A Short History of Monopolies

Red Herring Magazine, June 1, 2000

Judge Thomas Penfield Jackson has ruled that Microsoft is a monopoly. Many see the verdict as unique because of its high-technology spin. But it is not that extraordinary. Antitrust law has been on a long and winding road since it was invented a century ago, and corporations in the past have found themselves in much the same kind of trouble that Microsoft is in today. The antitrust analogy that most resembles the Microsoft case is the 1945 Alcoa Aluminum prosecution, which forced the divestiture of Alcoa's Canadian holdings.

Is Microsoft really a predatory monopoly that vanquishes rivals? There's no doubt that the economic mechanism known as "network effects" -- which amps up the value of a system as it acquires more users -- has intensified Microsoft's market power and bolstered its Herring 100 standing because of the ubiquity of its Windows operating system. But Microsoft is hardly invulnerable. It lagged badly in the "browser war" with Netscape in the early '90s. Microsoft was able to catch up only by recognizing its mistake and developing its own high-quality browser. Even two of Microsoft's most avid foes, Silicon Valley lawyer Gary Reback and Oracle CEO Larry Ellison, have admitted that it's possible to compete successfully with Microsoft. Industry leaders have been vanquished before. It happened when IBM was the tech world's big kahuna. Free-market competition, which the economist Joseph Schumpeter memorably defined as "creative destruction," reduced IBM's market power, with Intel and Microsoft as the destroying forces. Now competition via the Internet from Linux and other open-source operating systems is carving away Microsoft's power in the industry -- something that will continue.

Microsoft will evolve or devolve. It should be free to do either without a shove from the government. Although the antitrust laws have been around since Congress passed the Sherman Act in 1890, economists have argued for decades that the laws should be cut back or even tossed onto the junk heap of failed public policy.

Evaluating the Justice Department's trust-busting goals requires understanding three things: the specifics of the Microsoft case, how and why the antitrust laws came about, and what economists and legal scholars have thought about the nature of competition in U.S. history.

Microsoft Focus

Early in the '90s, Microsoft's drastically improved graphical user interface-based operating system, Windows 3.1, tempted many away from the company's existing text-based operating system, MS-DOS. In the mid-'90s, Microsoft offered an even further enhanced product, the hugely successful Windows 95, which cornered as much as 90 percent of the operating-system market. The economics of pricing was Microsoft's chief weapon. The company gave substantial discounts to original equipment manufacturers (OEMs) that were willing to license Windows on a per-processor rather than per-copy basis.

Suppose that Windows was priced to OEMs at $50 a copy. At that price, a manufacturer wanted to install Windows on 60 percent of its 100,000 computers. The payment to Microsoft would be $3 million. Now imagine that Microsoft were to give the OEM a discount of 30 percent per processor whether or not the OEM installed Windows. At the discounted price of $35 per computer, the OEM would pay Microsoft $3.5 million. The additional cost of this deal would be only $500,000, or $12.50 per computer. With such pricing schemes, most OEMs chose to install Windows on all of their computers.

This policy held two benefits for Microsoft. The first, and most often noted, was that it helped Windows become the dominant operating system. This was good for Microsoft because of network effects: if a critical mass of people is already using a particular operating system, others are more likely to adopt it. But a second benefit, though less noticed, may be even more important. In the peculiar economics of software, each additional copy sold costs the company almost nothing. By charging an implicit low price to OEMs, Microsoft took in as profit almost all of that low price on each sale. What Microsoft did with its per-processor deal was what economists call multipart pricing. It's what airlines and other high-fixed-cost, low-variable-cost companies do every day. When there is a product that has an additional cost of close to zero -- whether the product is the use of an airline seat from San Jose, California, to Austin, Texas, or a softwarebearing floppy disk -- companies seek to make a lot of money from those who value the product a lot and some money from those who value it a little. That's how airlines stay in business, and it's one way Microsoft thrived. Economists have shown that the practice is often more efficient than straight single pricing because it profits from the segment of the market that values the product or service less.

Antitrust enthusiasts contend that Microsoft's pricing scheme gave OEMs an incentive not to bother installing a Microsoft competitor's operating system. They're right, of course. But is this unfair? An airline that charges a low price to a segment of the market takes business away from an airline that doesn't, but there's no similar antitrust case pending against United Airlines . Competition is the energy that drives the economy. That's why the internal Microsoft emails about trying to kill the competition meant so little when they were produced at trial.

Microsoft would love to be the world's only producer of operating systems. We don't really need internal emails to know that: all we have to know is that Microsoft's managers want to make money and figure out ways of taking business away from its competitors. Managers will lead the "kill the competition" cheer to motivate workers to improve Windows or to place that next cold call to an OEM.

Web of Intrigue

The competition, however, nearly killed Microsoft. In the mid '90s, when the Internet and the World Wide Web loomed, Netscape beat Microsoft to the market with its Navigator browser. At first, Netscape distributed Navigator free to noncommercial users. Though Microsoft's first Internet Explorer was inferior to Navigator, the company bundled its Explorer in Windows at no extra charge. Netscape, which eventually bundled its Navigator with email and other services for a price of $19, lost market share, reduced its own price to zero, and complained to the federal government about Microsoft's alleged unfair tactics. The result was the lawsuit. The question was whether the browser is an integral part of the operating system. Microsoft said it was and the Justice Department said it isn't. But it's a pointless question. Is a car radio an integral part of a car?

Yes for some, no for others. The real question is: why would Microsoft, which no one has accused of being dumb, want to charge nothing for its browser?
Some have claimed that Microsoft is engaged in predatory pricing, trying to knock Netscape out of business so that it can charge more for its browser once the competition is out of the picture. But companies don't usually cut a price to zero to knock out a competitor that previously charged zero. Worse, it didn't work: Netscape still has a large, albeit reduced, market share. Professor Ben Klein, an antitrust economist at the University of California at Los Angeles, offers a much more plausible reason that Netscape and Microsoft charged nothing for their browsers: they were after market penetration. Logging on to the Internet, writes Mr. Klein, is like entering a huge store in which shelf space is costless. A supplier to such a store -- a Web site in this analogy -- is willing to pay a lot so that customers see its banner first. So both Netscape and Microsoft had the same motive: maximizing returns they received from payments by advertisers. While the Justice Department sees antitrust violations in Microsoft's actions, many economists tend to see the competitive market economy at work.

After the evidence disclosed internal Microsoft discussions about crushing the competition, I got an email from an attorney friend who is not an antitrust lawyer. His 12-year-old had asked, "Isn't that what businesses are supposed to do?" My friend wrote: "So, how do I explain the antitrust laws to my son, who's not convinced that the Microsoft lawsuit is a good idea?" I answered that his child understood both competition and the antitrust laws -- maybe better than the Justice Department.

Mainstream economic thought fluctuates. From about 1776 to 1920, economists were skeptical about the advisability of antitrust regulation. The regulators gained credulity for the next 50 years, but the skeptics took over in the 1960s, '70s, and '80s. Regulators have since regained influence and held sway. Big cases like the Microsoft litigation spotlight flaws in the effort to legislate economic behavior.

The Smith Column

The skepticism starts, as does much in economics, with Adam Smith. When Smith used the word monopoly in his 1776 book, The Wealth of Nations, there were no doubts in his readers' minds that what Smith and his contemporaries meant was the grant of an exclusive license by the government. Smith devoted a large part of his classic book to attacking the Hudson's Bay Company, the East India Company, and other smaller monopolies granted by the British crown. Smith did fear that even when government was not involved, businessmen would conspire to fix prices: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends up in a conspiracy against the public, or in some contrivance to raise prices." But most economists who seek a case for antitrust in Smith's writing fail to quote his crucial next sentence: "It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice."

In short, although Smith was skeptical of the motives of businesspeople, he did not support antitrust laws. Very few economists advocated antitrust for the next 150 years. The push for such laws came from politicians and special interests.

In the late 1800s there began a dramatic transformation in the U.S. economy, the likes of which had never been seen before: the spread of railroads enabled companies to grow beyond their regional boundaries. Lower transportation costs allowed producers of many products to sell to a much larger market and shrewd businessmen exploited economies of scale and created large firms. In many industries, owners of firms combined in so-called trusts, a common-law device that was used to pool assets and have them run jointly in the interests of the owners. In many cases, these firms gained large market shares.

In the late 1880s, anxiety over the trusts' dominance led to a strong political desire for laws to limit their power. Economists at the time, however, were not involved in the fight for antitrust laws. No economists were invited to testify at the hearings on the proposed Sherman Act. Sanford Gordon, a modern economist who studied the social science journals, popular press, and books and articles from that time, reports that a big majority of economists believed that the trusts were procompetitive. Recently uncovered evidence from the era shows that they were right (see "Of Price and Men").

About 40 years after the passing of the Sherman Act, economists grew much more friendly to antitrust. The change can be traced to a dubious development in economic thought: a model called "perfect competition." By the 1920s, economists defined perfect competition as an industry composed of a large number of small firms, all producing exactly the same product and charging exactly the same price. That tortured and unrealistic view of competition still mars economics texts today. That's not the way the world works, and so economists comparing reality to the perfect-competition model found many imperfections. Businesses were doing things inconsistent with the economists' model: they were charging different prices to different buyers, tying the sale of one good to the sale of another, and requiring the retailers of their products to charge minimum prices. Long before criticism of antitrust law became widespread, Schumpeter put his finger on exactly what was wrong with the model of perfect competition and the antitrust policies it led to. In his 1942 classic, Capitalism, Socialism, and Democracy, Schumpeter wrote:

But in capitalist reality as distinguished from its textbook picture, it is not that kind of competition [i.e., perfect] which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control, for instance) -- competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.

A theoretical construct that neglects this kind of competition, wrote Schumpeter, misses the essence of capitalism and is "like Hamlet without the Danish prince." He argued that the prospect of earning high profits from temporary market power was a strong spur to innovation. The University of Chicago's George Stigler wrote that he and fellow economists had "mostly rebelled against such heresy, but it left its mark." Not enough of a mark. Throughout the late '50s to the '70s, most who strongly questioned antitrust never adopted Schumpeter's insights.

While economists continued to believe that tying and other big business practices were undesirable, courts increasingly found them illegal. Many thought even bigness itself was bad. Mr. Stigler, later to win the Nobel prize, wrote "The Case Against Business" for Fortune in which he advocated breaking up U.S. Steel into smaller companies.

Director's Cut

Eventually, Aaron Director, an obscure, economically literate law professor at the University of Chicago, began to question some of the conventional wisdom. He asked whether business practices that others considered anticompetitive might instead be ways of operating in a world that didn't conform to the perfect competition model. Mr. Director was a close friend of Mr. Stigler and the brother-in-law of the eminent economist Milton Friedman. Though he wrote very little himself, he motivated younger economists and, in 1958, founded the Journal of Law and Economics. From the start, articles questioned the alleged wrongs of predatory pricing, resale price maintenance, and other proscribed practices. According to Mr. Stigler, it was primarily under Mr. Director's influence that he and his "Chicago School" colleagues "moved away from the assumption that monopoly was almost ubiquitous in modern economies."

In 1998's Memoirs of an Unregulated Economist, Mr. Stigler wrote of his conversion to Mr. Director's way of thinking, "I now marvel at my confidence at that time [the early '50s] in discussing the proper way to run a steel company." Mr. Director's influence began to spread. Scholars questioned whether monopoly was so widespread and whether court rulings circumscribing companies' behavior were really a good idea. One person who learned a lot from both Mr. Director and Mr. Stigler was Richard Posner, now chief judge of the Seventh U. S. Circuit Court of Appeals -- the very jurist chosen by Justice Jackson to mediate the current Justice Department suit against Microsoft (he failed to broker a settlement). A number of other federal judges, especially Mr. Posner's colleague Frank Easterbrook and the former jurist Robert Bork, have also reëxamined antitrust. Among prominent economists and legal scholars, Benjamin Klein of UCLA and Yale Law School professor George Priest remain critical of antitrust policy.

One of the legal outcomes that Mr. Bork and others have lamented is the 1945 Alcoa decision. Although the judge who wrote the decision, Learned Hand, claimed that it would be wrong to find Alcoa guilty of monopolizing simply because of its success in capturing most of the market, he promptly contradicted himself:

It was not inevitable that [Alcoa] should always anticipate increases in the demand for ingot and be prepared to supply them. Nothing compelled it to keep doubling and redoubling its capacity before others entered the field. It insists that it never excluded competitors; but we can think of no more effective exclusion than progressively to embrace each new opportunity as it opened, and to face every newcomer with new capacity already geared into a new organization, having the advantage of experience, trade connections and the elite of personnel.

Mr. Bork commented in his 1978 work, The Antitrust Paradox, on both the Alcoa decision and another: "These cases are so firmly embedded in modern antitrust jurisprudence and are so widely admired as examples of skilled judicial handling of economic issues that I had better state plainly that they seem to me clearly bad law."

I had better state plainly that the Microsoft case is Alcoa revisited. Substitute "software" for "ingot," and Hand's words could apply today. Microsoft did not exclude the Netscape browser: people who wanted it could easily get it. But Microsoft did embrace each new opportunity (after falling behind on the browser) and it has "the advantage of experience, trade connections and the elite of personnel." Why, then, did Mr. Bork become a consultant to Netscape and an advocate of the Microsoft suit? He cites as explanation the 1951 case of Lorain Journal Company vs. the United States, in which an Ohio newspaper was found guilty of exclusive dealing for refusing to do business with any company that advertised with a rival radio station. But there doesn't seem to be much connection. Microsoft doesn't prevent OEMs from adding other browsers; it merely insists manufacturers include its own.

Inferiority Complex

Mr. Bork doesn't make the network effects argument that some of the post-Chicago economists and legal scholars use against Microsoft, so let's make it for him. The contention is that the huge demand for Microsoft's operating systems -- first DOS, then Windows -- has been due not only to their quality but also, unfairly, to the fact that Microsoft got there first. This first-mover advantage matters because of the network effects. Even an inferior product can become the standard if it gets a head start on other, better products. The fancy term for this is "path dependence."

Two classic instances of inferior products dominating, claim many Microsoft critics, are the QWERTY typewriter keyboard and the VHS videocassette recorder format. But the economists Stan Leibowitz and Stephen Margolis, in their 1999 book, Winners, Losers & Microsoft (Independent Institute), demolish that argument. They point out that the famous U.S. Navy study allegedly proving the Dvorak keyboard superior was authored by -- Dvorak. The VHS format was not clearly inferior to Beta, they write, and one of VHS's main virtues was that the tape was long enough to show a whole movie, something that many of us kind of like. Moreover, Beta had a head start. If there's anything to path dependence, that should have made it the dominant technology.

Does this mean that path dependence fails as a theory, or are QWERTY and VHS just bad examples? And since the issue here is Microsoft's dominant position in operating systems, are we locked into an inferior technology because of network effects and path dependence? Many experts in software development believe that we are. They find that what is needed to write software for Windows is clumsy and time-consuming. They see alternatives that are easier to work with, such as Macintosh OS X and Linux. Then they look at the fact that most of us ignorant consumers are quite happy with Windows, and they feel frustrated. Surely, they conclude, there is something to this lock-in effect.

And there is. But what overcomes it is marketing. Microsoft has done it well, and Apple Computer didn't, for a long time. Mr. Gates saw early that aggressive marketing was as vital as "insanely great" technology (Steve Jobs's description of the Macintosh). Jim Carlton's 1997 book, Apple: The Inside Story of Intrigue, Egomania, and Business Blunders, contains a revealing 1985 Gates memo to Apple CEO John Sculley. Mr. Gates, who wanted Apple to succeed because much of his profit came from selling Macintosh application software, recommended that Apple allow other manufacturers to produce the Mac. That way, reasoned Mr. Gates, Apple would "have the independent support required to gain momentum and establish a standard." This memo shows Mr. Gates as hardly the "Mac killer" that many believe him to be. More importantly, it shows that he understood network effects and thought carefully about the marketing strategy required to take advantage of them.

Even some of the most rabid Microsoft foes don't contend that Microsoft maintains its dominance without improving its product. Here's Gary Reback, the

Silicon Valley lawyer who has been so critical of Microsoft, interviewed by Red Herring in February 1998: "Before the advent of the Internet technologies, Microsoft was stagnating. Then along came Netscape and Java and all these other technologies. What happened? Microsoft started making better stuff. That's the way the competitive system works. No competition, no innovation."

And, as the Wall Street Journal editorial writer Holman Jenkins pointed out in June 1999, Oracle CEO Larry Ellison, after decrying Microsoft's bullying, stated on Fox 's Neil Cavuto show: "In the ten largest business-to-business Web sites, nine of the ten use Oracle. None of them use Microsoft. Microsoft's been in the database business for a decade and they continue to lose. We almost have Gates-like share in the Internet and it's the Internet that's driving the business."

So much for dominance. The fact is that Microsoft made money with proprietary operating systems. That was necessary at the time: someone had to own it in order to have an incentive to invest in it. We are probably better off that the operating system was closed. But new competition from open systems like Linux is breaking Microsoft's grip. And underneath Apple's OS X is NextStep, which some experts think is the greatest system ever invented. Apple's market share has tripled to 9 percent, up from just 3 percent a few years ago. One sign of the new competition: almost nobody plays games on Windows any more.

Trust Me

Adam Smith was right to be skeptical about antitrust laws. They remain a crazy quilt, a century's worth of conflicting economic and political thought. On the grounds of simple fair play, we should not hold businesspeople to laws that can't be clearly understood. Even the trustbusters concede the confusion. Two of antitrust's strong supporters, William Kovacic, a law professor at George Washington University, and Carl Shapiro, an economics professor at the University of California and a former high-ranking official in President Clinton's antitrust division, recently referred to the antitrust laws as "open-ended commands." Mr. Kovacic once wrote, "If one were to read all the laws and all the amendments carefully, one would find them a very poor guide to the legality of pricing or any other business practices." Such vague laws are more fitting in a fascist society than a free one. We should, at a minimum, pare down the antitrust laws to one: thou shalt not engage in price fixing. Or we could get rid of the antitrust laws altogether. Here's what the most famous economist in the world wrote about antitrust when he was a little-known consultant in 1962:

Whatever damage the antitrust laws may have done to our economy, whatever distortions of the structure of the nation's capital they may have created, these are less disastrous than the fact that the effective purpose, the hidden intent, and the actual practice of the antitrust laws in the United States have led to the condemnation of the productive and efficient members of our society because they are productive and efficient.

The author's name is Alan Greenspan. Like Judge Hand on Alcoa and Adam Smith on the limits of the law, his words can be seen to apply to today's antitrust case against Microsoft.