

The Un-Microsoft Un-Remedy: Law Can Prevent the Problem That It Can't Patch Later

JONATHAN ZITTRAIN*

I. THE PROBLEM

In order to address the question of remedy, I would like to map out what I see as the key issue in the Microsoft case.¹ We need to be clear about the fundamental problem alleged—and perhaps soon proven—if we are to speak a common language about a remedy.

First, what's not the central problem: simply having a monopoly.² Just being a monopolist is not alone a concern to many antitrust enforcers; some markets lend themselves quite naturally to having one dominant player, and others may find themselves with only one because that player simply outclasses all others. The animating idea behind antitrust is not to “punish winners” out of some kind of arbitrary sympathy for underdog competitors.³ Rather, antitrust sanctions are appropriate only if the monopolist has committed some sort of extra “bad behavior,” behavior that might leverage the firm's monopoly power in a way that itself distorts the market, penalizing even competent, otherwise well-positioned competitors.⁴

Second, behaviors that are problems but not fundamental: most of the pieces of the kitchen sink of bad monopolist behaviors that have been thrown at Microsoft at one time or another. For example, it has been

* *Executive Director, Berkman Center for Internet and Society, and Lecturer on Law, Harvard Law School. This essay was drawn from remarks to the Connecticut Law Review Spring Symposium, March 26, 1999. I thank Larry Lessig, Christine Jolls, Ben Edelman, and Donna Wentworth for their help.*

1. See *United States v. Microsoft Corp.*, No. CIV. A. 98-1232 (TPJ), CIV. A. 98-1233 (TPJ), available at 1998 WL 614485 (Sept. 14, 1998) (memorandum of decision granting in part and denying in part Microsoft's motion for summary judgment). As I write, the trial continues.

2. See 15 U.S.C. § 1 (1994) (prohibiting “monopolization,” not monopoly); *United States v. Aluminum Co. of America*, 148 F.2d 416, 429-32 (2d Cir. 1945) (Hand, J.).

3. See *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 224 (1993) (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962)) (“It is axiomatic that the antitrust laws were passed for ‘the protection of *competition*, not *competitors*.’”).

4. See *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600 (1985).

claimed (but not proven by any means) that Microsoft hires away competitors' key programmers, and preannounces products that do not exist—"vaporware"—in order to disrupt the market for competitors' programs. If proven, these amount to anticompetitive problems of the sort antitrust was designed to address, but they are within reach of the usual toolbox of remedies for antitrust violations. The main concern in finding a remedy for these behaviors may be time: The technology environment moves at a lightning pace, and by the time a federal case has been made out of a problem, the problem is proven, a remedy fashioned, and appeals exhausted, the damage may already be irreversible. I will speak to that issue when I turn to remedy.

Third, then, the real problem—one that is indeed fundamental: Microsoft has brilliantly exploited its current control of the personal computer operating system (OS) market to grant itself advantages towards controlling tomorrow's operating system market as well. This exploitation is wholly apart from being an effective company that makes solid, trusted, and popular products. Instead, it flows directly from the control Microsoft has asserted over user "defaults," a power Microsoft possesses thanks to a combination of (1) Windows' high market share, (2) the "network effects" that make switching to an alternative so difficult for any given consumer or computer manufacturer, and (3) software copyright, which largely prevents competitors from generating software that defeats network effects. This is "monopoly maintenance" of a sort that may be enabled only by the distinct dynamics of the networked technology industry, and which therefore lends itself to a distinct remedy.

To be sure, monopolistic empires can fall without having to be pushed, even when they are engaging in strategic "bad behavior" designed to artificially extend their tenure. A team sneaking a few extra players on the field can still lose the game. I concede this even as I claim that the company fairly winning the battle to dominate the last generation of networked software—particularly operating systems—then has an advantage that it can press to have an unfair shot at dominating the next, too. This creates a consistent anticompetitive problem for which a remedy ought to be explored, even if sometimes—slowly, inefficiently—the problem can evaporate on its own. There is no reason to wait for chance, or extraordinary incompetence in the arenas in which market players normally compete—product quality, price, marketing, etc.—to be the undoing of an actor that has been leveraging monopoly power to great advantage. Indeed, ideally the market could be structured so that monopoly power can't be leveraged to begin with.

II. THE MONOPOLY

Of course, not everyone has conceded that Microsoft is a monopolist at

all.⁵ There are difficulties defining the relevant market—Apple, after all, has a lock on the mainstream operating system for personal computers sold with Motorola 680x0 and PowerPC chips. Even if we define the market as “personal computers,” in which Microsoft’s Windows OS has an overwhelming market share, we should go the extra step to show that the market is difficult to contest. I believe that we can take that step. Windows’ dominance of the PC OS market is very difficult to challenge, and not just because it is a daunting and expensive task to write an OS from scratch to compete with the huge, complex opus that Windows is, or to market that OS against the established Windows brand.

The significant barriers to entry are twofold, and they function even without “bad behavior” by the market leader. The first flows from so-called “network effects,” through which a given operating system becomes more valuable as more people use it.⁶ Software developers typically write software for a particular OS, and as more people use a given OS, more software developers write software for that OS. The OS then becomes that much more appealing for other consumers, therefore also for other developers, creating a mutually reinforcing cycle. A challenger to the existing OS faces a mature market in which both software developers and consumers are locked into an embrace that neither can readily untangle, even if, all else being equal, the upstart OS is better—cheaper, faster, more feature laden—than the prevailing one. We see the same phenomenon with file formats—how many have endured the torture of trying to convert one word processor’s footnotes to another’s?—and the literal networks that link many of today’s computers together: they can work better if they are on the same footing.

The second barrier to entry is intellectual property protection itself, a form of monopoly granted by the government to authors, inventors, and software coders. It is thanks to this protection that competing operating systems cannot readily adapt their code to be compatible with software written to run on the OS of the market leader. I fear that this barrier is so obvious as to be unexamined, and its role in building and maintaining monopolies such as Microsoft’s is fundamental. As I will explain, if we are to remedy Microsoft’s “bad behavior,” such as it is, the key may rest in giving them—along with everyone else—less of a monopoly to begin with, rather than waiting for the exploitation of that monopoly to take shape, have effect, and then land a market leader in court for antitrust violations. As the architect of federal tax withholding can testify, it is always easier to give less to begin with than to take away extra later.

5. See, e.g., Robert M. Levy, *Microsoft and the Browser Wars*, 31 CONN. L. REV. 1321, 1330-35 (1999).

6. See Mark A. Lemley & David McGowan, *Could Java Change Everything?, The Competitive Property of a Proprietary Standard*, SZO PLUPat 453 (1998).

III. A WAR FOR THE BROWSER IS A WAR FOR THE OPERATING SYSTEM

I have defined the central problem in the Microsoft case as unfair monopoly maintenance, and defined the monopoly as one that rests on the unusual factors of network effects and government-granted intellectual property protection. I will now try briefly to show Microsoft's reliance on monopoly power to defend its operating system market share with an example at the strategic level: Microsoft's participation in the browser wars. I will then describe three tactics drawn from the current litigation—instances, if proven, of “bad behavior”—that Microsoft has used as extra ammunition.

The conventional story of the browser wars is that of Microsoft and Netscape vying for dominance in a new market: that of the web browser, which has rapidly become the most common window through which consumers view the Internet. One could imagine—and the government has alleged—unfair behaviors that Microsoft might employ to beat Netscape in this new market. But the story so far assumes that the stakes are merely dominance in this new market. It misses the fact that control of the browser market has—or at least had—implications for dominance of the established PC operating systems market. For Microsoft, Navigator was not simply a competitor to Internet Explorer in a new applications area called the “browser market.” It was also a dagger pointed at Microsoft Windows.

The blade of the dagger was a software development environment called Java. Java's idea was “write once, run anywhere.” Different platforms and operating systems could ideally all run Java; the use of such programs would not be limited to users of a particular operating system. If Java could harness the self-reinforcing “network effects” cycle, Windows would be greatly weakened, since software authors could be writing for Windows and competing platforms at the same time by writing in Java. If Java succeeded, consumers would not pay a premium for a particular operating system like Windows just because everyone else had it, too.

Java was to find its way on to your computer—whether an Apple Macintosh or a Windows PC—initially through the Navigator browser. If you used Navigator you had Java; if you didn't, you didn't. However, the maker and licensor of Java, Sun Microsystems, disclaimed the idea of someday being a new boss just like the old: Sun purported to eschew most of its intellectual property rights and instead license the Java code freely and openly. That way, if Java succeeded in becoming the platform consumers wanted, and for which software authors wrote software, it would not become a new monopoly exploitable by Sun. Network effects might keep it in place—makers of operating systems would deviate from compatibility with Sun's Java at the peril of unpopularity among consumers and developers—but Sun could not unilaterally adapt the platform to its

own strategic ends in just the way I am about to claim Microsoft has done with Windows to win the browser wars. Note that this is just the way the protocols of the Internet itself work: TCP/IP and other network standards are open, freely taken and adapted by anyone, developed by a loose confederation of engineers known as the "Internet Engineering Task Force" (IETF). The IETF does not charge for its work or limit others' use of it. The overwhelming market share for networking protocols is credited to TCP/IP; it is a monopoly difficult to contest thanks to network effects—who wants to have a networked computer that cannot talk to any other computer on the network?—but also difficult to exploit thanks to the absence of any intellectual property claim to control its use, sale, or copying. (You may ask why Sun, a for-profit company answering to profit-maximizing shareholders, would be as generous with Java as the kindly Merlins who participate in the IETF are with networking standards. Recall that Sun makes chips for computers that do not run the Windows operating system and you can see why it might be to its benefit to break the Windows monopoly even if it does not end up getting a similar one itself.)

IV. HOW (NOT?) TO WIN A BROWSER WAR

Navigator did not remain the only path to Java for long. Microsoft itself entered into a now-soured deal with Sun to license Java for use with Internet Explorer. That way, consumers could run Java programs so long as they had either Navigator or IE. This would seem to add momentum to the adoption of Java, and thus speed the breakup of Windows as the only platform for which lots of software is exclusively written. Why, you might ask, would Microsoft embrace the instrument of its own undoing in the operating systems market? The answer lies in a brilliant defensive masterstroke by Microsoft: The Java that comes with IE is not exactly the same as the Java that comes with Navigator and that Sun says is "pure." Microsoft added certain features that are really tempting for an individual software developer to use. The cost of using those features in a program is that the program will no longer run on any platform; instead, it will run only with Microsoft's Java as found in IE. Which Java would succeed—the original one or Microsoft's incompatible, proprietary derivative—would depend on which browser, Navigator or IE, became dominant, since each carried with it Java's respective implementations.

When Java was not only embraced by Microsoft but extended (Sun says "poisoned") by them, Sun immediately cried foul and made a federal case all its own out of it.⁷ Ironically, the case is grounded in the licensing conditions imposed on Microsoft for licensing Sun's "open" standard of Java and the Sun-trademarked Java name. That case may not matter so

7. See *Sun Microsystems, Inc. v. Microsoft Corp.*, 21 F. Supp. 2d 1109 (N.D. Cal. 1998).

much since Microsoft has since re-written its version of Java with entirely new code, and it might be happy to stop using the Java trademark. But the Sun lawsuit highlights the importance of the browser wars: Control of the browser market is control of Java in its early stages, which is control of a cross-platform programming environment that in anyone's hands but Microsoft's could sideline Windows itself. Microsoft did not overplay its previous-generation OS monopoly by clinging to DOS; instead, it brilliantly leveraged DOS into Windows, abandoning the old monopoly to set itself up for a new one. We now see how dominance in current-generation operating systems might be leveraged into dominance for the next: Windows could be abandoned for Microsoft Java.

So, as a matter of strategic monopoly maintenance, Microsoft wanted to win the browser wars. One could imagine both fair and unfair tactics of battle. One way to distinguish between those categories is to see whether a tactic is one available to any competitor; tactics adopted by Microsoft and drawn solely thanks to its dominant position in PC operating systems smack of anticompetitive abuse of monopoly power. For example, both Microsoft and Netscape have been giving away their respective browsers in a frenetic attempt to retain and gain browser market share; claims of predatory pricing may ring somewhat hollow when the marginal cost of a unit of software really does converge to zero no matter who the producer. Note, however, that even if the marginal cost of software distribution is non-trivial, pricing below cost in an immature software market can turn out to be a good strategy, since recoupment through higher prices might be possible after one wins; network effects and intellectual property rights work to exclude cheaper players with incompatible but otherwise-competitive offerings. Indeed, this might explain deals in which Microsoft or Netscape literally *pay* to have their software placed into users' hands. I do not attempt to resolve whether paying distributors or consumers to take software is of concern; rather, I seek to identify practices that, predatory or not, are available only to the monopolist.

A. *"If you want Windows, you'll have to agree to take Internet Explorer."*

Of course, Microsoft has an avenue for placing software in users' hands that Netscape does not and cannot readily buy: the Windows desktop. People buy Windows; people arguably need Windows. Consumers want Windows so much that they want it automatically ready for them to use when they buy a computer; a computer that leaves a factory without Windows on it in many cases might as well be a paperweight. If Microsoft can put IE into Windows, people who buy Windows—which is to say people who buy computers—will have IE right in front of them. The only thing standing between Microsoft and many Windows consumers is the "original equipment manufacturer," or OEM. OEMs like Dell or Compaq buy Windows from Microsoft and then sell computers, with Windows, to

consumers. Thus Microsoft's desire to turn its Windows 95 licensing agreements to its advantage: "OK, Dell, if you want Windows, you will have to agree to install Internet Explorer as well."

Now you may ask, "Is it really such a big deal when you first turn on your new Dell? You just unpacked it, you turn it on and there's IE, Internet Explorer, front and center. Does that really mean you are going to end up using IE six months from now instead of Netscape, which if you are willing to wait several hours, you can download and install and have running parallel with the other browser?" The answer is, quite credibly, yes. That really could be. Indeed, the argument that IE's default position on the desktop is not a big deal because you can uninstall it so quickly, and can easily put in a competing browser, cuts both ways. If including IE is no big deal for the consumer, why was compulsory licensing of IE so critical or so important to Microsoft that it was worth a big fight to retain it during the litigation over Windows 95? The existence of those compulsory licenses indicates that at least Microsoft believes in the value of having that IE icon as a default on the desktop.

A less heavy-handed Microsoft tactic would have been to try to simply persuade companies like Dell to accept it—to say, "By the way Dell, we have just sealed this deal to give you Windows, don't you want Internet Explorer too? Let's get you in touch with our Internet Explorer sales force, and they can convince you how nice it would be, and, believe it or not, the price is zero, so why not take it?" But Microsoft didn't do that. They left that route to Netscape, and "competed" by playing their ace in the hole—their position on the selling end of a contract for Windows 95 through which they, and only they, could require their browser software to be a default on every computer that was shipped with Windows 95.

B. *"If you want to have your program on the Windows desktop, you'll have to agree to put Internet Explorer inside it."*

Another asserted Microsoft tactic linking its control of Windows to acceptance of IE also involves contract use of monopoly power—this time involving contracts between Microsoft and America Online. America Online's lifeblood is new subscribers. They've got to keep new people coming in the door so that their customer base can grow in step with the growth of the Internet. To succeed, they too must capitalize on the power of the default. After all, when you first turn on your computer, and you click on something that says, "I'd like to get on the Internet," you are prompted to make a decision about your Internet provider—a decision that can be difficult to reverse, particularly if it entails abandoning one's long-held e-mail address.

AOL needed that place on the desktop as a very important strategic component of signing up new members. Microsoft says, "Okay, it's our desktop, what do you bid?" And, in fact, it didn't turn out to be a bid in

money. Instead, Microsoft said, "Instead of actually paying us a whole lot, why don't you agree that your subscribers will use Internet Explorer when they surf the Web through AOL." By trading prime default real estate on the Windows desktop, Microsoft found yet another path (on top of its deals with OEMs) to make sure that Internet Explorer (and its corresponding version of Java), not Netscape, is getting into consumers' hands. There is no parallel deal that Netscape can offer, because they do not own the default real estate. It is a deal that only Microsoft, thanks to its monopoly position, can offer, and it is one that is very difficult for AOL to refuse.

C. *"No need to agree to anything. When you get Windows you'll notice Internet Explorer inside, and you won't know how to take it out."*

A third tactic is now the subject of the current Windows litigation, and represents a shift in Microsoft's plan for inclusion of IE in Windows 95. The lesson Microsoft learned from the Windows 95 litigation over its forced licensing of IE to OEMs was: "Let's not use contracts to get the OEMs to put IE on the desktop. Customers can still remove it, and we still have to enforce the contracts if an OEM violates them. Let's just build IE right into Windows 98 and nail it down; OEMs or consumers can pry at it all they want, but it is not coming back up."

This is the idea behind technological tying, and it illustrates the amazing power of the company that controls the operating system, for the OS defines what the computer user sees and when she sees it. To define this control the way an earlier speaker did—as mere advertising—doesn't do justice to the amount of power it represents. Bundling a program right along with the operating system, which itself comes right along with a new computer, has benefits for the distributor of that program that cannot be replicated if the program is merely a third-party add-on—users need not find the program, wait for a lengthy download or figure out the intricacies of installation. The default is a seamless package of clicks from which the average user will not stray.

These tactics use the market power of Windows to make Internet Explorer succeed, and thereby thwart the adoption of a Java standard that can threaten Windows. They are "unfair" in the sense that they add momentum to Microsoft's sales of Windows not earned through the usual competitive advantages of quality, price, salespersonship, reputation, and goodwill. They work only because middlepeople like Dell and America Online cannot afford to lose access to Windows—whether as a product to be resold or as an environment to gain new clients.

V. PROPOSED REMEDIES

With the problem stated as one of maintaining an operating system monopoly rather than merely winning a battle for dominance of a particular

application, I will touch on the possible remedies that have been discussed in this Symposium and then suggest my own.

A. *A Lawsuit Without a Remedy*

One remedy that was put forward was the idea of doing nothing.⁸ The idea is that the burden the suit itself placed on Microsoft can remedy its behavior. Microsoft's engineers had to submit to endless depositions, they had their e-mail rifled through, and they were generally less productive as a result of the lawsuit's burden. That strikes me as a rather dubious remedy, and one that is not necessarily properly scaled to the problem. Would lesser offenders need only be subjected to a few depositions before the government abandoned the suit? Further, the burdens of a lawsuit can hurt all of us—it is a sad day for the whole technology industry when e-mail must be regularly destroyed as part of new prophylactic document “retention” policies.

Another rationale offered for doing nothing beyond bringing the lawsuit itself is that the lawsuit has served to embolden Microsoft competitors. You could call this the “circling vulture” syndrome where potential competitors think, “If the government is really giving Microsoft a kick in the ribs, maybe I should not be afraid to run up and get a few in too.” This, too, strikes me as an unseemly way to encourage competition in a market.

Finally, the claim was made that the lawsuit stops the complained-of practices. There is a mixed record on that score. To be sure, many of Microsoft's controversial OS licensing conditions to OEMs have been abandoned. But with Internet Explorer and Windows 98, the licensing conditions at issue have merely been supplanted on the technological side with the integration of the two programs at the level of software code. The proponents of remedy “abstention” have at least one good point here, however: The combination of browser and operating system at the level of code is one that law would have difficulty undoing. There may indeed be benefits to combining the two that have nothing to do with anticompetitive intent, and teasing out good motives from bad is to try to distinguish good and therefore allowable tech bundles (“Solitaire and Windows” or “Scandisk and Windows”) from bad and therefore impermissible ones (“IE and Windows”)—a market intervention that seems very risky indeed.

B. *Criminal Penalties*

The second remedy, criminal penalties, was mentioned at the very beginning, and I will only talk about it very briefly.⁹ Could this be criminal

8. See William E. Kovacic, Remarks at the *Connecticut Law Review* Spring Symposium (Mar. 26, 1999) <<http://www.connecticutlawreview.org>>.

9. See Robert M. Langer, *Symposium Introduction: United States v. Microsoft*, 31 CONN. L. REV. 1245, 1247 (1999); *Symposium Dialogue, United States v. Microsoft*, 31 CONN. L. REV. 1397, 1430-31 (1999).

antitrust? My answer here is: "I hope not." It is important to understand that there is nothing personal here. I think the campaign of demonization that goes back and forth, but seems anecdotally primarily focused on Microsoft and Bill Gates, is not at all helpful to the resolution of this problem. To see Bill Gates as evil is to misunderstand what the rational capitalist is about. Gates' job is to push the envelope as far as he possibly can in order to compete. It is the job of the judicial system to say where the boundaries of the envelope are and to enforce them in some way, and we are in a context in which the boundaries really are being defined as we go—this is not as simple as price fixing in a smoke-filled room, and therefore not as readily labeled "malum in se." The grain of truth I see in a suggestion of criminal penalties is the realization that the Microsoft case has touched a nerve with the public at large, that it is a battle in rhetorical as much as doctrinal space, fought on a public stage with a large and attentive audience. Many observers seem to think the Microsoft case is a referendum on whether Microsoft and Bill Gates are good or evil; criminal penalties are a dramatic way to punish a wrongdoer, but not reflective of the true difficulties of the case nor respectful of the uncharted territory in which it is taking place.

C. *A Fine*

A third remedy suggested today was a fine; charge Microsoft a one-time fee to cover the damage it has done.¹⁰ I suppose there is some amount you could fill in on the check to actually make Microsoft regret whatever anticompetitive practices were found by the court. I am not sure I could guess what it is. Let us say Microsoft has now secured, with the help of some of these practices, but not entirely due to them, a better chance than it would otherwise have to dominate the successor operating system to Windows, or a longer lease on Windows' life. How to put a price tag on that? It makes the typical tort problem of toting up present-value damages for a loss-of-chance injury look like calculating a dinner tip. The risk of under- or overestimating the amount to be deducted makes antitrust enforcement seem truly a spin at the wheel. Thus, I do not find a fine particularly interesting.

D. *Breakup*

Next we heard about divestiture and breakup.¹¹ I am very much in agreement with the skeptical views you have heard on that today. A horizontal split would mean that Microsoft would be divided into separate operating systems and applications companies; the former would only be al-

10. See Kovacic, *supra* note 8.

11. See Leonard Orland, Remarks at the *Connecticut Law Review* Spring Symposium (Mar. 26, 1999) <<http://www.connecticutlawreview.org>>.

lowed to continue developing Windows or other operating systems, but not to tie applications to it. However, even after the painful and difficult job of identifying what is currently properly part of the operating system and what is a separate application, must the court remain ever vigilant against OS scope creep? First, Microsoft's three Solitaire maintainers have to leave Microsoft, go into Solitaire, Inc., and hope that their relationship with the new Microsoft is one that keeps Solitaire at the forefront of gaming in offices across America. Then, each projected new feature of the OS will have to be subjected to some external "objective" test of what belongs there and what does not, or what constitutes a harmless game and what in fact is a move by Microsoft to co-opt the next generation OS, something I have claimed is the case with Java.

Breakup seems like a highly regulatory solution that makes Microsoft's parade of horrors about government oversight of private programmers seem not so fanciful. To be sure, there are purists who will happily tell you about what is rightfully in an operating system and what is not. That may work within a computer science department, but to ask government to apply that test represents an abandonment of the idea of letting the market decide whether an operating system is of greater or lesser value as it throws in—integrates—so many whistles and bells.

The other kind of split is vertical. For example, the court could order that Microsoft prepare five "gold" copies of the Windows 98 source code, split Microsoft by random lottery or some other fashion, and thereby vertically create Microsoft, Microsoft', Microsoft'', et cetera, put each in a new headquarters, and let them compete. It's already been observed that the Microsoft descendant that gets Bill Gates is already unduly advantaged against the other Primes. More important, there is reason to think that network effects will eventually have us all gravitate to one winner among them, and then we are just back where we started, in which case it could be time for another lawsuit.

E. *Compulsory Licensing*

Solution number five: compulsory licensing of Windows source code to competitors.¹² The idea behind this is to break Microsoft's monopoly on the operating system by allowing others to get under Windows' hood and generate competing versions. This proposed remedy moves in the right direction because it takes into account the fact that we are talking about software here, not oil fields or railroads. The magic of code is that it can be given to a new person without diminishing its use to the original possessor—except along the dimensions of the original possessor's "right to exclude others," which is a basis of the monopoly problem to begin with.

12. See Leonard Orland, *Teaching Antitrust During Microsoft*, 31 CONN. L. REV. 1375, 1383 (1999).

The problem is that such licensing is indeed complicated, and runs the risk, as Rick Rule said today, of benefiting competitors, not competition, as it carves up Microsoft's empire while letting new ones develop, since works derivative to the "freed" Windows source code could themselves be copyrighted. As with the vertical split idea, even if the delicate licensing issues are addressed well, we could end up in short order with a new boss as anti-competitively ornery as the old.

VI. THE REMEDY WITHOUT A LAWSUIT: REDUCTION OF TERM OF COPYRIGHT PROTECTION FOR COMPUTER SOFTWARE

To me the real answer lies in uniformly cutting back the current ninety-five-year term of copyright protection for computer software generally. This idea springs from the realization that the very basis of the Microsoft monopoly is the government's creation and enforcement of intellectual property law, a market intervention every bit as explicit as a court's application of antitrust law.

Thanks to the Sonny Bono Copyright Term Extension Act,¹³ Congress has decreed ninety-five years to be the "limited time" the Constitution ordains for intellectual property protection—a time during which software authors may enjoy the exclusive rights to copy and distribute their work for the purpose of recouping the effort it took to produce it.¹⁴ The Framers contemplated that intellectual property protection would not be at all like "normal" private property, since it represented a balance between rights to authors—incentives for their hard work—and rights to the public commons, a recognition that free speech means the freedom to build new ideas out of pieces of old ones.¹⁵

The bargain is that the government will defend a person's right to prevent others from uttering the things one uttered, or copying the software one has authored, for ninety-five years, but after that it is the public's property as much as one's own; the government will no longer defend the intellectual property monopoly that, after all, is defined solely by restrictions on others' speech. Such a long term of protection may make sense for such enduring favorites as the Lion King or a Madonna song, but the claim that computer software is creative expression subject to ninety-five years of protection—monopoly protection given freely by the government—clearly dismisses any attempt at balance between private and public. Ninety-five years might as well be forever, and indeed from some comments today it seems that we have become acculturated to thinking of intellectual property

13. Act of Oct. 27 1998, Pub. L. No. 105-298, 112 Stat. 2827 (codified in scattered sections of 17 U.S.C.).

14. See *id.* § 102(d)(1)(D) (amending 17 U.S.C. § 304(b)).

15. See THE FEDERALIST NO. 43 (James Madison); 2 JOSEPH STORY, COMMENTARIES ON THE CONSTITUTION OF THE UNITED STATES § 1152 (5th ed. 1891).

as just plain property, forever belonging to its creator without reversion to the commons.

Of course, no one really believes that ninety-five years from now Windows 95 would be of great use to either creator or competitor. Imagine: "All right everybody, it's New Year's 2089, finally the locks are off, we can get to Windows 95!" Of course, five years before we would have gotten to DOS, and five years before that—let's see, the winter of A.D. 2075 or so—the Radio Shack TRS-80 operating system. This is clearly absurd, and this absurdity bears directly on the problems within the Microsoft case—problems that I have claimed are too severe to go unaddressed, yet know no ready remedy within the traditional antitrust framework.

Suppose Congress were to say that for computer expression, for software programs, authors get five years of protection, or maybe ten. They post the source code to get that protection, and it is kept under lock and key at the Library of Congress. The goal is to grant enough years of exclusive monopoly so that it is worth it for software authors—including operating systems authors—to generate their wares. They can milk them for all they are worth for that five years and recoup their money. But after that, it is free. Anybody can take it. Anybody can copy it. The Library of Congress places the source code onto the World Wide Web with a suitable ribbon-cutting ceremony. Anyone can do as she wishes with it.

This applies to all software manufacturers, not just Microsoft. It does not require singling out Microsoft and saying—through a lengthy lawsuit—"You're bad. We're going to make you, and only you, license your software." Typically, if one collars a venture capitalist about a great plan for a new application that is going to revolutionize software and make everybody a billion dollars, she does not want to hear about a plan that is going to work ten years from now. After five years, your chart need not project anything further, because no one has any idea what is going to happen five years from now. The plan had better contemplate a net profit within the next five years or the venture capitalist will be in search of another general direction in which to disgorge money. Indeed, a shortening of software term could actually help the software industry—a sort of simultaneous legal disarmament through which software authors could realize they have more to gain in terms of others' work that comes free for use in their own creations than they have to lose in that sixth year when their own work comes free.

Would a reduction in software term actually injure Microsoft? Would they regret the decision to make, say, DOS 3.0—a long-forgotten A.D. 1984 precursor to Windows 3.1—if DOS 3.0 were suddenly to enter the public domain today? Would they regret making Windows 3.1 (A.D. 1990) if Windows 3.1 were suddenly to enter the public domain today? They certainly would not have "direct" regrets in the form of lost profits from sales of those products. One cannot buy Windows 3.1 from Micro-

soft today. Microsoft's only regret would be in the potential competition that these products could provide to Windows 98—yes, competition.

The real fear would be that if Windows 3.1 source code becomes free, goes from the proprietary to the open, those do-good engineers at the Internet Engineering Task Force could come and start picking over it, can start making things out of it. University students could dissect it as part of Computer Science 101. They could make a derivative version, say Windows 3.2, which perhaps could compete pretty well with Windows 2000—if Windows 2000 does not represent a true innovative leap ahead from prior operating systems. Now Microsoft has a problem: competition without the power of network effects on their side. For when Windows 3.1 becomes free, so do all the applications developed to run upon it. Some consumers will still want the absolute latest Windows from Dell, and Dell will have to deal with Microsoft for it. But it won't be Windows or nothing anymore; it will be old Windows (and new third-party derivatives) vs. new Windows. The ability of anyone—Microsoft, Sun, anyone that might sooner or later lay claim to a proprietary standard that could become the dominant player—to call the shots indefinitely, leveraging today's dominance into tomorrow's, will be based upon competitive advantage instead of the rut of network effects and the dead-hand power of intellectual property.

How does this boil down to advice for Judge Jackson in the current Microsoft litigation, should he find against the company? David Post has suggested a general rule whereby the government would strip away copyright protection for computer software that has achieved market dominance.¹⁶ As a general rule, this seems difficult to apply—how would market dominance be found, and what components of an integrated software package would be thought to be “dominating.” Applied to the Microsoft case, this would resemble the compulsory licensing remedy. The licensing fee would simply be set at zero, and Microsoft would be compelled to release clean source code from which any and all competitors could crib.

The more comprehensive and self-executing solution that I suggest—a five-year copyright term for every piece of software, regardless of author or subsequent market success—requires new law. In the meantime, if indeed Microsoft is found to have abused its power, Judge Jackson could reasonably single out the release of Windows source code as a fair remedy, and a test of some of the benefits such a law could bring.

16. David Post, *Opening Up Windows*, AM. LAW., June 1998, at 83-84.