department challenges to Microsoft's plans may reveal something about the antitrust laws and about the Department's current views of what those laws are about.

In the three instances mentioned, the antitrust theories underlying the Department's position merit close examination. In each case, the theoretical base of the Department is either novel or raises issues which have not yet been fully explored. During the 1960s, antitrust caselaw developed without the benefit of an underlying theory.[1] As a result, the law took a number of wrong turns. A major cause of the confused state of the caselaw was the failure of the Department to embrace a theoretically coherent approach to antitrust enforcement. Rather, the Department at that time appears to have taken on the role of an aggressive litigator, leaving to the courts the task of generating a

---

1. *See* Daniel J. Gifford, *The Jurisprudence of Antitrust*, 48 SMU L. REV. 1677, 1683 (1995).

coherent caselaw framework. The generation of a coherent antitrust caselaw, however, is a task for which the courts need the help of the Justice Department, a Justice Department which has developed its own overall antitrust approach and to which the courts can properly defer.[2] During the Reagan/Bush Administrations, the Justice Department embraced the so-called "Chicago School" of antitrust analysis as the theoretical basis for its actions.[3] Today, the Department's theoretical approach to antitrust is unclear. The Department has every right to abandon, or to modify as it sees fit, the Chicago School approach, so long as it has a coherent alternative. The Department has, however, an obligation to act consistently, as opposed to developing policy ad hoc. Whether the Department has worked out a fully developed and coherent framework for its enforcement actions is, therefore, a matter of legitimate public concern. It is reasonably clear that the present administration of the Department's Antitrust Division differs with the policies of its predecessors in a number of ways. The public is vitally interested in what these differences are, and whether these differences are part of a coherent approach to antitrust enforcement.

In this paper, I use the Department's relations with Microsoft Corporation to cast light on its present policy positions. The questions which need to be addressed are: (1) whether the Department has worked out the theoretical underpinnings of the approaches which it is presently taking? (2) what in fact are the theories which the Department has adopted? and (3) whether those theories withstand critical examination? In the pages that follow, the ground-work for such an examination is laid out.

In examining the Department's antitrust theories, I proceed in the following way. Part I sketches out some factual background. Next, I explore the licensing issue which arose in the consent decree to which District Court Judge Stanley Sporkin originally objected,[4] but which was ultimately entered by direction of the United States Court of Appeals for the District of Columbia Circuit.[5] I then examine the

---

2. *See id.* at 1706, 1709 (contending that the courts need assistance on antitrust policy from the enforcement authorities); *cf.* Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 844 (1984) (recognizing a critical role for the executive in the formulation of policy).

3. Gifford, *supra* note 1, at 1706 & n.173.

4. Judge Sporkin objected to the scope of the consent decree, which he believed was too narrow. *See* United States v. Microsoft Corp., 159 F.R.D. 318, 338 (D.D.C.), *rev'd*, 56 F.3d 1448 (D.C. Cir. 1995). *See also* United States v. Microsoft Corp., 1995-1 Trade Cas. (CCH) ¶ 70,928 (D.D.C. Mar. 14, 1995).

5. United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21, 1995), *on remand from* United States v. Microsoft Corp., 56 F.3d 1448, 1462 (D.C. Cir. 1995).

abortive Microsoft/Intuit merger. Finally, I explore the issues surrounding the release of Windows 95.

II. MICROSOFT AS THE SUBJECT OF ANTITRUST CONCERN: SOME FACTUAL BACKGROUND

Certain facts about Microsoft are well-known. Personal computers emerged into public consciousness in the late 1970s. Until the early 1980s, operating systems for personal computers varied from brand to brand. Apple, which emerged as a major player in the personal computer market, used a proprietary operating system.[6] By maintaining proprietary operating systems, companies like Apple locked-in customers to their software.

This was the state of the personal computer market when IBM entered in 1981. When IBM began selling personal computers in that year, it made a decision to adopt a so-called "open architecture" system.[7]

In designing its personal computer, IBM chose the microprocessor produced by the Intel Corporation, and selected Microsoft Corporation to provide it with an operating system.[8] Microsoft purchased an operating system from another company, Seattle Computer Products which had developed QDOS, a clone of Digital Research Corporation's CP/M 8-bit operating system. QDOS then became the basis of MS-DOS, the 16-bit operating system employed in the IBM Personal Computer.[9] IBM's decision to employ an open architecture system encouraged independent software companies to supply software for its personal computers. The rapid multiplication of software helped to expand the market for IBM's personal computers. Accordingly, IBM rapidly dominated the personal computer market.

IBM's dominance was short-lived, however, because many independent manufacturers began to produce "clones" of the IBM personal computer. The clone producers generally used the Intel microprocessor in their machines and equipped them with MS-DOS purchased from Microsoft. The clones were the functional equivalent

---

6. Don Crabb, *A Mac Melange*, BYTE, Mar. 1990, at 97.

7. The open architecture system permitted and encouraged independent vendors to produce applications software which could run on the operating system employed in the IBM personal computer. STEVEN MANES & PAUL ANDREW, GATES: HOW MICROSOFT'S MOGUL REINVENTED AN INDUSTRY—AND MADE HIMSELF THE RICHEST MAN IN AMERICA 152 (1994).

8. Kenneth C. Baseman et al., *Microsoft Plays Hardball: The Use of Exclusionary Pricing and Technical Incompatibility to Maintain Monopoly Power in Markets for Operating System Software*, 40 ANTITRUST BULL. 265, 271 (1995).

9. *Id. See infra* note 120.

of the IBM personal computers and their competition rapidly eroded IBM's market share.[10] Thus, although IBM lost its dominance of the personal computer market, the input providers which it selected, Intel and Microsoft, continued to dominate the markets for personal computer microprocessors and personal computer operating systems. The dominance of Intel and Microsoft has continued over the years as each company has periodically replaced its product with improved versions. Intel has successively replaced the 8088 microprocessor with the 80286, the 80386, the 80486, and the current Pentium (the 80586). Microsoft has produced six successively improved versions of MS-DOS. It produced a graphic user interface called Windows in 1985 which operated over the underlying operating system. Recently, Microsoft has started marketing Windows 95, an operating system containing its own graphic user interface.

Microsoft's "Windows" venture was an attempt to do for the IBM-compatible market what Apple had done with its Macintosh: provide a graphic user interface enabling users to call up applications programs by touching a visual symbol (or "icon") with a cursor controlled by a "mouse," a pointing device which moves the cursor on the screen with a small movement of the hand. Indeed, Microsoft has a license from Apple, entitling it to use much of the visual display embodied in the Macintosh graphics.[11] The original Windows, however, was an overlay on the underlying operating system. Users would install Windows on machines on which MS-DOS (or other compatible operating system) was already installed. Windows evolved through several versions. The new "Windows 95," however, is itself an operating system containing its own graphical user interface.

After cooperating for more than a decade, Microsoft and IBM parted ways in the 1990s.[12] Until 1992, the two companies had been jointly developing OS/2 ("operating system 2"),[13] an operating system conceived as a successor to DOS. Originally introduced in 1987, OS/2 evolved into a powerful 32-bit operating system in the years immediately following the split between the two companies. IBM's introduction of the 32-bit OS/2 2.0 in 1992 was followed by Microsoft's introduction, in the following year, of Windows NT ("new technology"), its own 32-bit operating system, also derived from the earlier

---

10. MANES & ANDREWS, *supra* note 7, at 265.

11. *Id.* at 291-92. *See* Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435 (9th Cir. 1994) (construing the license), *cert. denied*, 115 S. Ct. 1176 (1995).

12. MANES & ANDREWS, *supra* note 7, at 432-38.

13. BILL GATES, THE ROAD AHEAD 62 (1995).

OS/2.[14] In 1994 IBM introduced OS/2 Warp, its most recent version of OS/2 and also a full 32-bit system.

These several 32-bit systems break the constraining effect that DOS had on applications performance.[15] Until recently, demand for the 32-bit systems has been sluggish among nonbusiness users. Windows NT effectively requires 16 megabytes of RAM (Random Access Memory),[16] a requirement that alone discouraged widespread adoption among such users. Moreover, Windows NT apparently would not run the (16-bit) Windows applications software as well as Windows 3.1.[17] The power of both Windows NT and OS/2 Warp has not been a major attraction to nonbusiness users who, until now, generally have not seen a need for the multitasking capability of the 32-bit systems and for whom Windows 3.1 has performed satisfactorily.

Yet personal computers have been increasing in power over the years, while their performance has been limited by the 16-bit DOS/Windows operating system. The general understanding in the industry, accordingly, is that ultimately all operating systems will employ a 32-bit platform. Like Windows NT and OS/2 Warp, Windows 95 is designed to run on a 32-bit platform, but carries 16-bit capability as well. Windows 95, however, is more of a hybrid than the other two systems, being designed especially as a transition device.[18] Although Microsoft claims that Windows 95 can operate on 4 megabytes of RAM, the system operates better with 8 megabytes[19] and some observers believe that 16 megabytes becomes preferable as users attempt to enjoy Windows 95's multitasking capabilities.[20] Off-the-shelf hardware carrying 8 and 16 megabytes of RAM is now routinely carried in most retail computer stores, so these RAM requirements are no barrier to adoption. Windows 95 generally will run DOS applications and this capability together with the current compatibility of its RAM requirements with the new hardware makes it a transitional operating system. As a result, Windows 95 provides a bridge from the 16-bit platform of MS-DOS and a separate Windows graphic user interface

---

14. Harry McCracken & Tinoo Singh, *Windows 95 versus Windows NT versus Warp versus Mac*, PC WORLD, Feb. 1996, at 145, 146.

15. MS-DOS and other DOS systems were based upon a "16-bit" platform. This 16-bit platform was originally adapted to the available hardware, but as the hardware increased in power, that power could not be fully exploited on a 16-bit platform.

16. MANES & ANDREWS, *supra* note 7, at 461. According to Manes & Andrews, Windows NT is said to require a minimum of 12 megabytes of RAM but actually needs 16 megabytes.

17. Jon Udell, *Is There a Better Windows 3.1 Than Windows 3.1?*, BYTE, Nov. 1993, at 85.

18. Tom R. Halfhill, *Inside the Mind of Microsoft*, BYTE, Aug. 1995, at 48, 49.

19. Tadesse W. Giorgis, *Big Decision: Warp vs. Windows*, BYTE, Apr. 1966, at 154, 155.

20. Stanford Diehl, *Windows 95: The Numbers*, BYTE, Oct. 1995, at 113.

to the more powerful Windows NT or a successor designed as a full 32-bit platform and incorporating its own graphic user interface.

Against the background of industry developments, Microsoft can be seen to be engaged in a fierce competition with IBM for the operating systems market for IBM-compatible personal computers. With its OS/2 2.0 and 2.1, IBM arrived first with an operating system for a 32-bit platform, a move countered by Microsoft with Windows NT. Microsoft first induced computer users to adopt Windows as an add-on to MS-DOS. After exploiting Windows' popularity, Microsoft is now attempting to use Windows 95 as a transitional device to encourage its existing Windows customer base to make its way through Windows 95 to Microsoft's powerful 32-bit operating system, Windows NT or its successor. Thus, Microsoft is exploiting its product development with imaginative and aggressive marketing to get an edge on IBM.

IBM (through its joint venture with Apple and Motorola) has developed a reduced instruction set computer (RISC) processor for use in desktop and notebook computers.[21] Apple, a member of that venture, has been marketing its "power Macintosh," based upon that RISC microprocessor for over a year.[22] IBM had been widely expected to employ that microprocessor in a new RISC-powered personal computer, thus extending a new challenge to Microsoft's position in the operating systems market — while simultaneously challenging the Intel Corporation in the microprocessor market. As of February 1996, however, IBM had decided that its new microprocessor is better suited to work stations than to desktop personal computers.[23]

This brief description of events in the personal computer operating systems industry depicts an industry in which large firms are in intense competition in developing and selling operating systems. At present, the leading players in the personal computer operating systems market are Microsoft, Apple, and IBM, with Microsoft and IBM contending in the IBM-compatible sector of that marketplace. Microsoft has so far held the lead through creative product development combined with imaginative and aggressive marketing. In the

---

21. Steve Lohr, *At Last, a Sneak Preview of Big Blue's Strategy*, N.Y. TIMES, Mar. 24, 1994, at D1.

22. Peter H. Lewis, *The New Power Macs Seen as a Triple Threat*, N.Y. TIMES, Mar. 22, 1994, at C13.

23. Quentin Hardy, *Motorola-Apple Licensing Pact Aims to Enhance Image and PowerPC Chip*, WALL ST. J., Feb. 20, 1996, at B7.

pages below, I argue that, for the most part, IBM does not need the help of the antitrust laws to compete with Microsoft.

III. THE ANTITRUST LAW BACKGROUND: ACADEMIC AND POLITICAL DEVELOPMENTS

From at least the late 1950s through the mid 1970s, the Justice Department, with the support of the Supreme Court, was pursuing an expansionary approach to the scope of antitrust prohibitions.[24] During this period, the antitrust laws were judicially construed to ban a wide variety of behavior which had not previously been considered either anticompetitive or unlawful.[25] Although most of the caselaw developments of this period were the result of Government instituted litigation, private actions also engendered expansionary decisions.[26] The sad aspect of this development is that it rested upon no underlying theory. The case rationales were inconsistent and confused. The bar was necessarily handicapped in advising its business clientele. The national welfare was neglected in the administration of a set of laws designed to advance that welfare.

Ultimately this expansionary caselaw produced its own reaction. This caselaw encouraged scholarly critiques in the law schools and economics departments of the nation's universities. Led in significant part by academics identifying with the University of Chicago, the late 1960s and 1970s produced the so-called "Chicago School" of antitrust analysis.[27] Under a Chicago School approach, case analysis must employ consistent sets of rules or evaluative techniques justified by economic theory. In the 1970s, the Supreme Court reversed the course that it had been following throughout the 1960s and adopted a Chicago-School approach to antitrust analysis.[28] The Court first signaled its new attitude in 1974 in *United States v. General Dynamics Corp.*[29] In that same year, the Court confirmed its new approach in two bank merger decisions: *United States v. Marine Bancorporation, Inc.*[30] and

---

24. *See* Gifford, *supra* note 1, at 1706 (discussing the developments of such an approach).

25. *Id.* at 1681-82.

26. *Id.* at 1682. Among the Supreme Court's expansionary decisions rendered in private litigation were: Fortner Enters., Inc. v. United States Steel Corp., 394 U.S. 495 (1969); Simpson v. Union Oil Co., 377 U.S. 13 (1964); Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207 (1959).

27. Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 933 (1979). *See* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976).

28. *See supra* note 27.

29. 415 U.S. 486 (1974).

30. 418 U.S. 602 (1974).

United States v. Connecticut National Bank.[31] Its 1977 decision in *Continental T. V., Inc. v. GTE Sylvania, Inc.*[32] further evidenced its new appreciation of microeconomic analysis. Its course of decisions during the 1980s demonstrated the Court's continuing commitment to a Chicago School antitrust approach. During the 1981-92 period, the Justice Department was part of a conservatively-oriented Administration which accepted Chicago School analysis as consonant with its own ideological outlook.

During the 1980s a number of antitrust scholars began looking for a successor approach to that of the Chicago School.[33] Steven Salop developed an analysis centered on the concept of "raising rivals' costs."[34] Others have focused upon strategic behavior and game theory as sources for new antitrust doctrines.[35] The advent of a "post-Chicago antitrust analysis" has been announced repeatedly.[36] Yet so far the Chicago School represents the consensus. Although the Supreme Court appeared to deviate from that approach in *Eastman Kodak Co. v. Image Technical Services, Inc.*,[37] its subsequent decisions in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*[38] and *Spectrum Sports, Inc. v. McQuillan*[39] are suggestive of its continuing reliance upon microeconomic analysis as the basis for antitrust prohibitions.

The orientation of the Justice Department's Antitrust Division during the Clinton Administration is unclear. Anne Bingaman, who has headed the Division since 1993, has stated that she is in agreement with the basic approaches of her predecessors during the Reagan/

---

31. 418 U.S. 656 (1974).

32. 433 U.S. 36 (1977).

33. *See, e.g.,* Herbert Hovenkamp, *Antitrust Policy After Chicago,* 84 MICH. L. REV. 213 (1985).

34. *See* Thomas G. Krattenmaker & Steven C. Salop, *Competition and Cooperation in the Market for Exclusionary Rights,* 76 AM. ECON. REV. 109 (1986); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price,* 96 YALE L.J. 209 (1986); Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs,* 73 AM. ECON. REV. 267 (1983). Salop and others have continued this line of inquiry up to the present time. *See* Michael H. Riordan & Steven C. Salop, *Evaluating Vertical Mergers: A Post-Chicago Approach,* 63 ANTITRUST L.J. 513 (1995). For a critical review of this approach, see Timothy J. Brennan, *Understanding "Raising Rivals' Costs",* 33 ANTITRUST BULL. 95, 107 (1988).

35. Michael S. Jacobs, *The New Sophistication in Antitrust,* 79 MINN. L. REV. 1, 35-36 (1994); William E. Kovacic, *The Antitrust Paradox Revisited: Robert Bork and the Transformation of Modern Antitrust Policy,* 36 WAYNE L. REV. 1413, 1465 (1990).

36. *See* Hovenkamp, *supra* note 33, at 225.

37. 504 U.S. 451 (1992).

38. 113 S. Ct. 2578 (1993).

39. 506 U.S. 447 (1993).

Bush period.[40] Yet some significant differences are manifested in her actions. One of her first acts was to revoke the vertical restraints guidelines,[41] apparently because she believed them to be too permissive. But her concern about vertical relationships seems to be deep seated. She is also responsible for the Department's renewed interest in vertical mergers and acquisitions. In 1994, the Department challenged three major telecommunications acquisitions: (1) the AT&T/ McCaw acquisition;[42] (2) British Telecommunications' investment in MCI;[43] and (3) the reintegration of Liberty Media Corporation with Telecommunications, Inc. (TCI).[44] In these cases, the Department's concern appears to have been focused primarily upon two factors. First, the Department was concerned with incentives engendered by vertical integration for the combination to exploit power that it may possess over unintegrated rivals who compete with one part of the combination's operations and purchase or sell to another part of its operations. Second, the Department was concerned about the possibility that the combination might unfairly exploit information to which it had access.[45] The Department's new emphasis on vertical relationships was also reflected in its apparent concern that Microsoft may be using its dominant position in the personal computer operating systems market to assist its entry into the provision of on-line services, thus leveraging power in an upstream market into a competitive advantage in a downstream market. For some time, this concern threatened to delay the introduction of Windows 95.[46]

---

40. *Republican Victories Won't Affect Antitrust Division's Competition Policy*, 67 Antitrust & Trade Reg. Rep. (BNA) No. 1691, at 631 (1994).

> "There has to be a core of reasonable, sound, middle-of-the-road endforcement" that stays constant through Administrations and the waxing and waning of party influences, Bingaman pointed out. "We can argue at the fringes, . . . but business must have confidence that the people in this job are not doing a political job in any way, shape, or form," she added. "That's why we don't plan to change what we're doing."

Id.

41. *Division to Recall Verticals Guides, Expand Amnesty Policy for Corporations*, 65 Antitrust & Trade Reg. Rep. (BNA) No. 1627, at 227 (Aug. 12, 1993).

42. United States v. American Tel. & Tel. Corp., 59 Fed. Reg. 44,158 (1994).

43. United States v. MCI Communications Corp. 59 Fed. Reg. 33,009 (1994).

44. United States v. Tele-Communications, Inc., 59 Fed. Reg. 24,723 (1994).

45. James A. Keyte, *Foreclosure and Harm to Competition: Some Lessons for Defending Vertical Mergers*, ANTITRUST, Spring 1995, at 42.

46. The Government was concerned that the Windows 95 release would include an icon facilitating subscription to Microsoft's on-line service. The Government apparently viewed the inclusion of the icon as a means through which Microsoft was "leveraging" the popularity of its Windows 95 program to provide itself an advantage in competing with Prodigy, CompuServ, and America Online, firms already established in the provision of on-line services. The Government expressed its concern that " 'every user who purchases Win 95 to upgrade an existing computer, as well as the millions who buy computers for the home with Win 95 already installed, will, it

This sensitivity of the Department to the potential of vertical relationships for producing anticompetitive results was not present during the Bush and Reagan Administrations, so the Department's activism suggests that Ms. Bingaman may have opted for some version of post-Chicago antitrust analysis.[47] On the other hand, the relief which the Department has obtained in the three telecommunications cases is minimal.[48] The Department's actions are vulnerable to the criticism that its actions are political. For example, it brings actions against large companies for the publicity value, but is careful not to interfere with their operations.[49] Conversely, the Department's actions may be explained as a cautious commitment to a post-Chicago approach. The Department believes that some vertical acquisitions carry the potential for anticompetitive consequences, but recognizes that many vertical relationships carry a strong efficiency potential. These beliefs would be consistent with the actions of the Department in increasing its enforcement in the vertical area while remaining cautious about the relief which it seeks.

IV. THE LICENSE AGREEMENTS

Recently, the Justice Department has focused sustained attention upon Microsoft Corporation. After investigating Microsoft for possible antitrust offenses, the Federal Trade Commission split 2-2 on proceeding against Microsoft on a variety of alleged offenses.[50] The

appears, *automatically* receive the MSN access software.' " *See Government, Microsoft Contest Merits and Timing of Latest CID*, 69 Antitrust & Trade Reg. Rep. (BNA) No. 1722, at 52 (July 20, 1995).

47. Some commentators believe that the era of post-Chicago antitrust analysis has begun. *See* Riordan & Salop, *supra* note 34; Lawrence A. Sullivan, *Post-Chicago Economics: Economists, Lawyers, Judges, and Enforcement Officials in a Less Determinate Theoretical World*, 63 ANTITRUST L.J. 669 (1995).

48. *See, e.g.*, United States v. Tele-Communications, Inc., 59 Fed. Reg. 24,723 (1994) (prohibiting, inter alia, discrimination against unaffiliated video programming providers "where the effect of such discrimination is unreasonably to restrain competition"). Those terms appear to make the decree less predictable in application than analogous provisions in the Clayton Act.

49. Murray Edelman describes such behavior in his classic book on the subject. MURRAY EDELMAN, THE SYMBOLIC USES OF POLITICS 40 (1964). Edelman argues that political figures often act symbolically, accomplishing nothing of substance but profiting from the appearance of action.

50. *See* United States v. Microsoft Corp., 159 F.R.D. 318, 321 (D.D.C.), *rev'd*, 56 F.3d 1448 (D.C. Cir. 1995) (reporting that the FTC apparently considered charges involving the practice of "vaporware," i.e., announcing a product's future availability although the product may have been unavailable, favoring its own applications developers over competing developers with initial access to information about its new operating systems, tying, and exclusive supply aspects of its licensing practices).

Justice Department then took over the Commission's investigation.[51] A major part of the Department's case against Microsoft consisted of claims that certain aggressive marketing practices by Microsoft impeded the ability of rival suppliers of personal computer operating systems (such as IBM which markets the rival OS/2 Warp) to market their own products.[52]

A. The Exclusionary Provisions

Among the licensing practices which the Department successfully challenged were certain agreements between Microsoft and computer manufacturers which were equivalent to exclusive supply contracts.[53] In many of its licenses, Microsoft obtained commitments from computer manufacturers to purchase licenses for their estimated production capacity. Microsoft then negotiated a royalty charge equal to the licensee's estimated production multiplied by an agreed-upon fee per unit of that production.[54] That charge would then take the form of a lump sum payable in several installments over a year.[55] The arrangement was generally referred to as a "per processor" license, because it was measured by the number of microprocessors which the licensee shipped. (Each personal computer is equipped with a microprocessor). The Department objected to this arrangement because it effectively excluded rival producers of operating systems from dealing with personal computer manufacturers who were Microsoft customers, a class which includes most such manufacturers.[56]

The consent decree prohibited Microsoft from charging royalties to computer manufacturers based upon the number of processors shipped.[57] Because this practice imposed a royalty charge upon computer manufacturers for machines equipped with non-Microsoft operating systems, those manufacturers had to pay twice for non-Microsoft operating systems: once to the licensor of the non-Microsoft system and once again to Microsoft. In addition to prohibiting the per-processor royalty, the consent decree also prohibited Microsoft from

---

51. *Id.* at 321-22.
52. *Id.* at 323.
53. *Id.*
54. *See* Baseman et al., *supra* note 8, at 274.
55. *Id.* at 274 n.14.
56. Complaint ¶¶ 19-28, United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21 1995) (Civ. A. 94-156420).
57. United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096, at 75,244 (D.D.C. Aug. 21, 1995) (Final Judgment ¶ IV(C)).

obtaining commitments to specified numbers of licensed units,[58] and it prohibited a lump-sum method of payment.[59] The effect of these provisions is to force Microsoft to abandon the practice of issuing manufacturer licenses for the estimated production capacity of the licensee at a lump sum figure. The objectionable feature in these licenses lay in the effect of reducing the computer manufacturer's marginal cost for operating systems licenses to zero up to the minimum requirement.[60] Even in the absence of a commitment by the customer for a specified number of copies, at a marginal cost of zero for a Microsoft copy, no other supplier of operating systems could compete for sales to that manufacturer. Critics of this type of licensing characterize it as an "exclusionary" device, preventing rival suppliers of operating systems from competing.[61] It was, of course, a particular form of an exclusive supply (or "requirements") contract. Like many exclusive supply contracts, it was both an aggressive sales device and a means for achieving significant efficiencies.

B. Monitoring Efficiencies

Microsoft defended this lump-sum licensing practice precisely as an efficient means for combating manufacturer fraud. Since licenses authorize manufacturers to electronically reproduce the operating system on the hard drive of each machine, and since the reproduction of a software program is essentially costless, manufacturers paying a per-unit licensing fee would have an incentive to underreport the number of operating systems installed on machines of their manufacture. The lump-sum license fee eliminates the incentive of manufacturers to cheat and eliminates the need to monitor the brands which have entered into lump-sum manufacturer licenses.

Lump-sum licensing fees (or "blanket licenses") were before the Court in *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*,[62] a case involving collective licensing by the copyright holders of sheet music. The copyright holders collectively employed two common agencies (ASCAP and BMI) to negotiate blanket licenses to radio and television networks for all of their works.[63] In that case the

---

58. *Id.* at 75,244 (Final Judgment ¶ IV(F)). The decree, however, permits Microsoft and computer manufacturers to develop "non-binding estimates of projected sales of Microsoft's . . . products for use in calculating royalty payments." *Id.*

59. *Id.* at 75,245 (Final Judgment ¶ IV(H)).

60. *See* Baseman et al., *supra* note 8, at 274.

61. *See id.* at 296-98.

62. 441 U.S. 1 (1979).

63. *Id.* at 4-6.

Court ruled that the efficiencies connected with the blanket license were sufficient to take the arrangement out of the scope of the per se rule against horizontal price fixing.[64] Under the rule of reason, the question would be whether the cost savings achieved by the blanket license issued by the collective licensing agencies would so reduce cost that output would be increased over alternative arrangements. In *Broadcast Music, Inc.*, the lump-sum license eliminated the incentives of networks to cheat and dispensed with the need for monitoring, characteristics which seem to inhere in the Microsoft lump-sum license as well.

C.   The Evolution of the Law Governing Exclusive Supply Contracts

The "exclusionary" effects of the lump-sum manufacturer license are equivalent to those which would be produced by any exclusive supply contract. Indeed, as noted above, the lump-sum license creates an exclusive supply contract. The leading Supreme Court decisions on the lawfulness of exclusive supply contracts date from the late 1940s to the 1960s. In *Standard Oil Co. v. United States*[65] and *Tampa Electric Co. v. Nashville Coal Co.*,[66] the Court held that exclusive supply contracts are unlawful when they cover a "substantial share" of the product in the market.[67] In the mid 1960s, the Court, in *FTC v. Brown Shoe Co., Inc.*,[68] asserted that a large manufacturer's program of requiring its dealers to enter into exclusive supply contracts "obviously conflicts with the central policy of both § 1 of the Sherman Act and § 3 of the Clayton Act."[69] Yet this caselaw has probably been impliedly modified by *Continental T. V., Inc. v. GTE Sylvania, Inc.*,[70] the leading case on nonprice vertical restraints. Under the approach of *GTE Sylvania*, vertical restraints are subjected to a rule-of-reason evaluation and are generally upheld unless competition in the general (or interbrand) market is shown to have been reduced.[71] Such a reduction in interbrand competition could be shown by proof that market supply in the relevant product had been reduced below the level which would be forthcoming in a competitive market.

---

64. *Id.* at 24.
65. 337 U.S. 293 (1949).
66. 365 U.S. 320 (1961).
67. *Standard Oil*, 337 U.S. at 314; *Tampa Electric*, 365 U.S. at 325, 328-29, 333.
68. 384 U.S. 316 (1966).
69. *Id.* at 321.
70. 433 U.S. 36 (1977).
71. *Id.* at 58-59.

Underlying the traditional approach of *Standard Oil, Tampa Electric*, and *Brown Shoe* is a concern that when existing input suppliers control in the aggregate a large share of the available outlets, entry into the input supply industry will be impeded. Entry then may have to take the form of two-level entry into the input supply and output industries simultaneously, thus increasing the costs of entry. Yet this analysis is composed of several layers. First, it requires attention not only to the share of the exclusive supply contracts of any one supplier, but to the aggregate share of exclusive supply contracts by all manufacturers. Second, when many or most suppliers sell through exclusive supply contracts, this may indicate that the practice of selling through exclusive supply contracts is driven by efficiency concerns. At that point, it is proper to accept the practice as consistent with the efficiency goals of antitrust law and to redefine the product market as the market for exclusive supply contracts. In those situations, exclusive-supply contracts no longer constitute a cognizable restraint. They are instead efficiency-justified. The Court acknowledged as much in *United States v. General Dynamics Corp.*,[72] albeit in dicta.[73]

The concern that widespread use of exclusive supply contracts by producers would raise the costs of entry into the producer market was incorporated into the Justice Department's vertical restraints guidelines in the mid 1980s.[74] The guidelines, however, also incorporated another factor widely recognized under the earlier *Standard Oil/ Tampa Electric* approach: the difficulty of entry into the customer market.[75] The Supreme Court recognized this factor in *Standard Oil* when it referred to the limited number of strategically located retailer outlets subject to Standard's requirements contracts.[76] If entry into the customer market is easy, then an existing base of exclusive supply contracts portends less foreclosure to entrants at the supplier level than if entry to the customer level is difficult. Under the guidelines, no exclusionary objection to exclusive-supply contracts would be upheld if entry at the customer level was easy.[77] If entry at the customer

---

72. 415 U.S. 486 (1974).

73. *Id.* at 499-500.

74. U.S. DEP'T OF JUSTICE, GUIDELINES FOR VERTICAL RESTRAINTS § 3.22 (1985) (revoked 1993) [hereinafter GUIDELINES FOR VERTICAL RESTRAINTS], *reprinted in* 16 ANTITRUST LAWS & TRADE REGULATION Vol. 1, app. 5 (Von Kalinowski, ed. 1995).

75. *Id.*

76. *Standard Oil*, 337 U.S. at 304 n.6.

77. GUIDELINES FOR VERTICAL RESTRAINTS, *supra* note 74, § 3.22. *See also id.*, § 4.2 ("The finding of easy entry in just one market will cause the Department to conclude that the vertical restraint is lawful if: (1) it is clear that exclusion is the only possible anticompetitive effect of the restraint, and entry is very easy in the foreclosed market . . . .").

level was difficult, however, then widespread use of exclusive-supply contracts, which would force an entrant at the supplier level to enter at both the supplier and customer levels, would constitute a substantial restraint[78] which would be condemned, absent an efficiency justification. The vertical restraints guidelines, however, indicated that impediments to entry engendered by large-scale use of exclusive supply contracts would be balanced against their efficiency-enhancing effects.[79] The guidelines, of course, are no longer in force. Moreover, even when they were in force, they did not apply to intellectual property licensing.[80] The guidelines provide a useful background of analysis, however, because they represent the broad analytical framework employed by the Department in the recent past to assess the significance of vertical restraints.[81]

D.   Questions About the Consent Decree

Several questions arise in connection with the consent decree. First, how does the Department view the relation between the apparent ease of entry into the computer manufacturing business and the widespread use by Microsoft of lump-sum licenses? Why doesn't the apparent easy entry into personal computer manufacturing ensure the availability of outlets for OS/2 Warp? Even if entry into computer manufacturing is easy, maybe every manufacturer — established or new — would want a license for Microsoft operating systems. Indeed, even IBM, the provider of the rival OS/2 Warp operating system, probably needs Microsoft licenses. If this is in fact the case, then ease of entry loses its significance. In such circumstances, rival operating system providers would be effectively compelled to enter at both levels in order to market their product. Every manufacturer — even those who want to sell some machines installed with OS/2 Warp —

---

78. GUIDELINES FOR VERTICAL RESTRAINTS, *supra* note 74, §§ 3.22, 4.2.

79. *See id.*, §§ 2.0, 4.226.

80. *Id.*, § 2.4.

81. That similar analytical framework which applies to exclusive arrangements involving intellectual property as well as other exclusive arrangements is recognized in the new Antitrust Guidelines for the Licensing of Intellectual Property. U.S. DEP'T OF JUSTICE AND THE FTC, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 4.1.2 (1995)[hereinafter ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY], *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,132, at 20742 ("The antitrust principles that apply to a licensor's grant of various forms of exclusivity to and among its licensees are similar to those that apply to comparable vertical restraints outside the licensing context, such as exclusive territories and exclusive dealing."). These Guidelines, however, note that because of the greater vulnerability of intellectual property to misappropriation, greater restrictions are tolerable in intellectual property contexts than in other contexts. *Id.*

needs, say Windows 95, to satisfy the bulk of its customers. Thus, were Windows 95 to be available only through lump-sum licenses, IBM would effectively be impeded in marketing its OS/2 Warp because it would be unable to find computer manufacturers who would be free to purchase OS/2 Warp and would be willing to pay for it. This seems to be the way the Justice Department looks at the factor of ease-of-entry at the customer (computer-manufacturer) level.[82]

Even so, there is a theoretical problem lurking in the background: If there is a market for computers equipped solely with OS/2 Warp as the discussion above assumes, then why are there not computer manufacturers who specialize in meeting those demands? The existence of such specialist computer manufacturers would eliminate the market-foreclosure problem facing IBM. These specialist computer manufacturers would provide the outlets which IBM needs. This takes us back to the factor of ease-of-entry at the customer (computer-manufacturer) level. If it is easy to enter computer manufacturing and if specialization in marketing OS/2 Warp machines is feasible, then the exclusionary effect of Microsoft's lump-sum licenses may be minimal. Indeed, IBM (the provider of OS/2 Warp) is itself a computer manufacturer. If the demand for OS/2 Warp-equipped machines does not exceed IBM's personal computer production capacity, then IBM itself can be the specialized vendor of OS/2 Warp-equipped personal computers. On this analysis, the restraint constituted by Microsoft's lump-sum licensing withers into insignificance.

Let us assume that specialization by vendors in OS/2 Warp machines is infeasible or inefficient. There still remains the question of whether the inherent efficiency of Microsoft's lump-sum licenses is sufficiently great to overcome their exclusionary effects. In addressing this question, we should note an aspect of the lump-sum license that differs from more conventional exclusive-supply contracts. As noted above,[83] the lump-sum license provides the customer computer manufacturers with a marginal-license-cost of zero for each machine produced. Indeed, it is this zero marginal-license-cost effect which produces the exclusion. From the licensee's perspective, however, there is another effect: In the short-run, the lump-sum licensee does not take the licensing cost into account when it responds to changes in market conditions. It has an incentive to reduce its price to meet rivals' prices or otherwise to sell more machines without the constraining effect that a per-unit license charge would impose on its

---

82. *See* GUIDELINES FOR VERTICAL RESTRAINTS, *supra* note 74, § 4.2.

83. *See supra* text accompanying note 60.

decisionmaking. Thus for the short-run, the lump-sum license is more output-enhancing than would be the per-unit charge which is normally imposed in sales of commodities. Apart from any savings to Microsoft in monitoring, the lump-sum license lowers the marginal costs of computer manufacturers, freeing them to be more responsive to the demands of the computer market. Thus, in addition to the efficiency effects of the lump-sum license, the lump-sum license enhances short-run competition in the computer-manufacturing market.[84]

E.   The Factors of Declining Average Cost and Network Externalities

The Justice Department's objections to the exclusive-supply contracts, however, lay in their longer term effects. The Department believes that these supply contracts help to exclude Microsoft's rivals — principally IBM — from outlets for their operating systems and thus help Microsoft to acquire a monopoly in the long term. More precisely, the Department believes that Microsoft already possesses a market share legally equivalent to a monopoly, and that these contracts will further strengthen that monopoly.[85] Then, after Microsoft has effectively eliminated IBM as a competitor in operating systems, the scenario proceeds, Microsoft will exploit that monopoly by restricting output and raising prices. This long term scenario, however, is subject to criticism on at least two grounds.

First, this scenario does not deal with a natural monopoly analysis. In theory, operating systems could be a natural monopoly. If they were a natural monopoly, then the exclusionary aspects of lump-sum licensing would be matters of little concern, since a single company would eventually control the market anyway. If Microsoft is to be the prevailing "natural monopolist," then maybe its present large market position is socially beneficial rather than the opposite. Thus, there is ground to believe that society will be better off if the selection of the natural monopolist occurs sooner rather than later, since an earlier selection would minimize the amount of society's assets which are ex-

---

84. In Baseman et al., *supra* note 8, at 282, the authors suggest that a lump-sum license would be inefficient because it would force licensees to operate at an inefficiently large scale. This criticism of the lump-sum license does not appear to apply to the short run, where the lump sum is a sunk cost after it is incurred. Moreover, the criticism would seem to apply even in the long run only if Microsoft set a fixed sum applicable to all licensees, maintaining it through the long-run period. If Microsoft negotiated the amount of the fee with each licensee, then the criticism would not appear to apply at all.

85. Complaint ¶¶ 15-28 & Competitive Impact Statement, United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21, 1995) (Civ. A. 94-156420).

pended in providing the service.[86] Under some circumstances, so-called "network externality" effects may reinforce the natural monopoly effects, as described below.[87]

Second, the scenario does not deal with the dynamic nature of technology. Operating systems are continually in process. At the stage of each new move to a higher-level technology, the market carries a potential for opening wider to new entrants and for presenting new opportunities to existing players. If Microsoft has been the leader during the era of the 16-bit platform, perhaps IBM will be the leader during the era of the 32-bit platform. We have no idea who will lead in the era of the 64-bit platform.

1. The Natural Monopoly Analysis

The development of operating systems, like the development of all computer programs, is an activity in which most of the costs are incurred in research and development.[88] After the program is developed, output costs are essentially zero. MS-DOS, Windows, Windows NT, and Windows 95 are systems which are reproduced electronically at minimal cost. After the program is developed and released, Microsoft's costs are primarily marketing costs: the costs of negotiating licensing agreements with computer manufacturers. It also, of course, incurs the costs of improving the program and of providing technical support to users. To the extent that monitoring is necessary, monitoring constitutes an additional cost. The costs of continuing program development are fixed costs. Technical support costs increase with output and, in a broad sense, may be considered variable. So are monitoring costs. Thus, Microsoft incurs minimal marginal costs. The cost structure of competitors, such as IBM (whose OS/2 Warp is a substitute for the MS-DOS/Windows combination, for Windows 95, and for Windows NT), is similar. Thus producers of operating systems incur large, up-front research and development costs, and minimal marginal costs.[89] The average cost is determined by dividing the research and development costs by the number of programs sold. Consequently, this industry is one in which each firm faces a continually declining average cost curve. It is, in short, a textbook case of a

---

86. *See, e.g.*, Omega Satellite Prods. Co. v. City of Indianapolis, 694 F.2d 119, 126 (7th Cir. 1982) (Posner, J.).

87. *See infra* part IV.E.2.

88. *See, e.g.*, Roger D. Blair & Amanda K. Esquibel, *The Microsoft Muddle: A Caveat*, 40 ANTITRUST BULL. 257, 259 (1995).

89. *Id.*

natural monopoly marketplace. Each firm reduces its average cost the further it expands its volume. Each sale not only enhances the seller's position by helping to reduce its average cost, but each sale also has an impact on the seller's rivals. Each sale is one which the rivals did not make and thus did not reduce the rivals' average costs.[90]

If the operating system market were a natural monopoly, unit production costs would be minimized when one firm succeeded to that monopoly. Society's resources would then be most efficiently allocated. Moreover, because of the fall in unit costs, prices to consumers might very well be lower than in a less efficient industry structure composed of competing higher-cost producers.

2. Network Externalities

Operating systems are not only subject to scale economies, but they also increase in value as they are used by more computer users. This effect is sometimes referred to as a network externality.[91] As Windows has been adopted by a large number of users, producers of applications programs have an incentive to devote their initial efforts towards Windows-compatible programs. As various versions of Windows (Windows 3.1, Windows NT, Windows 95) represent significant market shares, applications makers find less time and incentive to develop programs for non-Windows operating systems, such as OS/2 Warp. As more applications become available for use with Windows, Windows or Windows compatibility itself achieves the level of a de facto standard.

As Windows compatibility approaches the level of a de facto standard, rival operating systems face increasing pressure to achieve Windows compatibility. As pointed out below, however, the growth

---

90. Note that aggressive sales behavior in an industry in which average cost declines with output not only reduces the seller's costs, but it also raises its rivals' costs (as the rivals are compelled to operate at higher regions on their average cost curves). It is especially important in this kind of industrial setting to avoid careless references to antitrust theories concerned with "raising rivals' costs", since those theories are not meant to apply to contexts like the present one. *See supra* note 36 and accompanying text.

91. *See, e.g.*, Stan Liebowitz & Stephen E. Margolis, *Policy and Path Dependence: From Qwerty to Windows 95*, REGULATION, 1995 Number 3, at 33; S. J. Liebowitz & Stephen E. Margolis, *Path Dependence, Lock-In, and History*, 11 J.L. ECON. & ORG. 205 (1995); S. J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, J. ECON. PERSPECTIVES, Spring 1994, at 133; Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, J. ECON. PERSPECTIVES, Spring 1994, at 93. The ramifications for antitrust policy of network externalities are discussed in John E. Lopatka & William H. Page, *Microsoft, Monopolization, and Network Externalities: Some Uses and Abuses of Economic Theory in Antitrust Decision Making*, 40 ANTITRUST BULL. 317, 347-62 (1995).

of Windows-application programs does not necessarily disadvantage rival operating systems, so long as they are fully Windows-compatible. Rival systems can then compete, at least on the level that they can claim to operate Windows applications as well or better than Windows itself. The latter claim has been a mainstay of IBM's challenge to Windows 3.1.[92]

Although IBM has made its OS/2 systems compatible with Windows 3.1 applications, the relative paucity of applications programs designed specially for the OS/2 system detracts from the value of that system as a 32-bit replacement for the DOS/Windows combination.[93] The powerful 32-bit platform thus is reduced to operating 16-bit programs. This problem has now been exacerbated by the apparent inability of OS/2 Warp to run 32-bit Windows programs, thus denying OS/2 Warp users the benefit of applications programs designed for Windows 95.[94] The result is that network effects connected with Windows 95 combined with IBM's less-than-astute marketing decision to forfeit Windows 95 compatibility have strengthened Microsoft's lead over IBM in these transitional systems.

These network effects reinforce the advantage secured by the market leader from its declining average cost of production. The producer who is ahead of its rivals (1) on the declining average cost curve, and (2) on a rising curve of value created by network externalities, has advantages which are increasingly difficult for its rivals to overcome. These circumstances — present in varying degrees in the operating systems industry — have analogues elsewhere. Intel Corporation, for example, may have acquired such advantages. In the production of microprocessors, research and development (and thus fixed costs) play strong roles. Also, learning curve effects in semiconductor chip production are apparently significant.[95] The network externalities effect is also strong with respect to microprocessor production. As more personal computers are equipped with Intel microprocessors, software firms find it increasingly profitable to produce software for those chips, thus in turn increasing the attractiveness of Intel microprocessors to buyers.

---

92. Stan Miastkowski, *OS/2 2.1: A User's Perspective*, BYTE, Nov. 1993, at 97.

93. McCracken & Singh, *supra* note 14, at 146 ("OS/2 has failed to garner much support from major software developers, and its prospects are worrisome considering that most major new programs are 32-bit Windows applications, which it can't run.").

94. *Id.* at 146 (observing that OS/2 Warp cannot run 32-bit Windows applications).

95. LAURA D'ANDREA TYSON, WHO'S BASHING WHOM? TRADE CONFLICT IN HIGH-TECHNOLOGY INDUSTRIES 89 (1992). Unit production costs fall with accumulated production, primarily because experience enables the producer to find ways of lowering the defect rate.

3. Limitations of These Effects

The natural monopoly effect depends upon the relations among fixed cost, price, and volume. High fixed costs are compatible with several rival producers in an industry, as the steel and various other capital-intensive industries illustrate. Even though increases in sales volume decrease average unit cost indefinitely, the rate by which unit cost falls continually declines. At large units of output, scale economies may be largely exhausted, the effect of further sales on unit cost being minimal. Accordingly, the declining unit cost effect may not be effective to capture the entire market for the market leader, thus leaving room for rival suppliers of operating systems.

Similarly, the network externalities effect should not be exaggerated. There is a network externalities effect on the software available for IBM-compatible machines versus that available for the Macintosh. Most of the major applications programs, however, are available for both IBM-compatible and Macintosh machines and many (especially among business applications) that are available for the IBM-compatible machines are available in both Windows and OS/2 Warp versions. Apple/Macintosh commands 7.8% of the global personal computer market[96] and thus is itself an attractive market for software producers. Although OS/2 Warp and its predecessors probably command only about 10% of the IBM-compatible computer market,[97] the OS/2 family commands a sizeable segment of the major corporate-user submarket. OS/2 Warp, therefore, is also an attractive market for business applications producers and has at least the potential of becoming an attractive market for most applications producers. On the basis of existing market shares, producing Windows versions will be the first priority for applications companies.[98] But Macintosh and OS/2 Warp versions are also significant markets which can provide profits for applications producers and thus are unlikely to be ignored by them.

Although these matters of natural monopoly and network externalities (and the limitations upon these factors) de-emphasized in the scenario which superficially underlies the Justice Department's position, these matters could be relevant to an assessment of that position,

---

96. *Next Task at Apple: First Order, Then Orders*, WALL ST. J., Feb. 5, 1996, at A3.

97. Amy Cortese & Kathy Rebello, *Can Microsoft's New Software line up to Expectations*, BUSINESS WEEK, July 17, 1995, at 36.

98. MANES & ANDREWS, *supra* note 7, at 430.

as some have argued.[99] In raising these matters, the objective has not been to criticize the Department, but merely to suggest the complexity of the problem. As discussed immediately below, the Justice Department has approached the exclusivity issue with sophistication.

F. The Sophistication of the Decree

While the exclusionary effects of the lump-sum license can be debated in the manner set forth above, the Justice Department carefully structured the prohibition of the lump-sum licenses to avoid the imposition of substantial costs upon Microsoft. Microsoft is prohibited from the use of per-processor licenses but it is not compelled to issue only "per copy" licenses.[100] Per-copy licenses would exacerbate the monitoring problems which would be faced by Microsoft. Furthermore, monitoring problems are widely recognized as a chronic problem in certain intellectual property license situations. Indeed, the Justice Department itself has explicitly noted that problem in its guidelines for intellectual property licensing.[101] Rather, under the decree, Microsoft is free to issue "system" licenses, i.e., licenses for a designated model of a personal computer.[102] Since under a system license, the licensee is effectively identifying to the world (by the model name or number) a set of machines on which Microsoft operating systems have been installed, system licenses facilitate Microsoft's monitoring task. Microsoft's royalty charge, however, cannot take the form of a lump-sum payment.[103]

The Department's objective thus lays in facilitating the divisibility in the customer market which had previously been impeded by the exclusive supply contracts. Because it believes that market imperfections hindered the emergence of specialized vendors for OS/2 Warp-equipped personal computers, the equivalent divisibility is mandated in the consent decree by loosening Microsoft's hold on its customers' purchasers. This market divisibility is fostered by ensuring that each computer manufacturer is free both to purchase from Microsoft and

---

99. Lopatka & Page, *supra* note 91, at 336 (describing the contentions of the anonymous amici).

100. *See* United States v. Microsoft Corp., 159 F.R.D. 318, 324 (D.D.C.), *rev'd*, 56 F.3d 1448 (D.C. Cir. 1995); *see also* Blair & Esquibel, *supra* note 88, at 261.

101. ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY, *supra* note 81, § 4.1.2.

102. United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096, at 75,244 (D.D.C. Aug. 21, 1995) (Final Judgment ¶ IV(G)). *See also id.* at 75,243 (Final Judgment ¶ II(12)) (defining "per system license").

103. *Id.* at 75,245 (Final Judgment ¶ IV(H)).

to purchase from other suppliers as well. The Department has shown its sensitivity to the monitoring problem by explicitly permitting per-system licenses.[104] The per-system licenses will increase Microsoft's monitoring costs somewhat, but the added cost is probably minimal. Balanced against the exclusionary effect, the Department plausibly concluded that this minimal additional cost to Microsoft is outweighed by the opening of the market to rival suppliers.

On the down side, the consent decree prevents Microsoft from obtaining commitments for specified numbers of copies and eliminates the lump-sum payment technique. As observed above,[105] these features in the license introduce greater flexibility into the short-run price responsiveness of computer manufacturers. Under the decree, license charges will become part of the marginal costs of computer manufacturers and, under some circumstances, produce a reduction of output.

V. CRITICAL PATH THEORY: THE DECREE AND RELATED ISSUES

A. *The Deficiencies of Judge Sporkin's Normative Critique*

In his ruling refusing to approve the consent decree, Judge Sporkin revealed his concern about the increasing returns aspect of the operating systems market.[106] Referring to Professor Kenneth Arrow's affidavit submitted by the Government in support of the consent decree, Judge Sporkin stated:

> [T]he operating systems market is an increasing returns market. In layman's terms that means that once a company has a monopoly position, it is extremely hard to dislodge it. . . . If it is concededly difficult to open up an increasing returns market to competition once a company has obtained a monopoly position, the Government has not shown how prospectively prohibiting violative conduct that contributed to defendant's achieving its monopoly position will serve to return the market to where it should have been absent its anticompetitive practices. Simply telling a defendant to go forth and sin no more does little or nothing to address the unfair advantage it has already gained.[107]

The position articulated by Judge Sporkin carries superficial plausibility. If Microsoft, for example, has entered into exclusive-supply con-

---

104. *Id.* at 75244 (Final Judgment ¶ IV(G)).
105. *See supra* text accompanying notes 83-84.
106. United States v. Microsoft Corp., 159 F.R.D. 318, 334 (D.D.C.), *rev'd,* 56 F.3d 1448 (D.C. Cir. 1995).
107. *Id.* (footnote omitted).

tracts which conflict with antitrust norms, then it should not be allowed to benefit from those transgressions. The assumptions underlying Judge Sporkin's comments are that the antitrust laws embody well recognized norms and that breaches of those norms are properly penalized. As applied to Microsoft, if its exclusive-supply contracts breach antitrust norms, then they produce consequences which are harmful to society and to Microsoft's competitors. Judge Sporkin would, therefore, undo those breaches. He would restore both society and Microsoft's competitors to the status quo ante.

Judge Sporkin's analysis, however, is problematic in several ways. His assumption that the antitrust laws embody well recognized norms is only partially true. There is a widespread recognition that price-fixing cartels, allocation of markets among competitors, bid-rigging, and other obviously anticompetitive behavior are illegal. But, the exclusive-supply contracts entered into by Microsoft are not necessarily unlawful. They have efficiency justifications. It is not immediately apparent why IBM's computer manufacturing division may not provide the needed outlet for IBM's operating system. This is not to say that Microsoft's exclusive-supply agreements are necessarily lawful, either. We are in an area in which there are plausible arguments to be made on both sides. We do not know how a court would rule on their lawfulness. When Microsoft and the Justice Department reached agreement on the consent decree, a troublesome issue was resolved. Microsoft agreed to a prospective prohibition on per-processor royalties.[108] However, it did not thereby agree that it had violated the law in the past.

Indeed, one of the troublesome aspects of the Sherman Act is that it is an open-textured statute, intentionally written by Congress to be open to development by the courts,[109] and yet it is open to application as if the norms formulated only today have always been in effect. This aspect of the Sherman Act is most troublesome in private actions where plaintiffs recover treble damages, sometimes for conduct which was widely believed to be lawful at the time it was performed. From this perspective, the Federal Trade Commission Act is better structured.[110] There, as in the Sherman Act, Congress openly admitted that it was leaving to case-by-case adjudication the task of determin-

---

108. United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71096, at 75,244 (D.D.C. Aug. 21, 1995) (Final Judgment ¶¶ IV(C), Final Judgment IV(G)).

109. *See* RICHARD A. POSNER, THE FEDERAL COURTS: CRISIS AND REFORM 278, 288 (1985).

110. The Federal Trade Commission Act authorizes the Federal Trade Commission to issue cease-and-desist orders against unfair methods of competition and unfair and deceptive acts or practices. 15 U.S.C. § 45 (1994).

ing the content of vaguely worded prohibitions.[111] However, contrary
to the Sherman Act, the Federal Trade Commission Act does not pro-
vide private parties an opportunity to collect damages,[112] and the Act
itself operates entirely prospectively.

Thus, when we acknowledge that the unlawfulness of Microsoft's
behavior is being determined at the time of the consent decree, that its
effective characterization in the decree as unlawful is prospective only,
and even that prospective characterization takes place with the agree-
ment of Microsoft itself, the assumption underlying Judge Sporkin's
remarks — that the behavior transgressed preexisting norms — is
seen as unfounded. This analysis merely recognizes the uncertainty
which permeates antitrust law at its boundaries. In addition, it also
recognizes the difficult task which the enforcement authorities per-
form. They must attempt to discern differences between socially effi-
cient and socially inefficient behavior — differences which, as applied,
often are perplexing even to skilled practitioners. Furthermore, they
have to do their utmost to ensure compliance with these newly deter-
mined behavioral standards.

Judge Sporkin's reference to "the unfair advantage [Microsoft]
has already gained"[113] thus oversimplifies the process of norm formu-
lation. He gives no attention to the fact that the application of the
norms embodied in the consent decree was negotiated.[114] Moreover,
Judge Sporkin assumes that if the antitrust laws are determined today
to bar Microsoft's exclusive-supply contracts, then the prohibition
must have always existed. Microsoft's advantages gained from the ex-
clusive supply contracts are "unfair" only if they violated the rules by
which it and its rivals played. But if those rules were indeterminate,
then it is difficult to maintain that Microsoft's advantages were
"unfair."

Finally, Judge Sporkin gives no attention at all to the ramifica-
tions of his approach on the deterrence of socially beneficial behavior.
To undo the "advantages" which Microsoft may have gained through
behavior not patently prohibited by the antitrust laws when per-
formed, might send a message to many other business firms to avoid
all behavior at the margins of antitrust prohibitions. Otherwise, the

---

111. *See* H.R. REP. No. 1142, 63d Cong., 2d Sess. 19 (1914), *reprinted in* 5 FTC, THE LEGIS-
LATIVE HISTORY OF THE FEDERAL ANTITRUST LAWS AND RELATED STATUTES 4680, 4694 (Earl
W. Kintner ed., 1982).

112. *See, e.g.,* American Airlines v. Christensen, 967 F.2d 410, 414 (10th Cir. 1992).

113. United States v. Microsoft Corp., 159 F.R.D. 318, 334 (D.D.C.), *rev'd,* 56 F.3d 1448
(D.C. Cir. 1995).

114. *Id.* at 324.

behavior of business firms may be undone by the courts years later, with untoward costs. As a result, socially beneficial behavior would be deterred. Society would then be the loser.

B. The General Inadequacy of Path Dependence Theory as a Basis for Judicial Restructuring

1. The Theory

Critics other than Judge Sporkin have been troubled by the particular characteristics of the operating systems industry. Employing the network externalities effect with critical path theory, they have formulated a special critique of Microsoft.[115] They argue that as a company providing an operating system (such as Microsoft) expands its sales, that company's product becomes increasingly attractive to customers. As a result, rival operating systems will increasingly lose their attractiveness because of the network effect. For example, as more people use Windows, Windows grows in value because the large number of Windows systems outstanding, in turn, generates more Windows-compatible applications.[116] These so-called network effects increase as more computer users adopt Microsoft operating systems. Thus, Microsoft is proceeding down a "critical path" in which its product is increasingly more attractive to potential buyers, just because it is used by so many others. The company which is furthest along on this critical path to success has an advantage over rivals which becomes ever-more difficult for rivals to overcome.

The critical path theory underlying this analysis was originally developed by Stanford University Professor Brian Arthur in the late 1980s.[117] The theory is concerned with how small and even accidental events may determine later history. As applied to Microsoft, the theory uses network externalities which puts an early leader, such as

---

115. *See* GARY REBACK ET AL., (WILSON, SONSINI, GOODRICH & ROSATI), WHITE PAPER: TECHNOLOGICAL, ECONOMIC AND LEGAL PERSPECTIVES REGARDING MICROSOFT'S BUSINESS STRATEGY IN LIGHT OF THE PROPOSED ACQUISITION OF INTUIT, INC., pt. IV (Nov. 14, 1994) [hereinafter WHITE PAPER] (originally on the Internet, on file with author) (Economic Evaluation).

116. This critique of Microsoft was incorporated in the Government's Complaint. Complaint ¶ 17, United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21, 1995) (Civ. A. 94-156420). The "network externalities" theory underlying this critique figured prominently in the brief submitted to Judge Sporkin on behalf of anonymous amici. *See* Lopatka & Page, *supra* note 94, at 336.

117. W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 ECON. J. 116 (1989); W. Brian Arthur, *Positive Feedbacks in the Economy*, SCI. AM., Feb. 1990, at 92.

Microsoft, on a track — or critical path — in which marketing success breeds further success in the manner described above.

These observers thus posit that a single operating system is likely to emerge as the de facto standard as a result of these network effects and critical path theory. There is, of course, a value in standardization. Standardization allows different manufacturers to provide parts and supplies to owners of various brands of equipment. In the world of computer software, standardization of operating systems reduces the costs of applications suppliers and facilitates communication among users by allowing one person's files to be run on another's machine. Moreover, it enables offices to establish in-house networks, facilitating communication among units.

The problem these observers identify is not the emergence of a single operating system as a standard. Rather, it is that the resulting operating system may not be the best of the available systems. Thus IBM's OS/2 Warp may be a technically superior system, yet network effects may advantage Windows 95 over OS/2 Warp, with the result that Windows 95 becomes the de facto standard.

2. Application of the Theory to Microsoft

Microsoft critics who employ the language of path dependence often de-emphasize Microsoft's contributions in the way of imagination, marketing skill, product development, and programming know-how to its present dominant position in the software industry.[118] Rather, using path dependence language to invoke the notion that merely trivial or accidental events may control later events, the critics point to certain events in the late 1970s and early 1980s as setting Microsoft on the path to dominance: (1) Microsoft's acquisition of QDOS, a clone of Digital Research's CP/M 8-bit operating system;[119] and (2) IBM's selection of Microsoft as an operating systems supplier for the original IBM personal computer. These events are depicted as trivial or accidental occurrences which are responsible for Microsoft's success.

It is clear these events played a significant role in Microsoft's success. Yet what these critics tend to deemphasize are other major contributing causes to Microsoft's success, many or most of which are properly attributable to Microsoft's own imagination, shrewd business behavior, and astute marketing. Thus, the critics seldom mention that,

---

118. *See* REBACK ET AL., *supra* note 115, pt. IV (Economic Evaluation).
119. *See* Lopatka & Page, *supra* note 91, at 322.

first, when IBM needed a commitment for an operating system for its personal computer, Microsoft made such a system available — no small feat, given the state of the software industry at the time. In providing the needed operating system, Microsoft stepped in where Digital Research (which was then working on a 16-bit operating system) was unable to commit to providing such a system within IBM's required timeframe. Within that timeframe, Microsoft located a suitable system, secured rights to it, and adapted the system to the IBM personal computer.[120]

Second, the original version of the IBM personal computer was shipped with a choice of three operating systems: the Microsoft system, CP/M-86, and the USCD Pascal P-System.[121] The agreement between Microsoft and IBM provided IBM with rights to market MS-DOS with its machines for a one-time fee.[122] This provided IBM with an incentive to sell MS-DOS to buyers of its personal computers at a substantially lower price than the alternative operating systems. As a result, most buyers opted for MS-DOS. MS-DOS then rapidly became the standard for all IBM-compatible personal computers. The point here is that it was the low prices to the ultimate consumers which induced them to opt for MS-DOS over alternative systems. According to Bill Gates,[123] Microsoft's president, this was shrewd marketing strategy. By providing IBM with an incentive to promote MS-DOS and thus ensure its widespread use, Microsoft was able to market MS-DOS to independent producers of IBM-compatible machines. In so doing, of course, Microsoft was exploiting "network externalities" that were created by IBM's promotion of MS-DOS. Yet it was no "trivial event" or "accident" that pushed the adoption of Microsoft operating systems. Rather, in this particular instance, it was Microsoft's astute marketing. It was, moreover, astute marketing

120. In 1980, Digital Research was working on a 16-bit version of its 8-bit CP/M operating system. The development of the 16-bit version, the CP/M-86, was beset with substantial delays in completing that project. MANES & ANDREWS, *supra* note 7, at 154-56. It appears that IBM would have gone with the CP/M-86 had Digital Research been able and willing to commit to IBM's time frame. *Id.* at 156. Digital Research's delays afforded Microsoft an opportunity to supply an operating system to IBM for its personal computer. Seattle Computer (through its Tim Patterson) developed a rudimentary CP/M clone (QDOS, later marketed as 86-DOS) which would operate on a 16-bit platform. Microsoft secured rights to 86-DOS from Seattle Computer, which it then adapted to the IBM personal computer. *Id.* at 168-70. After first securing a license for 86-DOS, Microsoft later purchased 86-DOS outright from Seattle Computer. *Id.* at 174-75.

121. GATES, *supra* note 13, at 48-49.

122. MANES & ANDREWS, *supra* note 7, at 162; GATES, *supra* note 13, at 48-49.

123. GATES, *supra* note 13, at 49.

which provided the public with a high quality operating system at a lower price than alternative operating systems.

Third, Microsoft also provided a graphic user interface for IBM-compatible personal computers ("Windows") when one was needed. Microsoft did not originate the graphic user interface. Xerox had done that with the Xerox "Star," a technological marvel but uneconomically priced and limited in its performance capabilities.[124] Apple had developed a graphic user interface for its unsuccessful "Lisa" and its successful "Macintosh," and Apple's technology was used to a significant degree by Microsoft in its Windows system.[125] But while other companies originated the technology, Microsoft brought it into play and succeeded in the market. Apple did not meet the pent-up demand for a graphical user interface for IBM-compatible personal computers because it kept the technology for Apple machines. Indeed, Apple failed to exploit the Macintosh itself, by refusing to license clones. Microsoft's adaption of a graphical user interface for IBM-compatible personal computers met that demand. When Windows was introduced, other companies were offering competing products. IBM, for example, was offering its "Topview," a character-based windows and multitasking system.[126] But Windows ultimately prevailed in competition with these rival systems.

Fourth, Microsoft is currently leading the transition from a 16-bit platform standard to a 32-bit standard in its Windows 95, thus again offering consumers a product which meets a recognized need. IBM, which had earlier introduced its own 32-bit platform in its OS/2 2.0, 2.1 and OS/2 Warp operating systems, had not neglected the problem of transition, but because it had not yet succeeded in capturing a major share of the nonbusiness market, its contribution to moving consumers from the 16-bit platform to a 32-bit platform has been limited. IBM recognized the transitional problem by making its OS/2 2.0, 2.1 and OS/2 Warp systems compatible with Windows 3.0 and 3.1 applications. Yet despite the backward compatibility of these systems,[127] they have not, as yet, succeeded in capturing a major segment of the consumer market. Indeed, IBM was not able to make a major breakthrough into the consumer market during the nine months between

---

124. MANES & ANDREWS, *supra* note 7, at 182.

125. *Id.* at 291-93.

126. *Id.* at 266-67.

127. Although OS/2 2.1 was a powerful 32-bit system, one critic observed that it ran 16-bit programs more slowly than Windows 3.1. Consumers with a base of 16-bit programs thus might decide not to move to a 32-bit system immediately. Udell, *supra* note 17, at 85.

the introduction of OS/2 Warp in October 1994 and Microsoft's intro-
duction, in August 1995, of its own transitional system in Windows 95.

Until recently widespread consumer appreciation of the potential
benefits of a 32-bit system has been largely lacking. Microsoft's intro-
duction and promotion of Windows 95 have raised the level of con-
sumer awareness about the benefits of 32-bit systems. Thus some of
the consumer inertia in moving to a 32-bit system — which has ham-
pered IBM's sales of OS/2 Warp — may be eroding, due in part to the
promotional efforts of Microsoft itself. Conversely, however, IBM
may be making a strategic marketing mistake in so far failing to make
OS/2 Warp compatible with Windows 95 applications. As noted
above, IBM has previously been sensitive to the transitional problem:
OS/2 Warp and earlier OS/2 versions were made compatible with
Windows 3.0 and 3.1 applications. With Microsoft's introduction of
Windows 95, it is no longer adequate for OS/2 Warp to run Windows
3.1 programs: It must run Windows 95 programs as well.[128]

If Windows 95 prevails over its competition, there will be strong
grounds for believing that its success can be attributed to the better
ability of Microsoft to judge the market, and to design an operating
system which conforms to prevailing felt needs of consumers at the
time of its introduction. Incompatibility between OS/2 Warp and
Windows 95 programs is likely to impede the sale of the former.
Microsoft's success so far and its potential for further success appear
due to its high quality product, its superior marketing and timing,
combined with some strategic mistakes by its principal rival.

The several events referred to above do not constitute an exhaus-
tive list of the various ways in which Microsoft has met consumer
needs that were either unmet or met less well in rival products. Its
current success is also due to continuous work in improving and up-
grading its products. Thus, while IBM's selection of Microsoft as the
supplier of an operating system for the original IBM personal com-
puter was an important factor in Microsoft's success, that was not the
only factor. Indeed, the selection of Microsoft as the provider of that
operating system itself was not the product of chance, but of
Microsoft's ability to provide a needed good at a crucial time.[129] Criti-
cal factors in Microsoft's success have been its own creative contribu-
tions to product development and improvement as well as astute
marketing. It is thus false to attribute Microsoft's success to the kind
of "trivial" or "accidental" events that critical path theory shows can

---

128. Jon Udell, *Why IBM Should License Win32*, BYTE, Sept. 1994, at 278.
129. *See supra* text accompanying notes 119-122.

affect later results. Critical path theory also shows that major events can shape the critical path and the position of particular firms on that path.

C. *Changes in Technology*

1. The Impact of Technological Change Upon the Critical Path

When major technical changes are made, rivals who have lagged behind the leader often have the opportunity to start the race anew. For example, when networking became technologically feasible, the market opened to providers of networking. Novell Inc., at that time, seized the opportunities made available by developing technology, outpacing both Microsoft and IBM.[130]

The industry is presently in the process of moving from a 16-bit platform to a 32-bit platform. This shift in technology provides a broad opportunity for providers of operating systems geared to a 32-bit platform. Windows 95 and Windows NT both operate on a 32-bit platform; so does IBM's OS/2 Warp. As noted above, when OS/2 Warp and its 32-bit OS/2 predecessors were introduced, the nonbusiness public was largely unaware of the advantages of a 32-bit operating system. This impediment may be in the process of disappearing, as the very marketing of Windows 95 itself generates a widespread awareness of the potential benefits of such a system. Microsoft — astute marketer as ever — is attempting to use Windows 95 as a transitional system to wean users away from an earlier 16-megabyte MS-DOS/Windows system ultimately to its own 32-bit Windows NT system through the sophisticated transitional Windows 95. Microsoft can be seen as leveraging the popularity of its Windows system to sell Windows 95. But that leveraging is not leveraging economic power. It is purely shrewd marketing.

Computer users who understand that the industry is moving to a 32-bit operating system platform understand that Windows 95 is a transitional system. They will or will not adopt Windows 95 on its short-term merits. Indeed, they may choose instead to bypass Windows 95 and to install a full nontransitional 32-bit operating system immediately in the form of IBM's OS/2 Warp or (if they have the requisite RAM at their disposal) Microsoft's NT. In any event, the movement to a new 32-bit standard has a potential market-opening effect. So long as IBM's 32-bit operating system is backwards compat-

---

130. MANES & ANDREWS, *supra* note 7, at 268.

ible with Windows 3.1 applications programs (and runs those pro-
grams as well as Windows 95), there is no a priori reason why the
Microsoft system will become the new industry standard. Under those
conditions, both OS/2 Warp and Windows 95 start afresh.

Suppose, however, that the very success of the earlier Windows
3.1, combined with the favorable reviews of Windows 95, impels appli-
cations producers en masse to develop many new 32-bit Windows ap-
plications, thus engendering a network-effects advantage for Windows
95. It is then open to IBM, in these circumstances, to introduce Win-
dows 95 compatibility into its OS/2 Warp system, thus canceling that
network-effects advantage. Were IBM to introduce that compatibil-
ity, OS/2 Warp would again be in the running. Its eventual market
share would depend upon how successful IBM was at convincing users
of the relative technical advantages of its own system over that of
Microsoft's. Indeed, since the Justice Department has successfully
opened the computer-manufacturer market to Microsoft rivals,[131] an
OS/2 Warp with Windows 95 compatibility could aspire to become an
original-equipment option on non-IBM brand machines (as well as on
IBM-brand machines), a development which could significantly in-
crease OS/2 Warp's market share. In short, each time that the indus-
try takes a major technological step forward — as it is now doing in
moving from a 16-bit platform to a 32-bit platform — the market
opens wider to the provider with the best technology (and the best
marketing). Even when the preexisting leader's reputation generates
network effects for its own version of the new technology (as may be
occurring in the case of Windows 95), its rivals nonetheless may offset
those network advantages by making their own products compatible
with the leader's. Microsoft, as the industry leader, nonetheless re-
tains advantages. Microsoft's continuing large market share (in an in-
dustry in which most costs lay in research and development) means
that its unit costs are lower than that of IBM's. Its large market share
means that it can distribute its advertising costs over a larger volume
of sales. Yet these advantages are not disabling to a determined and
resourceful challenger such as IBM.

The network effects, such as large accumulations of software ap-
plications by users — turn out to be illusory in substantial part. So
long as Windows compatibility is open to rival systems, these systems
do not incur a critical disadvantage. Accumulations of Windows ap-
plications are not an a priori reason for a purchaser to select a Win-

---

131. United States v. Microsoft Corp., 1995-2 Trade Cas. (CCH) ¶ 71,096 (D.D.C. Aug. 21, 1995) (Final Judgment).

dows system, if other systems will run those applications. Moreover, existing applications software will soon be obsolete, regardless of which operating system predominates. Most applications programs are in a continuous state of development themselves. Furthermore, this normal scenario of periodic technological obsolescence will be accelerated as most applications programs will be redone to take advantage of the 32-bit platform. Second, IBM can dissipate any advantage that Microsoft might possess from the existing software applications base and from new base of 32-bit Windows applications by making OS/2 Warp with interfaces for both Windows 95 and Windows 3.1, so that it will run applications systems designed for both Windows systems. Third, as an antitrust matter, the accumulated software base for Windows should be largely irrelevant. The accumulated software base is an advantage to Microsoft only insofar as Microsoft is able to persuade new users that the accumulated software base designed for Microsoft's 16-bit platform (which is likely to become rapidly obsolete) is a reason for adopting Microsoft's 32-bit platform. If all systems are Windows compatible, Microsoft's persuasive efforts will fall flat. There is no "market power" in any traditional sense of the term involved in this effort of persuasion. This is pure marketing. IBM is perfectly capable of countering Microsoft's persuasive efforts. Indeed, by introducing full compatibility with Windows 95 as well as with Windows 3.1, IBM can neutralize any advantage otherwise conferred upon Microsoft as a result of large bases of Windows-compatible applications. Clearly the antitrust laws should not become involved in a promotional contest between Microsoft and IBM.

2. Moving from One Level of Technology to Another

Prior to 1981, when the original IBM personal computer was introduced, most personal computers operated with an 8-bit microprocessor.[132] IBM's initial offering in the personal computer market used an Intel 8088 16-bit microprocessor.[133] When the IBM personal computer succeeded commercially, it brought the personal computer industry to a new and higher level of technology.[134] This technological shift, however, required an operating system geared to the new and more powerful microprocessor. Microsoft, participating in this technological transition, provided such a operating system. It did so by modifying a product which it had purchased from another

---

132. *See* GATES, *supra* note 13, at 48.
133. GATES, *supra* note 13, at 48; MANES & ANDREWS, *supra* note 7, at 153.
134. *See* MANES & ANDREWS, *supra* note 7, at 152-53; *see also* GATES, *supra* note 13, at 48.

company.[135] When IBM first marketed its new personal computer, it offered customers a choice of operating systems for its personal computer, only one of which was supplied by Microsoft. Microsoft rapidly became the standard, however, because its MS-DOS was priced substantially lower than the rival systems.[136] In short, Microsoft — along with IBM and Intel — played a significant role in assisting the personal computer industry to move from an 8-bit platform to a 16-bit platform.

Another later technological advancement occurred when the industry moved from typewritten commands to graphic user interfaces. In the 1980s, Xerox and Apple had developed graphic user interfaces for their commercially unsuccessful Xerox "Star" and Apple "Lisa" personal computers.[137] Subsequently, in 1984, Apple introduced the highly successful Macintosh line of personal computers, all of which employed a graphic user interface of the type earlier employed in the Lisa. This user interface employed a series of images (or "icons") as tools through which users selected the programs which they wished to operate. Microsoft, under a license from Apple, then developed a graphic user interface for IBM-compatible personal computers, which it named "Windows." At the time of the introduction of Windows, Microsoft was faced with competition from other developers. An important rival was IBM's character-based windows called "Topview."[138]

Windows, however, triumphed in the market. Initially shipped in 1985, Windows attained widespread acceptance with version 3.1. Within two years of its introduction in April, 1991, over 35% of all personal computers shipped (including non-IBM-compatible personal computers) were equipped with Windows.[139] Providers of applications programs rapidly generated Windows versions of those programs. Soon Windows became a de facto standard user interface. By the early 1990s, most IBM-compatible personal computers ran on MS-DOS as their operating system, and employed Windows as an MS-DOS overlay providing a user-friendly graphic user interface.

What is noteworthy about these events is that IBM-compatible personal computers needed a graphical user interface to meet the needs of consumers for easy operation. That need became apparent

135. *See supra* note 120 and accompanying text; *see also* GATES, *supra* note 13, at 48-49; MANES & ANDREWS, *supra* note 7, at 157-63.

136. *See supra* text accompanying note 127; *see also* GATES *supra* note 13, at 49.

137. MANES & ANDREWS, *supra* note 7, at 182-83; GATES, *supra* note 13, at 53.

138. MANES & ANDREWS, *supra* note 7, at 266-67.

139. *See* Baseman et al., *supra* note 8, at 273 (reporting the underlying figures).

when Apple developed the Lisa and Macintosh user interfaces. Apple, however, made no attempt to expand its successful Macintosh systems to the IBM-compatible sector of the market. And by refusing to license others to manufacture its hardware, Apple ensured that the Macintosh operating system would be available only on Apple-manufactured machines. These decisions both limited the reach of the Macintosh operating system and did nothing to alleviate the need in the IBM-compatible sector for a graphic user interface. Microsoft met this need by providing the public, through its new Windows program, the new capability it needed. Most applications providers were able to provide Windows' versions of their software. By providing Windows as a DOS overlay, Microsoft was able to smooth the transition from a purely MS-DOS based system to a more user-friendly combined MS-DOS/Windows system.

The personal computer marketplace is presently in another transition. It is in the process of moving from a 16-bit platform to a 32-bit platform.[140] MS-DOS was an operating system which was geared to a 16-bit platform. IBM introduced a 32-bit operating system in its OS/2 2.0, 2.1 and OS/2 Warp, and Microsoft responded with its own 32-bit system, Windows NT. So far, however, neither the OS/2 systems nor Windows NT has obtained a major share of the nonbusiness market.

Microsoft's "Windows 95" is a transitional program designed to overcome consumer reluctance to move to a 32-bit platform. Windows 95 requires only 8 megabytes of RAM to perform well and will operate with 4 megabytes of RAM.[141] Windows 95 thus enables computer users easily to switch to a 32-bit platform as they replace their existing equipment with current off-the-shelf hardware, almost all of which currently bears a minimum of 8 megabytes of RAM. Ultimately, as more powerful hardware comes on line, Microsoft probably hopes that Windows NT will become the standard operating system. Note, however, what Microsoft is doing with Windows 95; it is facilitating the movement of personal computer users and their suppliers from a 16-bit platform to a 32-bit platform. Computer users as well as applications providers can move gradually through Windows 95. Computer manufacturers can gradually increase the power of their machines and gradually increase the amount of RAM which they routinely install. A sudden general switch to a 32-bit platform would be difficult for computer users and their suppliers alike. IBM's OS/2 Warp initially failed to make major inroads against Microsoft in the

---

140. *See supra* part IV.C.1.
141. *See* Diehl, *supra* note 20.

consumer market because consumers did not initially appreciate the
advantages of a 32-bit system. With its Windows 95, Microsoft has
done something which IBM has failed to do; it is providing a bridge to
a full 32-bit platform.

VI. Is this Leveraging or Facilitating?

Critics of Microsoft complain that Microsoft has "leveraged" its
position in MS-DOS to sell Windows.[142] Similar arguments can be
constructed alleging that Microsoft has leveraged its position in Win-
dows to sell Windows 95. That is perhaps true. However, there are
various ways to describe developments in personal computer operat-
ing systems. As suggested in the preceding paragraphs, Microsoft has
facilitated the movement of personal computer users and their suppli-
ers from an 8-bit platform standard to a 16-bit platform standard.[143]
It has facilitated another transition from a verbally-based user inter-
face to a graphic user interface standard. Currently, Microsoft —
through Windows 95 — is facilitating a transition from a 16-bit plat-
form to a 32-bit platform.

When it is said that Microsoft is leveraging its position in one
software segment to advance its position in another, those statements
reflect two realities, only one of which is generally emphasized. Of
course, when Microsoft markets Windows 95, it stresses Windows 95's
compatibility with applications programs which have been designed
for preexisting versions of Windows, such as Windows 3.1. This com-
patibility is good for Microsoft because it aids the sales of Windows
95. But it aids the sales of Windows 95 precisely because consumers
want their transitional operating system to run their current inventory
of applications programs. In this instance (as in others), Microsoft has
benefitted itself by providing a service desired by consumers. This is
an example of a market operating as we expect it to operate.

VII. Microsoft's Acquisition of Intuit

In 1994 Microsoft entered into a merger agreement with Intuit,
the producer of Quicken, the most successful application program for
financial planning. During 1994, Quicken was the most popular of the
financial planning software programs, occupying about 70% of the fi-

---

142. *See* REBACK ET AL., *supra* note 115, pt. III(B).

143. *See supra* text accompanying notes 134-136.

nancial planning software market.[144] Microsoft's own competing "Money" program was the runner-up with about 22% of the market.[145] In order not to run afoul of the antitrust laws governing horizontal acquisitions, however, Microsoft offered to divest itself of most of Money's assets by transfer to Novell. As a result, Microsoft would own Quicken, Novell would own Money, and they would continue to be in competition.

A. The Justice Department's Opposition to the Microsoft/Intuit Merger

After significant pressures upon the Justice Department exerted by Microsoft's competitors,[146] several United States Senators,[147] and public expression of concern by the banking industry,[148] the Department decided to challenge the Microsoft/Intuit merger. As a result of Justice Department opposition, Microsoft and Intuit called off their planned merger.[149] Microsoft also canceled its planned transfer of "Money" assets to Novell.

The rationale for the Justice Department's challenge to the Microsoft/Intuit merger was not immediately clear. Assistant Attorney General Anne Bingaman explained the Department's opposition as follows:

> Allowing Microsoft to buy a dominant position in this highly concentrated market would likely result in higher prices for consumers who want to buy personal finance software and would cause those buyers to miss out on the huge benefits from innovation," . . . .
>
> "Moreover, Microsoft's control of that market will give it a cornerstone asset that could be used with its existing dominant position in operating systems for personal computers to seize control of the markets of the future, including PC-based home banking."[150]

The basis for the Department's opposition to Microsoft "buying" Intuit's "dominant position" needs further explanation. No new domi-

---

144. *Merger Raises Division Concerns in Personal Finance Software Market*, 68 Antitrust & Trade Reg. Rep. (BNA) No. 1711, at 581 (May 4, 1995) [hereinafter *Merger Raises Division Concerns*].

145. *Id.*

146. *See* REBACK ET AL., *supra* note 115.

147. Senators Howard Metzenbaum, Paul Simon, and Edward Kennedy wrote Anne Bingaman, asking that the Justice Department look more closely into the longer-term implications of the merger. COMPUTERWORLD, Dec. 5, 1994, at 8.

148. Terence P. Pare, *Why the Banks Lined Up Against Gates*, FORTUNE, May 29, 1995, at 18.

149. *Microsoft and Intuit Abandon Merger Challenged by Division*, 68 Antitrust & Trade Reg. Rep. (BNA) No. 1714, at 672 (May 25, 1995).

150. *Merger Raises Division Concerns*, *supra* note 144, at 581.

nant position results from the Microsoft/Intuit merger. Intuit's Quicken already has a dominant position, with its 70% share of the financial planning market. Whether Quicken is owned by Intuit or by Microsoft does not change that 70% share. The Department perhaps thinks that a 70% share owned by Microsoft is more dangerous than a 70% share owned by Intuit. If that is the Department's position, then the public needs an explanation. Does the Department believe that Microsoft's greater wealth makes its ownership of Quicken more of a threat to competition than Intuit's ownership? Anne Bingaman reportedly stated that the transfer of Money and related assets to Novell would not fix the problem of reduced competition because Novell could never match Microsoft's financial might.[151] Such a statement, if made, sounds much like the "deep pocket" antitrust analysis of the 1960s, which became formalized in the doctrine of "entrenchment." Is the Justice Department's challenge to the Microsoft/Intuit merger a disinterring of these older — and, some would say, archaic — doctrines, doctrines long believed to have been abandoned years ago?[152]

B. Entrenchment and Related Doctrines

Back in the 1960s, the Supreme Court once believed that the acquisition of a dominant firm in an industry by an especially wealthy acquiring corporation was likely to "entrench" the dominant firm further into its position of dominance. The apparent rationale was that the addition of wealth to a position of dominance would make the dominant firm a stronger competitor than it already was. Justice Douglas expressed this view in his opinion condemning Procter & Gamble's acquisition of Clorox.[153] In his opinion for the Court, Douglas expressed the view that the addition of Procter & Gamble's resources to Clorox, the dominant firm in the bleach industry (with

---

151. Don Clark & Viveca Novak, *U.S. Files Antitrust Suit to Stop Microsoft From Its $2.1 Billion Acquisition of Intuit*, WALL ST. J., Apr. 28, 1995, at A3, A6.

152. The Justice Department abandoned the entrenchment doctrine when it issued its 1982 merger guidelines. *See, e.g.*, E. Thomas Sullivan, *The Antitrust Division as a Regulatory Agency: An Enforcement Policy in Transition*, 64 WASH. U. L.Q. 997, 1028 (1986); Joseph P. Bauer, *Government Enforcement Policy of Section 7 of the Clayton Act: Carte Blanche for Conglomerate Mergers?*, 71 CAL. L. REV. 348, 369 (1983) (noting the omission of entrenchment as a factor in evaluating mergers under the 1982 guidelines). Commenting upon the 1968 merger guidelines' inclusion of the entrenchment doctrine, Donald Turner (under whose supervision the 1968 guidelines had been issued) stated that those guidelines "were on much shakier ground, to say the least, in their concern with . . . so-called entrenchment." Donald F. Turner, *Observations on the New Merger Guidelines and the 1968 Merger Guidelines*, 51 ANTITRUST L.J. 307, 307 (1982). *Accord* Donald F. Turner, *The Durability, Relevance, and Future of American Antitrust Policy*, 75 CAL. L. REV. 797, 807 (1987).

153. FTC v. Procter & Gamble Co., 386 U.S. 568, 579 (1967).

48.8% of national bleach sales), would be likely to dissuade Clorox's rivals from competing aggressively.[154] According to Douglas, smaller rivals would become more cautious in competing because Clorox's ability to retaliate would be strengthened by the addition of Procter & Gamble's resources.[155] Since the 1960s, antitrust observers have identified serious problems with entrenchment as a factor for evaluating a merger. A serious drawback is that "entrenchment" would invalidate a merger which was efficient, thereby enlisting the antitrust laws in a misallocation of society's assets. It is also difficult to see how the wealth of a firm can become the basis for barring its acquisition of a business through purchase but not through internal expansion. The analysis which makes this distinction must assume that the resources of the acquiring firm would be employed anticompetitively in the former situation but not in the latter. These problematic aspects of the doctrine were responsible for its demise. When the Justice Department issued its 1982 merger guidelines, it dropped all reference to entrenchment.[156] Few judicial decisions have employed entrenchment analysis since the mid 1970s.[157] Until the recent Microsoft investigation, the enforcement agencies have also ignored the doctrine.[158]

Another possibility is that the Department believes that Microsoft could exploit Quicken's potential more effectively than Intuit because Microsoft possesses other software capabilities which, when combined with the Quicken software, would enhance Quicken's position, possibly further expanding its already large market share. Such a view would be a version of the entrenchment doctrine, although at a more sophisticated level. Here, it is not merely the addition of wealth, as in a deep-pocket version of entrenchment, but the addition of other resources possessed by the acquiring company. This version of entrenchment was also incorporated in the Court's opinion in *FTC v. Procter & Gamble Co.*[159] There, in addition to his focus upon Procter & Gamble's wealth, Justice Douglas wrote that Procter & Gamble's ability to garner advertising discounts from the media

---

154. *Id.* at 578-79.

155. *Id.*

156. *See supra* note 152.

157. *See, e.g.*, John DeQ. Briggs, *Mergers and Acquisitions: An Outline of General Principles, Current Enforcement Practices, and Recent Contested Cases*, 56 ANTITRUST L.J. 675, 699 (1988).

158. In 1983, Donald Baker and William Blumenthal described the omission of entrenchment and reciprocity analysis in the then recently issued 1982 merger guidelines as "accurately reflecting the unwillingness of several successive administrations to bring such cases." Donald I. Baker & William Blumenthal, *The 1982 Guidelines and Preexisting Law*, 71 CAL. L. REV. 311, 339 (1983).

159. 386 U.S. 568, 573 (1967).

was the kind of resource which, when added to Clorox's powerful position, would help to dissuade others from entering the bleach industry.[160]

C. The Purchasing-Market-Share Objection

One objection to Microsoft's acquisition of Intuit relates to the combination of Quicken's large installed base with Microsoft's complementary assets. The concern may be that access to this larger base would facilitate Microsoft's ability to offer upgrades enhanced with bill-paying capabilities or upgrades which were otherwise enhanced with complementary Microsoft products. The model underlying this scenario is the Microsoft Office, which combines wordprocessing (Microsoft Word for Windows 6.0), spreadsheet (Microsoft Excel), electronic mail (Microsoft Mail), database management (Access), presentations (PowerPoint), project management (Project), and calendaring (Schedule+). The "bundle" of programs is especially attractive to users, since it heightens their productivity, often beyond the sum of what each program could accomplish by itself. Moreover, the bundle sells for a price significantly less than the sum of the prices of the individual programs. Other companies offer similar office "suites," such as the "Lotus Smart Suite" and "Wordperfect Office."

Following the example of the Microsoft Office, Microsoft might combine Quicken in a bundle with its Office or in a bundle designed for home applications, thereby enhancing Quicken's attractiveness and further enlarging its market share. By bundling Quicken with other software, Microsoft may be providing new value to consumers, and by creating new bundles, consumers may incur lower out-of-pocket costs for software values. A recent commentary in Fortune magazine suggested that many banking institutions were concerned about Microsoft's acquisition of Quicken, because they saw it as facilitating Microsoft's entry into the provision of banking services.[161] With time, Microsoft would make use of its complementary capabilities in electronic mail, bank clearinghouse business, and banking software. Ultimately, as the Fortune commentary put it, "[b]anks, at least for cybersurfers, would become what they really are anyway: providers of commodity services, doomed to compete on price."[162]

Microsoft's potential threat to banks — like its potential threat to rivals elsewhere — seems to be a threat based on the provision of

---

160. *Id.* at 579.
161. Pare, *supra* note 148, at 18.
162. *Id.*

greater value at lower prices. This sounds like greater competition for banks. Microsoft, of course, in the instances referred to above, is able to provide greater value to consumers because it is able to provide complementary services in a package which many of its rivals cannot emulate. From the perspective of a Microsoft rival which offers a single software applications line, Microsoft's ability to package products together to provide greater value to consumers may seem "unfair." Thus, in a "white paper"[163] submitted to the Justice Department by opponents of the Microsoft/Intuit merger, Microsoft was said to be "leveraging" its capability in one line of software into other, related lines of software, behavior which was seen as unfair. Yet consumers benefit when they receive greater value for the same expenditure. Microsoft's bundling of complementary programs and otherwise exploiting synergistic capabilities are efficiencies which increase the value of its output and thus make a contribution to the enhancement of national wealth. The courts have long recognized that the use by a single firm of complementary technologies to provide a superior line of products or services is not unfair, even though it may disadvantage that firm's rivals who have access to only one such technology.[164] Indeed, the exploitation of the complementary technologies is exactly the behavior which the antitrust laws are designed to encourage.

D.   The New Entrenchment Doctrine: A Critical Path Officially Imposed

As we have seen, Microsoft's attempt to replace its Money financial planning program with Quicken was thwarted by Justice Department opposition. Under the scenario envisioned by Microsoft, it would have acquired Quicken, while spinning off Money to Novell. The result would be the continued competition of the two leading financial planning programs, except that Quicken would have become Microsoft's player while Money would have become Novell's. The Department opposed this arrangement because it feared that Microsoft's resources behind Quicken would have created a competitive threat. We have observed, however, that the mere addition of Microsoft's resources to Quicken could not have created any danger to competition. What Microsoft could have gained from acquiring Quicken, however, would have been a larger installed base in financial

---

163. *See* REBACK ET AL., *supra* note 115.

164. *See* Northeastern Tel. Co. v. American Tel. & Tel. Co., 651 F.2d 76, 88-89 (2d Cir. 1981), *cert. denied*, 455 U.S. 943 (1982); *see also* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 282-83 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

planning software. By upgrading this large base, Microsoft could have provided links between the large base of Quicken users and other programs. Thus, as pointed out above, Microsoft might expand the size of its bill-paying and bank-services venture more rapidly by operating through the larger base of Quicken than through the smaller base of Money.

Let us be clear in our terminology. Exploiting potential links among the technologies available to a firm is generally procompetitive. It enables a firm to offer consumers a package of services which otherwise would not have been available to them at all or, if available, only at higher costs. Some of Microsoft's critics have phrased Microsoft's exploitation of technological linkages as "leveraging."[165] They thus speak of Microsoft "leveraging" its capability in financial planning software into the provision of banking services.[166] The English language certainly is flexible enough to incorporate this usage of the verb "to lever," or its participle, "leveraging." But care must be taken in such use. "Leveraging" has a history of use in the antitrust context. There it has been employed to describe the purported extension of monopoly power from one market to another.[167] Indeed, "leveraging," in antitrust discourse, is synonymous with anticompetitive behavior. When used to denote the exploitation of synergies by software providers such as Microsoft or Lotus, however, the term is being employed in a different context and connotations of anticompetitive behavior which might carry over from the antitrust context are misleading.[168] Indeed, the core concept of antitrust leveraging lies in tying, where a seller with a monopoly on one good uses that monopoly to "force" buyers to take unwanted goods in a second market at supracompetitive prices.[169] Thus "leveraging" involves a restriction of output. But in the case of software providers, like Microsoft and Lotus, extra value is being provided which enriches consumers and contributes to an expansion of output.

When the Justice Department challenged the Microsoft/Intuit merger and thereby thwarted Microsoft's acquisition of Quicken, it did so under the rationale that Quicken, when in the hands of Microsoft, would present anticompetitive dangers that were absent

---

165. REBACK ET AL., *supra* note 115, pt. III(B).

166. *Id.*, pl. III(B)(4).

167. *See, e.g.*, Ward S. Bowman, Jr., *Tying Agreements and the Leverage Problem*, 67 YALE L.J. 19, 19-20 (1957).

168. *See* SUSANNE K. LANGER, PHILOSOPHY IN A NEW KEY (3d. ed. 1957) (describing how words carry over connotations from one context into another).

169. Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 12 (1984).

when Quicken was in the hands of Intuit. The difference seems to lie in Microsoft's ability to use Quicken's larger installed base as an asset for exploiting synergies with Microsoft's other capabilities. For reasons already stated, the combination of technologies to create new value is behavior which the antitrust laws, properly understood, are designed to encourage. It is the opposite of a restriction of output, the kind of behavior that the antitrust laws were meant to condemn. A telling inquiry is whether the Justice Department would (or could) find grounds for condemning Microsoft's combining its own Money program with other technological capabilities which Microsoft has been developing. After the failure of the Intuit merger, Microsoft will be compelled to use its original Money software as a route into the provision of banking services. Yet, so far at least, the Justice Department is not objecting to Microsoft's continued development of Money or expansion of Money into on-line banking. But why not? What is the difference between Microsoft's expansion of Money's capabilities with banking and other Microsoft capabilities and Microsoft's doing the same thing with Quicken? It is not a satisfactory answer to assert that Quicken differs from Money because Quicken commands a larger market share. That answer is not satisfactory, because it implies that were Money to replace Quicken as the market leader, Microsoft would be legally forbidden to combine banking and other services with Money. Yet there is no apparent basis for forbidding Microsoft from combining other technical capabilities which it possesses with Money, and the Justice Department has not even hinted that it would find such behavior problematic.

If the Department's position is accurately described above, then the Department is, in effect, imposing a development "path" on Microsoft, analogous to the "critical path" discussed above, except here the path is constraining. Microsoft is free to develop Money. It is free to employ Money as its tool for entry into on-line banking services. Should Money become the market leader in financial planning, then Money's large installed base would make Microsoft's entry into on-line banking much easier. But Microsoft is not free to jump-start its entry into on-line banking by purchasing (or otherwise acquiring) another firm which is the financial planning market leader. Restated in old-fashioned antitrust language, Microsoft is free to pursue its expansion plans through "internal expansion," but not through "acquisition." When the internal-expansion/acquisition dichotomy was part of antitrust discourse, it reflected an archaic understanding of the law. That dichotomy reflected the view that § 7 of the Clayton Act was

directed, by its terms, at acquisitions. Internal expansion, however anticompetitive the result, was not covered by the Clayton Act. When the profession concluded that internal expansion cannot produce anticompetitive results, the dichotomy lost its meaning. Then it became apparent (or should have become apparent) that an acquisition which does not reduce competition between market participants and which produces results equivalent to internal expansion cannot be anticompetitive either.

Yet the Department is providing us with a new doctrine which alters antitrust analysis. It is the doctrine of the internal expansion "path." Some firms which show potential for combining technologies will be required to proceed down a path whose boundaries are set by the expansion of their own in-house technologies. They will not be permitted to shift to a different "path" by purchasing assets or technologies for synergistic use with their in-house technologies. The firms which are so confined to this officially-imposed internal-expansion critical path are those which present the prospect of dominating the market as a result of the attractiveness of the product package which they offer consumers. This new rule of law has antecedents in the antitrust law of the 1960s. It is related to the view that antitrust law is more tolerant of results achieved through internal expansion, a view largely grounded on the structure of the Clayton Act. It is also related to the doctrine of entrenchment, a doctrine which flourished during the late 1960s and early 1970s.[170]

VIII. MICROSOFT ON-LINE SERVICES AND WINDOWS 95

When Windows 95 was introduced, it came with an icon promoting Microsoft's then new on-line service, Microsoft Network. For some time, computers have been marketed to the public with icons promoting other on-line networks, such as Prodigy, CompuServ, and America Online. The inclusion of an icon promoting the Microsoft Network on Windows 95, however, was a matter of concern to the Justice Department. The Justice Department apparently thought that Microsoft might be competing unfairly with its rivals in a way which would violate the antitrust laws.

It is not entirely clear, however, how Microsoft's inclusion of the icon inviting computer users to subscribe to the Microsoft Network would (or might) violate the antitrust laws. One is tempted to think in terms of tying: Purchasers of Windows 95 necessarily purchase both

---

170. *See supra* part VII.B.

Windows 95, which they want, and the icon, which they may or may not want. Yet the tying analogy ultimately fails. It is not the icon in itself that the Department (and Microsoft's on-line competitors) are disturbed about; rather it is the icon as an instrument guiding computer users to the Microsoft Network. Since subscriptions to the Microsoft Network do not come with the icon and must be separately purchased, the arrangement is just not a tying arrangement.

Perhaps the Justice Department had in mind a § 2 offense: By including the icon, Microsoft might be monopolizing or attempting to monopolize the market for on-line services. The Department was probably thinking along the lines suggested by language in *United States v. Griffith*,[171] condemning a monopolist who uses its monopoly in one market to gain a competitive advantage over rivals in another market.[172] There are, however, substantial problems in applying this language to Microsoft's inclusion of its icon in Windows 95 because Windows 95 was a new product which had no market share at all at the time of its introduction. But even if Windows 95 does not command a monopoly market share, Microsoft as an entity does command a market share of operating systems (through its MS-DOS, Windows NT, and Windows 95 releases) sufficient to be characterized as a monopoly for antitrust purposes. Similarly Microsoft controls a monopoly share of graphic user interfaces (through Windows 3.1, Windows NT, Windows 95, and other Windows releases). Thus, maybe Microsoft was "leveraging" (in an antitrust sense) its monopoly over operating systems to gain a competitive advantage over its competitors.

An inquiry into how Microsoft may have been "using" its monopoly to gain a competitive advantage over its on-line rivals is required. Microsoft may have been using the attractiveness of its Windows 95 release to ensure that computer users had access to the promotional icon, and presenting the icon to computer users was advantageous to Microsoft. But Microsoft might reply that it was not "using" its monopoly over operating systems to obtain this advantage. In this analysis, Microsoft's monopoly over operating systems resulted from its control over MS-DOS, Windows NT, and Windows 95, but it was "using" only Windows 95 to obtain this advantage. (A similar analysis applies to Microsoft's monopoly share of graphic user interfaces). This response, however, will not withstand a critique identifying the proper relevant market. The relevant market for purposes of analyz-

---

171. 334 U.S. 100 (1948).
172. *Id.* at 107.

ing this claim is the market in which operating systems are presently being sold. Probably most operating systems (for IBM-compatible computers) which have been sold since August 1995 are Windows 95. In that analysis, Microsoft is "using" its monopoly over operating systems presently being sold, i.e., its monopoly over operating system sales since August 1995 which is primarily composed of sales of Windows 95.

The Ninth Circuit, however, has rejected the view that the use of a monopoly to gain a competitive advantage constitutes monopolization.[173] In *Alaska Airlines*, the Ninth Circuit explicitly rejected that view,[174] which it equates with the Second Circuit's decision in *Berkey Photo, Inc. v. Eastman Kodak Co.*[175] In the Ninth Circuit's view, the use of monopoly power to monopolize another market constitutes monopolization.[176] However, § 2 is not violated by anything less than monopolizing a market or attempting to monopolize a market.[177] In the view of the Ninth Circuit, the language in *United States v. Griffith*[178] has been effectively rejected by the Court's embrace of efficiency as the ultimate criterion for antitrust law interpretation.[179] The Third Circuit[180] has followed the Ninth Circuit's revisionist approach to *Griffith*.[181] Finally, the Supreme Court's decision in *Spectrum Sports, Inc. v. McQuillan*,[182] rejecting shortcuts to the proof of attempted monopolization, lends support to the Ninth Circuit's position.[183]

Thus, although the Department may have a "monopoly leveraging" theory derived from *Griffith* by which to challenge Microsoft's inclusion of the icon in its Windows 95 release, that theory is currently subject to reevaluation. It is doubtful whether that theory would survive Supreme Court review, especially in the light of *Spectrum Sports*.

---

173. Alaska Airlines, Inc. v. United Airlines, Inc., 948 F.2d 536 (9th Cir. 1991), *cert. denied*, 503 U.S. 977 (1992).

174. *Id.* at 547.

175. 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

176. *Alaska Airlines*, 948 F.2d at 547-48.

177. *Id.* at 548.

178. 334 U.S. 100 (1948).

179. *Alaska Airlines*, 948 F.2d at 547.

180. Fineman v. Armstrong World Indus., Inc., 980 F.2d 171 (3d Cir. 1992), *cert. denied*, 507 U.S. 921 (1993).

181. *Id.* at 206.

182. 506 U.S. 447 (1993); *see* Daniel J. Gifford, *Predatory Pricing Analysis in the Supreme Court*, 39 ANTITRUST BULL. 431, 474-77 (1994) (discussing the decision of *Spectrum Sports*).

183. *See* Roger D. Blair & Amanda K. Esquibel, *Some Remarks on Monopoly Leveraging*, 40 ANTITRUST BULL. 371, 378-88 (1995) (discussing caselaw developments on "monopoly leveraging").

But there is another aspect of the monopoly leveraging theory which renders it even more suspect than the current reevaluation of that theory by the circuit courts. What kind of an "advantage" did Microsoft gain over its rivals by including the icon in its Windows 95 release? Does this "advantage" rise to the level of the "advantage" of which *Griffith* speaks?

As noted above, all three of the leading on-line services (Prodigy, CompuServ, and America Online) promote their services with icons embedded in new computer operating systems. The imbedded icons provide the on-line services with an "advantage." In addition to the proprietary on-line services market, many companies provide internet access and the Prodigy, CompuServ, and America Online icons arguably provide these leading companies competitive advantages in the Internet-access market over their smaller rivals. So the "advantage" which Microsoft has over its rivals consists in behavior which is widely replicated by the very rivals which are being disadvantaged. Moreover, these same "disadvantaged" rivals are exploiting analogous advantages over their own smaller rivals in the internet-access market. All of this makes it doubtful that the Microsoft "advantage" derived from the icon is sufficiently critical or unique as to fall under the *Griffith* condemnation. Further, it is questionable whether *Griffith* meant to condemn an "advantage" to a new entrant which would offer increased competition to established rivals constituting a practical oligopoly of three companies.

To properly assess the antitrust significance of Microsoft's behavior, we need to ask what that behavior accomplishes. Adding the icon to the Windows 95 release is a cost-effective way of providing the icon to a large public. Since the icon is a promotional device, we can conclude that adding the icon to the Windows 95 release is a cost-effective way of placing promotional devices in the hands of potential purchasers. Stated in those terms, Microsoft is engaged in nothing more than aggressive marketing for its products. On what theory would the antitrust laws require Microsoft to employ higher-cost alternatives to promote its new on-line product? Such a theory might be one based upon fairness to Microsoft's rivals: They have to pay for the privilege of including an icon on the graphic user interfaces of newly marketed personal computers, whereas Microsoft places its icon on those interfaces without having to pay for it. Surely this is an advantage to Microsoft, and it may appear unfair. But it does not restrict output. It also provides an information service to consumers about the availabil-

ity of the Microsoft service. In an efficiency analysis, the inclusion of the icon does not appear objectionable.

IX. CONCLUSION

Recent events surrounding Microsoft Corporation help to expose some of the current antitrust approaches of the Justice Department. The Department's concern with the lump-sum licensing arrangement and with the promotional icon reveal the Department's continuing concern that vertical relationships may engender horizontally restrictive effects. Thus, the Department was concerned that Microsoft's lump-sum license imposed hardships on its rivals, thereby inhibiting competition in the operating systems market. While the Department's approach is subject to minor criticisms, its formulation of a decree which allows significant monitoring efficiencies is praiseworthy. Moreover, the Department showed immensely more sophistication than Judge Sporkin over the "normative" implications of the decree. Although not discussed above, the Department merits further praise for not attempting to restructure the software industry, an attempt which could only yield disastrous results.[184] All-in-all, the consent decree evidences a unique combination of responsible enforcement with an awareness of the dangers of overenforcement.

However, nothing good can be said about the Department's handling of the Intuit merger. Here it appears the Department was reacting to political pressures engendered by banks and rival applications providers. The Department seems to have embraced, perhaps temporarily, an archaic view of merger law (perhaps having performed inadequate analytical work before it acted). At least the Department's theoretical framework for its action against the Intuit merger is not fully articulated.

Finally, the Department's concern over the inclusion of the promotional icon in the Windows 95 release is ultimately ambiguous. There is ground, expressed above, for believing that the Department's concern is misplaced. Yet the fact that the Department has not challenged this behavior is a sign that the Department may have come to the conclusion that the icon is ultimately innocuous and that its con-

---

184. *See generally* Lopatka & Page, *supra* note 91 (discussing some of the difficulties of restructuring the operating systems market). Among other considerations, they point out that there is no way of knowing whether consumers would be better off in a natural monopoly market by substituting one monopolist for another. *Id.* at 354. In any event, such a market restructuring is beyond the competence of the courts. The losses to society which would be incurred in any such attempt would be immense.

cern of last summer may have been unduly influenced by Microsoft's on-line rivals.