Roundtable: The Legacy of the *Microsoft* Case

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MICHAEL LINDSAY: The theme of this issue of Antitrust is "Looking Back and Looking Forward." Twenty years ago, the D.C. Circuit handed down its decision in *United States v. Microsoft Corporation*,[1] which made a significant contribution to the law of monopolization and remedies.

We've assembled this panel of distinguished scholars and practitioners for a roundtable discussion on "The Legacy of Microsoft," and we thank each of you for taking the time to participate. This roundtable was conducted on Friday, February 5, 2021

KAREN KAZMERZAK: Let's begin with a big-picture question: What do you consider the single most important legacy or impact of the *Microsoft* case?

DOUG MELAMED: I think the most important doctrinal contribution of the case—although I'm not sure it actually has had as much impact yet as it should have—is that the court made clear that Section 2 of the Sherman Act can be used to address conduct that makes uncertain potential future competition less likely—in effect, conduct that harms competition by raising entry barriers—even where there is no evidence of harm to competition in the relevant market in the past and where price evidence and price effects are not a factor.

BILL PAGE: One of the most important legacies of the case has been the revival and transformation of the public monopolization case after a long period of desuetude. It has superseded *Alcoa*,[2] to the benefit of antitrust law, as the most influential court of appeals decision in antitrust. I would characterize it as a broadly Chicago School resolution of a post-Chicago government case.

It also applied a burden-shifting framework to the conduct element of the case. For the monopoly power element, it recognized the theory of network effects as a legitimate

basis for monopoly power, but for the conduct element it made an important innovation in its burden-shifting/rule-of-reason framework.

When I teach this case, I suggest that the most important step in that framework is the first one because it resolved most of the liability issues in the case. The first step requires a showing of anticompetitive effect—meaning injury to competition and to consumers, not only injury to nascent rivals—and that meant any time Microsoft, even as a dominant firm, reduced its price or gave away its products or made them better, its action could not be considered anticompetitive. The case has also provided a template for many of the recent cases against the newly dominant tech companies, including *United States v. Google*, in which the DOJ invokes *Microsoft* at the beginning of its complaint.[3]

RENATA HESSE: I have two thoughts about the answer to this question. One is that I really do think it was a very, very important case, and I credit Doug Melamed and many others who prosecuted the case at a time when a case like this had never really been brought. They demonstrated to the American public and to corporate America that the Antitrust Division was capable of winning a complicated technology case against a very big, very popular, at the time, company. I think that was really a very significant marker to lay down in terms of how people thought about antitrust enforcement and how Silicon Valley and people in the technology world thought about antitrust enforcement.

The second is a slightly more parochial point, and that is that whenever anything happens, whether it's something about the Tunney Act or a legal question about Section 2, you can almost always point to an example from the *Microsoft* case. You can always find something, some piece of law or process—a hearing on a Tunney Act process had never happened before—in *Microsoft*. I think it remains durable not only because the decision is very well-crafted, but also because of the breadth of the issues that were covered in the case.

LEAH BRANNON: I agree with a number of the comments that others have made. I think one of the most important aspects of the D.C. Circuit's 2001 *Microsoft* opinion was the rule of reason burden-shifting framework. I think it's worth noting that the parties were urging other standards. Microsoft was arguing that much of its conduct was essentially per se legal, and it pointed to the standard applied by Judge Williams in the D.C. Circuit *Microsoft* case from three years earlier, under which any plausible claim of a procompetitive benefit was enough to immunize otherwise anticompetitive conduct.[4] The DOJ, for its part, was promoting a "no economic sense" test.

I think the D.C. Circuit's decision to adopt the rule-of-reason framework was an important one, and it's one that has been cited extensively in the two decades since.

ANDY GAVIL: To pick up a few points already made, you can view the significance of Microsoft's encounter with the antitrust laws narrowly in terms of doctrine, but also procedurally in the broader context of all the litigation that happened as a consequence of the federal and state governments' prosecution. This is one of the points that Renata made. You can find a great deal of law in the collective *Microsoft* cases. So many states resolved *Illinois Brick*[5] issues in the follow-on cases, just as one example.

But in terms of the D.C. Circuit's decision, its most significant aspect is that it was a government win in a fully litigated Section 2 case. That it remains significant is a testament to the importance of the government litigating cases to conclusion. We wouldn't have any of the effects of the case that have been mentioned had it not been fully litigated. It showed that a court could deal with economic ideas, both new and old, and that it could integrate those ideas into a sensibly structured legal framework. As others have already observed, it synthesized the prior Section 2 law in a very skillful way.

But, as any of us who have litigated a Section 2 case or studied them knows, there are not very many *Microsoft*s out there; there are not very many government-litigated wins in monopolization cases. I think *that* in some ways, as much as its technology context, is part of its really significant legacy and why it is the "go-to" case. Look back at *Microsoft* and see what other successful Justice Department prosecutions the parties and court had to rely on—primarily *Alcoa*, *Lorain Journal*,[6] and *Grinnell*.[7] After *Microsoft*, *Microsoft* becomes the "go-to" case in subsequent Section 2 cases, exclusive dealing cases, cases talking about network effects and switching costs and a whole range of issues that the case analyzed. It becomes important for all of those things.

DOUG MELAMED: Let me elaborate a little bit on Andy's last point about the importance of litigating these cases and getting judicial decisions. At the time the case was brought, much of the focus and a lot of the emotion was on the desktop operating system problem—"Microsoft had a monopoly; what are we going to do about it?"—and there are echoes of that today in the talk about using the antitrust laws, not just to solve antitrust problems, but to deal with broader concerns about the tech platforms. I think the more important issue was about antitrust law. It was very important that the case not just be settled for a remedy that might ameliorate the desktop operating system problem—the horse was largely out of the barn about that—but that it be litigated to judgment so that we could establish some of the legal propositions that we've talked about. I think Andy's observation about that is right on.

ANDY GAVIL: It may have done more as a legal precedent than it did for the immediate and subsequent history of competition in the desktop operating system market.

TOM COTTER: Let me pose a question relating to technological change and dynamic efficiency.

Toward the very beginning of the D.C. Circuit's opinion in *Microsoft*, the court observes that technological change can potentially outpace litigation and raises the question whether that limits the court's ability to assess liability and adequately address the harm alleged. My question for the panel is whether the courts have caught up since 2001, or what is or should be the solution to this problem.

DOUG MELAMED: I think the concerns about technology and antitrust are largely misplaced. I don't think there's anything about technology that poses a particularly new challenge to antitrust law, either antitrust doctrine or antitrust institutions. Technology often raises difficult fact questions, difficult economic questions, but they're not conceptual or doctrinal. We don't need new laws to deal with them.

Having said that, I do think there's a big problem in antitrust law that the increasing importance of technology and technological change exacerbates. Antitrust law has become increasingly technical and arcane. I think a lot of generalist judges don't understand it. Once we get beyond simple per se offenses or things judges can read about in an "on all fours" precedent, they're often at sea.

I think that, consciously or unconsciously, judges fall back on ideology and preconceptions to deal with difficult issues. It's a serious problem for antitrust law, but I don't think it's a technology problem except insofar as technology sometimes raises difficult issues and brings that problem into sharper focus.

BILL PAGE: It seems to me that the issue of technological change and its effect on a decision like *Microsoft* depends on four questions: what is the rate of technological change; how efficient can the court be in case management; what are the claims the courts will have to resolve; and finally, the legal standards. I think the case has to be in the "sweet spot" of those factors to have a chance of being successful.

Obviously, in computer software and hardware the rate of technological change is high, so humility is appropriate. There are limits to what courts can do well, even with the most efficient procedures and the strictest court supervision, and I think there are some cases where the technology is changing so fast that litigation can't practically influence it. It is possible, though, that efficient case management can make a big difference. We have the bad example of the *IBM* litigation from the 1970s, where the case lasted 13 years before it was finally dismissed and the then-Assistant Attorney General characterized it as "without merit." My coauthor,[8] John Lopatka, later described the litigation as "a monument to arrogance" in an article in the *Antitrust Law Journal*.[9]

On the other hand, I think *Microsoft*, picking another significant aspect of the case, is an example of good case management. From the filing of the case to the conclusions of law in the district court was a miraculous two years, including lengthy settlement negotiations. That was possible only because of a very expeditious trial using innovative methods, including submission of a limited number of witnesses' direct testimony in written form. The courts were very concerned throughout with keeping up with the rate of technological change and tried to accommodate it at every stage, including in the equitable remedy.

Finally, one of the most important factors in deciding how to address technological change has to do with the issues in the case. In *Microsoft*, of course, there were issues having to do with product design, which made the problem of technological change more challenging, but in many of the recent cases that's not true. *United States v. Google*, to mention one, is primarily about exclusionary contracts, so, as complex as Google's technology is, the litigation may not pose the same challenges.

LEAH BRANNON: I think that *United States v. Microsoft* shows that antitrust litigation can keep pace even in a high-tech market. Two years from filing of the case to a decision in the district court and then another year to resolution on appeal is not bad.

BILL PAGE: I would add that there were costs associated with having such expeditious trial court proceedings. I think we can see gaps in the proof that the court identifies—failing to prove a browser market, for example, or Microsoft failing to offer justifications for some of the things they did—that might have been different had the proceedings been more prolonged.

ANDY GAVIL: One other important thing to remember is that when the government filed its case in May 1998, it was seeking a preliminary injunction to stop the shipment of Windows 98 with an integrated browser. Judge Jackson made what turned out to be a pretty important decision that had both positive and negative effects. He decided to forgo a separate PI hearing and accelerate the trial, but, as a consequence, Windows 98 shipped with an integrated browser and, because of that, the three-year lag meant that the market shifted during that time.

So even though I agree with everyone that that was an extraordinary piece of work by the judge and he did use, as Bill said, a lot of very innovative techniques to move the case along, his decision not to entertain a preliminary injunction allowed the market to change even in that time, and I think that was a fateful decision.

But that goes to your point about technology. It depends on the conduct, as others have pointed out, and the framing of the case, as to whether or not a quicker resolution, something like a TRO or a preliminary injunction, is warranted. The procedural needs of a case that presents a more

imminent threat to competition can be quite different from a case where you are looking retrospectively at conduct that has been out there for a while.

DOUG MELAMED: You're talking about a choice between intervening on a sparse record or awaiting a fuller exposition of the facts. There is another way to deal with the issue of future harm, and that is to make antitrust law an effective deterrent, with damage remedies, civil fines in government cases, or injunctive remedies that might be costly to defendants. If we have effective deterrence, litigated cases could be seen as methods for getting at the facts, evolving legal doctrine, compensating victims, and promoting deterrence, rather than primarily as a source of regulatory intervention in the market.

TOM COTTER: Let me follow up with a related question. A few years after the *Microsoft* decision, the Antitrust Modernization Commission rejected calls for any sweeping changes to antitrust law on the ground that antitrust was already supple enough to deal with issues arising from new technologies, the new economy. Do you think that was true then? Do you think it is still true, or do we need some further reforms?

RENATA HESSE: I think we're seeing a push for further reforms basically as we speak. We have a legislative proposal that Senator Klobuchar just put out, and it will be interesting to see what happens with that. I have long been of the view that these statutes, though old, are flexible and supple enough if law enforcers and also courts are brave enough to evolve as not only the economic and the legal theories, but also technology and facts, evolve.

Just to circle back to something that Doug said, which I think is important, and that is that the practice has gotten incredibly technocratic. Some of that is economic but some of it is also legal. Part of what I think has been happening here is an effort and desire constantly to put things in particular boxes—is this raising rivals' costs or is this a bundling problem; and if it's a bundling problem we look here, and if it's raising rivals' costs we look over here—instead of trying to describe in plain English what is the effect that the merger or the conduct is having and how is it impacting competition? And, if it is harming competition, how is that harm being felt by consumers?

I think we've really gotten away from talking about cases and litigating them in ways that are more descriptive and narrative, and instead we spend a lot of time working with economists and complex models and these difficult analytical expositions. What we do, in my view, is really not that hard. It's very interesting and compelling, but it's also fairly common sense conceptually, whichever side of the "v" you may be on. I think that if we did a better job explaining to judges what the problem is, or why it's really not a problem, we might end up with more decisions, and decisions that actually make sense.

When you read the decisions coming out recently—I was reading the Ninth Circuit's decision in *Qualcomm*[10] this morning, and it's really hard to understand what the court was doing. I think the court was just really confused. Whether that was because the FTC didn't do a good job explaining its claim or Qualcomm put on a really good defense, it's pretty clear from reading that decision that the court really had no idea what was going on.

ANDY GAVIL: I was just going to add to Renata's point. An irony of antitrust is that the flexibility that has allowed antitrust to move in different directions over time also allows flexibility to write really bad decisions and to take the law in a wrong direction. Part of the impetus behind legislative reform today is to readjust the scope of judicial discretion, given how it is being exercised by judges, by reestablishing some foundational legal concepts, like presumptions, that might point judges in a better direction.[11]

Right now we are getting a lot of very mixed decisions and mixed messages from the courts. Many are pointing in the direction of increasingly more demanding burdens than ought to reasonably be imposed on plaintiffs (public and private) to get past that first step of demonstrating probable tendency towards anticompetitive effect. In response, some of the language in the bills is designed to modulate that standard in a way that might hem in the discretion of judges inclined to throw down what appear to be a range of impediments to getting past even the early stages of a claim.

DOUG MELAMED: There clearly is a push, as Renata said, to change antitrust law in some ways. I think many of us on this panel think the law has gone too far in the direction of avoiding false positives, making it excessively difficult for plaintiffs.

One way to recalibrate the law is what Andy was suggesting—to have shorthands, simple rules, presumptions like *Philadelphia National Bank*.[12] The idea is that we're better off having simple presumptions that are enforceable than relying on judges to make difficult case-by-case assessments. Shortcuts like that will necessarily result in mistakes in individual cases, but it might well be that imperfections in the shorthands will lead to fewer mistakes than errors in application of principles that call for case-by-case economic and factual analysis.

It is not clear that that kind of solution can work everywhere. Antitrust law is a law of general application that applies to almost all commercial conduct that touches interstate commerce. Perhaps more important, it's a law of decentralized enforcement; almost anybody in the world can bring an antitrust case if they have a plausible claim of having suffered antitrust injury on account of a violation, and they can bring antitrust cases in hundreds of district courts around the country. So, necessarily, antitrust law has to be administrable in that kind of a context, which I think means some kind of simplifying, clarifying rules.

It might be, however, that shorthands that are optimal for a law of general application that is enforced in a decentralized manner are not well-suited for addressing certain important problems, including some of the problems created by the dominant tech platforms. Take *Trinko*[13] as an example. Refusal-to-deal law ought to be fairly narrow because we don't want everybody coming in and saying, "I want to piggy back on a monopolist's invention." That might be different for a new social network, for example, that wants to interoperate with Facebook. Maybe we need a specialized law for certain kinds of specialized problems.

LEAH BRANNON: I agree with the Antitrust Modernization Commission's conclusion that we don't need dramatic changes in the antitrust laws to reach anticompetitive conduct. I think the legislative proposals that Renata mentioned are well-intentioned but misguided and would harm U.S. consumers.

Some observers see *Brooke Group*[14] as a pro-defense case, but I see it as a pro-consumer case. If the defendant has low prices but there are no barriers to entry, there is no risk of the defendant driving all of its competitors out of the market, jacking up prices, and more than recouping its losses. That means that the defendant is just offering low prices to consumers. Competitors might not like that, but it's a good thing for consumers. I think *Brooke Group* offers the right legal framework if you're focused on consumers as opposed to competitors.

In contrast, if you look at jurisdictions that have adopted an abuse-of-dominance standard like what's being contemplated in New York, they have protected competitors at the expense of consumers. For example, in the European Union an abuse-of-dominance-through-predatory-pricing claim doesn't require likely recoupment, which means that low prices can be prohibited even if they would benefit consumers in the short and long run.

I don't agree with the premise of some of the recent legislative proposals that the U.S. antitrust laws have become so technical that monopolization actions can't be brought. I believe there are currently around 800 monopolization cases pending in U.S. courts, and those cases run the gamut. They include cases that are well-supported, serious monopolization claims with real prospects of success. And they also include what the Supreme Court in *Twombly*[15] called "anemic" antitrust actions, where litigants are using massive discovery expense to press for settlement of weak claims.

In short, there is no need to radically depart from existing monopolization law to allow plaintiffs to bring and win legitimate antitrust cases.

KAREN KAZMERZAK: I'd like to shift gears with another question relating to a 2018 op-ed article by Senator Richard Blumenthal and Professor Tim Wu in *The New York Times*,[16] in which, they argued that innovation surged after the *Microsoft* decision, including the introduction of new Web browsers and the rise of what is now big tech. In your view, what explains that new entry and how has the *Microsoft* decision shaped the current landscape?

BILL PAGE: I went back and read that op-ed. It makes some pretty strong claims, that but for the case Microsoft would have continued to dominate the browser market, which they could then leverage into search, social media, and video streaming, so all of the other tech giants that are so prominent now would never have gotten off the ground. It was interesting that they didn't say that the Windows phone would have crushed the Google Android and Apple phones, so I guess that would have been a stretch.

But I think there's really no way to draw that kind of causal relationship. The flood of innovation, especially on the Internet, is so powerful I doubt that any firm, even Microsoft then, could have held it back. I tend to agree with Dave Heiner, who wrote an article about nine years ago in the *Antitrust Law Journal*, called "*Microsoft*: A Remedial Success?"[17] The point of that article was to talk about the rate of technological change and the emergence of all of Microsoft's real competitors, not nascent competitors—including Amazon in Web services, Google in the browser, and Facebook in social media. Windows was static in sales, and all of the growth was in the handheld devices running on other operating systems and Internet-based services.

He attributed this—and I think this is right—to cross-platform innovation on the internet itself, including the use of HyperText Markup Language (HTML), which is completely cross-platform and accessible by any browser. But then he also cataloged the changes in Microsoft's behavior after that case, not only in the compliance with the pretty extensive remedies allowing greater OEM freedom, exposure of APIs, and exposure of protocols for communication with servers, but also its endorsement of interoperability, and support for industry standards and data portability. I think his conclusion is the right one, which is, we can't say that the rate of technological change is attributable to the decision but at least we can say that because of the decision Microsoft didn't do anything to hinder it.

RENATA HESSE: A couple of points in addition to Bill's. I do think what we are seeing today is actually a manifestation of what Microsoft feared, and had Microsoft been able to stop that, I don't think we would see a technology landscape like the one that we see today. I think other things might have happened, but I don't think we'd see the internet and the browser essentially beginning to function as a cross-platform facilitator of lots and lots of choice for people.

I think the antitrust agencies should be concerned about today's technology companies if they can demonstrate that they are using the Microsoft playbook to impair that kind of cross-platform interoperability. The ability of consumers to switch, and to switch easily, between devices and platforms is an important part of pushing innovation and of the evolution of technology markets. That's one point.

I also think that Microsoft was under a tremendous amount of scrutiny. Having been one of the people who was literally sitting in Redmond in conference rooms talking to their software engineers about what they were doing, they were really being watched all the time. Whatever anybody wants to say about the remedy, I think it really slowed them down. Now some might argue—and I think Microsoft felt—that that impaired their ability to innovate and to compete. But there's no question that just the presence of that litigation and the remedial process had an impact on the company, and I think that impact did open the way for other companies to emerge into the marketplace.

What people are worried about now is, is this happening again and should the government intervene again to make sure that these large tech companies don't do what Microsoft was trying to do, or at least are not successful in doing that if that's what they're trying to do.

BILL PAGE: I think that part of the point of that op-ed was this idea of the enforcement agency hovering over you and scrutinizing your every move, which Microsoft dealt with for years. Blumenthal and Wu thought that was a beneficial effect of the decision. I would contrast that with the *Qualcomm* decision, where the court seemed to go out of its way to say that dominant firms can be hyper-competitive, as they put it, and have sharp elbows, and that's part of the innovative process.[18]

LEAH BRANNON: I agree with Renata that the fact of the DOJ and the states and the Technical Committee watching Microsoft played an important role in the growth of all the platforms we see today, probably more than the consent decree itself, which was quite weak, in my view. I think without that scrutiny Microsoft would have run its same playbook again, deceiving third parties and engaging in similar misconduct.

In her role at the DOJ, Renata probably met with many technology companies that were deeply concerned about being wiped out by Microsoft. But Microsoft did not crush Google, Facebook, Amazon, Apple, and the many incredibly competitive U.S. technology companies we see today.

ANDY GAVIL: The Blumenthal and Wu piece might provide incomplete narratives. For one, although the piece did not promote this view, there have been former Microsoft executives who have argued that the antitrust prosecutions against Microsoft made it less aggressive and impeded its ability as a competitor.

As I argued in my book co-authored with Harry First,[19] Microsoft got into antitrust trouble in the 1990s because it had already fallen behind in terms of innovation. Bill Gates acknowledged as much in "The Internet Tidal Wave" memo that was a part of the case record. When Microsoft missed the full significance of the internet, it turned to exclusionary strategies.

In response to the Blumenthal and Wu piece, I would argue "yes," the prosecution of Microsoft likely gave its emerging rivals more breathing room than they might otherwise have had. But the competitive opening was there in part because Microsoft had already fallen behind. Finally, it seems likely that Microsoft has flourished more recently due to the combination of the antitrust case and the emergence of new and significant competitors. Instead of continuing to concentrate its competitive strategy solely on its still impressive dominance on the desktop and laptop, it diversified and has quietly and consistently risen to the top of the technology world. Antitrust enforcement and competition may have been the much-needed impetus it required to re-engage as a competitor.

BILL PAGE: It's interesting that Microsoft, even though its total revenue is far greater than, for example, Facebook, is never mentioned as a matter of concern from an antitrust point of view.

DOUG MELAMED: The current tech platforms—apart from Amazon—involve information and communications; and they involve social disintermediation and political disinformation. These have been hot-button items in America for decades. Antitrust enforcement has always been particularly aggressive with the then-dominant communications medium, starting with motion pictures, broadcast television, and then cable television. So I think the problems of the current tech platforms are very different from *Microsoft* because of those additional features. The current issues transcend the more narrow economic concerns that *Microsoft* and antitrust law focus on.

BILL PAGE: On the other hand, the complaint in the *Google* case filed last fall accuses Google of learning from Microsoft's playbook in its insistence on exclusivity and default placement. There are different ways of learning from the *Microsoft* opinion.

TOM COTTER: Following on from some of these comments, maybe Doug's in particular, Blumenthal and Wu and others have argued that *Microsoft* notwithstanding, antitrust enforcement over the past 20 years has become too fixated on price increases as the chief harm to consumers and has not been paying adequate attention to other potential harms, such as decreased innovation, reductions in quality or service, other less quantifiable considerations.

Do you think that that's right? Should antitrust be focusing exclusively on price and output? Under what circumstances might it make sense to challenge conduct that has nonprice effects that nevertheless could cause anticompetitive harm?

DOUG MELAMED: I don't know what, if any, cases the enforcers passed on because they didn't have price effects

in them, so I really can't comment on the first part of your question.

But more substantively—and I think this is a really critical point—the idea that antitrust law is fixated on price is fundamentally wrong. All antitrust offenses have two elements: (1) the creation of market power (2) as a result of anticompetitive conduct. Nothing in that statement of the elements of an antitrust offense has anything to do with price. The reason is that, when someone gains market power, it can be presumed that that power will be used to the detriment of trading partners, commonly—maybe most often—by raising price, but not necessarily. It could be, as Renata and others have said, diminished innovation, reduced choice, reduced quality, and so on. Or, as Learned Hand noted in *Alcoa*, it could be by sloth. How the market power is used is not material to the offense, and in principle there is no need to know or even predict the particular manifestation of the ultimate harm.

To be sure, price can be relevant and illuminating. Economists can build models that estimate what the price effect would be, if the defendant chose to exploit its market power by increasing price. If the conduct at issue had happened sometime in the past and it was followed by a price increase, then that would tend to corroborate the suspicion that there was an increase in market power. If the allegedly anticompetitive conduct involves price—predatory pricing or bundled discounts or whatever—then price becomes important. But in that respect price is no different from any other kind of behavior that might be part of an allegedly anticompetitive scheme. And because price data are precise, measurable, and often readily available, economists and lawyers naturally look for price data as evidence. But, while price is often relevant and illuminating, it is not conceptually material to antitrust law.

I think the *Microsoft* case demonstrates that. There's nothing of any consequence about price in that case. Microsoft used non-price anticompetitive conduct to reduce the likelihood of future competition. Browsers were given away for free. Microsoft argued briefly that it didn't have market power in operating systems on the ground that the price predicted by the Lerner Index would be much higher than the price it actually charged, but the court correctly gave that argument short shrift.

ANDY GAVIL: I would generally agree with Doug. I think that this particular criticism has been greatly overstated. I also agree with Doug that *Microsoft* is an illustration of such a case when you are dealing with nascent competition. The case was not about price; there were no overcharges alleged in the government's case. The question of overcharges became very important in the private cases, however, and, indeed, the private cases had a very difficult time establishing damages because the core theory of the case was that future competition had been eliminated. It became arguably very speculative to try to estimate when that competition would have happened and what impact it might have had on the price of Windows.

The government case could easily be understood today as being about innovation; quality of the product; and the competitive process—interfering with whatever competitive future might have unfolded. And as the court of appeals noted, the risk of any uncertainty about that future was properly borne by Microsoft. So I think this particular criticism has been very overstated, as Doug said, for specific political reasons as a basis for criticizing the current state of antitrust law.

Having said that, I think the criticism has a degree of weight when you look to what happens in some litigated cases. The issue comes up in merger cases, for example, where judges have come to expect evidence of quantifiable price harm, even though predictions are at work. That has become a challenge in litigating mergers. Requiring quantifiable price effects loses track of the incipiency standard and it loses track of other types of theories of why a merger might be anticompetitive, particularly when you're talking about the acquisition of a potential or nascent competitor whose products or services have yet to hit the market.

So I think that there is some truth to the idea that some cases have overemphasized price but it is not true that antitrust as a whole is fixated on price. That critique has been manipulated as an argument to serve some ends, but it is not an accurate portrayal of the overall state of antitrust.

BILL PAGE: Except, as you say, in the follow-on cases, where presumably plaintiffs would have had to prove some sort of increase in price to show damages.

ANDY GAVIL: Yes, I think that's right, Bill. Again we come back to what we are talking about, the collective *Microsoft* cases. The rivals who brought cases needed to show lost profits. The consumer class actions struggled to show overcharges. In either event, you do need to put some kind of number on damages if you're suing in a private case and you're seeking treble damages, so those cases do wind up very focused on price because it's the measure of damages being sought. That's different, however, than requiring increased prices to establish anticompetitive effect, especially in a government case.

RENATA HESSE: I do think—this sounds like we have a chorus of agreement here—that the big issue is that in the cases that get to trial, and where there are decisions, there is a demand for some quantifiable demonstration of harm and, as everybody has just said, price is the easiest way to do that. I have a very distinct recollection, for example, when we were litigating the *Oracle/PeopleSoft* merger trial, that one of the big issues we thought about was this kind of leapfrogging innovation that we could see in the documents. That never found its way into Judge Walker's decision, which was for a variety of reasons very focused on demonstrating that

the transaction did not violate the antitrust laws, but that was a big issue we cared about.[20]

And there are matters that I worked on more recently when I was at DOJ where the primary driving issue of concern was innovation and harm to innovation. Those cases just don't end up seeing the light of day in any kind of decision that somebody could look at. But I do think that there is room for it in the law, there is room for it in the consumer welfare standard, and it actually is something that people do take into account and really think about and worry about.

LEAH BRANNON: I agree with that. The antitrust agencies in the merger context routinely look at nonprice attributes of competition, whether that is innovation or something else. I don't agree with the notion that current antitrust analysis ignores non-price attributes of competition.

I do think there have been some recent calls to untether antitrust analysis from competition, though, and I have much more concern about that. In my view, it would be a real mistake for the DOJ or the FTC to use an antitrust investigation to try to regulate environmental effects, privacy, labor issues, or other conduct of the parties where those issues are not important nonprice attributes of competition. These other issues are important, but they are appropriately left to other more expert authorities that can systematically address market failures in a market-wide fashion, not an ad hoc and muddled basis.

KAREN KAZMERZAK: I'd like to address something that was mentioned earlier: the D.C. Circuit's rejection of the district court's order to break up Microsoft. In retrospect, was that the right decision; how has that decision shaped enforcement actions against other alleged monopolists; and what implications does it have for current and forthcoming litigation against big tech?

BILL PAGE: I think the notion that the remedy released a flood of innovation and that, notwithstanding that, we ought to have required divestiture in the *Microsoft* case as well—I don't think those can both be true.

I believed at the time, and I believe now, it would have been a terrible mistake to require a so-called vertical divestiture of Microsoft. We can talk about this all day, but it seemed to me that there were very clear, measurable, and certain costs, of trying to do that, and the benefits struck me as extremely speculative. It wouldn't have introduced immediate competition. It would have created two vertically related monopolists and immediately raised the threat of double marginalization and would have harmed consumers. In addition, there would have been the loss of human capital to the operating system company, which benefits from being linked to the apps operation in Microsoft. Only over a long period of time was there any prospect, that as the government contended, the apps company could have evolved into a separate platform.

So I personally think that was the right decision. Of course it was in a new administration, but the decision not to pursue the structural remedy was definitely the right one at the time.

ANDY GAVIL: One lesson is that if there is to be an attempt at any kind of structural remedy going forward, you have to have a hearing and support it with evidence. That was a big mistake that the judge made. He basically took the attitude that the court of appeals was going to do whatever it wanted with respect to remedy; he had spent all the time he wanted to spend on the case.

And one could even fault the DOJ for grabbing the win and getting the breakup order. There was obvious risk without any hearing and evidentiary basis that the remedy would not withstand appeal. They argued that there had been sufficient evidence in the liability phase.

But whatever you think of the theory of the breakup, one certain lesson of the way Judge Jackson handled the case was that you can't just skip the remedy at the end; you have to have a serious hearing—it was a serious remedy; breaking up a successful company involved certainly a degree of risk not just for the company and for markets but also for consumers.

And when you are talking about—maybe this comes back to a point that Tom made earlier—technology markets, it's not manufacturing plants that you're necessarily splitting apart, it's people and a firm's human resources. There was no guarantee that, if a breakup had happened, the human resources would have stuck with the new organization. It might have been quite disruptive.

So, I think that there is just one glaring lesson out of that, which is you have to think about remedies early on, and if a structural remedy is part of the goal, you have to make the case for it. Certainly, the *Microsoft* D.C. Circuit decision set a high bar for that, but perhaps Judge Jackson did a disservice to future structural remedies because the court set that high bar partly in reaction to what he had done in not holding a hearing.

DOUG MELAMED: I agree with almost everything Andy said. The court of appeals did the right thing. The district court should never have ordered the divestiture remedy. There was no discovery, no record, on the cost of disassembling the company or on the predictable double marginalization that the remedy would have caused, at least in the short run.

I think the theoretical case for the divestiture remedy was pretty good. I'm not sure it was necessarily compelling, but it was not a crazy idea. But without a hearing, there was no basis for the remedy.

The one thing I disagree with Andy on is the idea that the government should not bring a case until it knows what remedy it wants. I'm not sure that's right. Sometimes it's not until the end of the case that you actually know what violation you have proven and what the facts are. And as I suggested earlier,

a case can be very valuable if it helps establish good legal principles and enhance the deterrent benefits of antitrust law, even if the equitable remedies are of less value.

I want to add one other thought. One of the unfortunate legacies of the saga of the structural remedy in the *Microsoft* case is that I think many people construe the *Microsoft* court as having said or reinforced a preconception that structural remedies are appropriate only where there is an unlawful merger or aggregation of business assets. I think that would be a mistake as a matter of principle. Structural remedies are presumptively, in my view, better than conduct remedies because the latter are almost always in tension with a law designed to promote competition. So I think structural remedies should always be available in principle, depending on the facts and the equities.

ANDY GAVIL: I would just quickly correct one thing. I wasn't saying that you must absolutely know at the start of the case what remedy you are going to seek. I agree with Doug that as the case unfolds that the possible remedies become clearer, especially once the scope of liability has been established. But I do think you have to have some plan or some idea at the start of what the goal of your litigation is going to be and what it is that you think you can do that will improve competition. It may not be the final word, just like liability may not be the final word, but I do think you have to have some idea about it.

RENATA HESSE: I agree 100 percent with that. I have again very vivid recollections of getting to the end of a case or having a court ask, "What's your remedy?"—and this was during one of my various times at DOJ—and really having to work hard to figure out what we thought would work to resolve the harm to competition that we were litigating. It's not that we didn't know what we were doing when we filed the case. It's just that sometimes these remedies are very, very hard to craft. A structural remedy—I agree with Doug—is likely to be much more effective, much easier to enforce, but it doesn't always fit, particularly in these monopolization cases.

And figuring out how to write a behavioral remedy in a monopolization case is really hard—I remember thinking about this in the *American Airlines*[21] predation case—how do you write out on a piece of paper what the right standard for predation is and what rules a defendant would be guided by in terms of how they could think about their costs and their expansion in view of a liability finding? It's very difficult sometimes to write a clear rule that can be followed and, if not followed, enforced.

I think people do overlook that a little bit too much at the beginning, and I think people often don't think all the way down the path when they are drafting the complaint—how are we going to describe what we want them to stop doing in a way that is neither too narrow nor too broad?—and that's a very important exercise.

DOUG MELAMED: One reason for injunctive remedies is to terminate the unlawful conduct. A plaintiff has to be able, when it files the complaint, to articulate what it is that made the conduct unlawful, where the defendant crossed the line. That is part of the liability case, and an injunction ordering a cessation of that conduct follows from the liability theory of the case. The plaintiff ought to have that in mind at the outset.

But the more difficult remedy issues, which I thought we were talking about earlier, involve restoring competition to a market where competition has been injured. That's very fact-dependent. I don't think the plaintiff has to think about that at the outset of the case.

ANDY GAVIL: A good example, Doug, in the private cases was Sun's attempt to get a "must-carry" remedy, which the Fourth Circuit refused to grant.[22] That was a mandatory injunction—not a prohibitory injunction, but a mandatory one—trying to order specific conduct to be done. We could debate what kind of standard that should require—the Fourth Circuit imposed a very demanding standard—but that was a remedy that, like a structural remedy, was designed to somehow repair the market. But Sun lost in its quest for that as did the states.

BILL PAGE: There was a presumption in the *Microsoft* case, it seemed to me, at the remedies phase of preserving interoperability. Even in areas that were not at issue in the case—such as the communications protocols that turned out to be the biggest sticking point at the remedies phase[23]—it seemed to me the goal at that stage was interoperability. You can see that presumption carried forward into other cases, like the settlement of the FTC's case against *Intel* about ten years ago, when one resolution was requiring Intel to maintain interoperability through a specified protocol. I think that is something that courts can do. It can be policed, although I think it was done in the wrong way in the communications protocol context, at least in the American *Microsoft* case.

TOM COTTER: I'd like to shift gears right now to the question about the integration of Internet Explorer with Windows. With regard to that one specific issue in the *Microsoft* case, the D.C. Circuit affirmed the lower court's condemnation of two of the three ways in which Microsoft had integrated the two products, principally because Microsoft didn't offer a procompetitive justification, but it noted the difficulties that courts face in weighing business justifications against potential harm from product design.

That raises a broader question about how, if at all, antitrust law should address issues of product design. This comes up not only in computer software and telecom cases, but in pharmaceutical cases involving allegations of product hopping or evergreening. So what is or what should be the role of courts in assessing whether a product design is anticompetitive?

LEAH BRANNON: I think the record on the product design issue in the *Microsoft* case was not well developed, and that may go to a point that we've discussed quite a bit here. As Renata said at the start, almost everything happened in *Microsoft*. It was a massive case, and it was litigated on a very fast track.

For two of the three methods of integration, as the D.C. Circuit pointed out, Microsoft had offered no justification whatsoever, and for the other, Microsoft had offered a justification that the government had made no serious effort to rebut. I think this piece of the *Microsoft* case just received less attention than it would have if it had been the sole focus of the case or one of a smaller set of claims.

That said, there are general principles that appear in the *Microsoft* decision that also appear in other cases addressing product design claims. First, the courts focus on the effect of challenged conduct, not on the intent behind it.[24]

Second, "courts are properly very skeptical about claims that competition has been harmed by a dominant firm's product design changes."[25] The courts are not well positioned to second-guess product design. I think this point is why courts looking at product design claims often look first to coercion as a threshold element. Where, unlike in *Microsoft*, the challenged product is on the market alongside other options, the courts have rejected product design claims due to a lack of coercion. The Second Circuit, for example, takes this approach. In the *Berkey Photo* case in 1979 the Second Circuit held that "No one can determine with any reasonable assurance whether one product is superior to another. Preference is a matter of individual taste. . . . [S]o long as the free choice of consumers is preserved, [consumer response] can only be inferred from the reaction of the market."[26]

That is the same point the Ninth Circuit made in *Allied Orthopedic*: "Absent some form of coercive conduct by the monopolist, the ultimate worth of a genuine product improvement can be adequately judged only by the market itself."[27] More recently, the Second Circuit made this same point in its product-hopping decision in the *Namenda* case in 2015.[28] There, the Second Circuit held that the defendant's "hard switch," in which it introduced its new drug and pulled its old one off the market, coerced Alzheimer's patients to switch to the new version of the drug, regardless of whether they viewed it as better. There was no ability for consumers to choose.[29] Where coercion is present, the courts will need to look further, as the Second Circuit did in the *Namenda* case and the D.C. Circuit did in *Microsoft*. But, where coercion is lacking, there is no viable product design claim, and this has helped courts resolve such claims as in *Berkey* and *Allied Orthopedic*.

BILL PAGE: Just to refer also to one part of the *Microsoft* case, Microsoft's design of the Windows-specific version of Java, the court found it was possible to measure the benefit of that product design decision. The benchmark test could show that it ran a little faster than the cross-platform version of Java, and that was the end of it.

On the issue of commingling browser-only and operating system-only code in the same file—that was found to be a basis for liability, but I note there was nothing to remedy that conduct in the eventual consent decree. The focus at the remedies stage was on permitting deletion of the means of access to the browser, like icons and menu items, not on removing the underlying code. The courts decided that requiring redesign of Windows to separate the code would have been costly with little or no benefit to competition beyond what the end-user access provisions would provide.[30]

DOUG MELAMED: I agree with Leah that if there is market evidence demonstrating that consumers seem to prefer the new design, that's pretty compelling evidence that the design had some procompetitive or efficiency-enhancing benefits. And, if consumers are coerced to take the new design or new product as a result of conduct that itself has no efficiency benefits, as in some of the product hopping cases, it's pretty easy to reject a defense based on product design.

But there are lots of cases in which the coercion test is of limited value. In the *Microsoft* case, for example, the argument was that Microsoft's design choices had in effect given consumers, who were subject to Microsoft's monopoly power in the operating system market, no choice but to take Internet Explorer. Microsoft argued that that feature was an essential part of a product improvement. In that kind of situation, the coercion test doesn't help answer the question whether the design provided efficiency benefits because the design itself eliminated the opportunity for a market test.

Assessing efficiency benefits is often a very difficult fact question, and courts have not yet decided how to balance harms and benefits. But unless we're willing to ignore efficiency justifications in all cases in which consumers are not given a choice whether to accept the new design, the coercion test offers only a partial solution.

LEAH BRANNON: The coercion test is an important starting point. If there is no coercion, if consumers are free to choose, that should end the claim, as the Second and the Ninth Circuits have pointed out. The coercion test may not be enough to solve every case, but for a very large number of these product design cases it is sufficient.

ANDY GAVIL: I've always thought that although Microsoft tried to portray what it did with the browser as just integrating functionality, the case would not have been as compelling if Microsoft hadn't taken the extra step to make it difficult, if not impossible, to remove IE from Windows. That to me was the anticompetitive act, and it was a faux defense to say, "Oh, we're integrating this for the benefit of consumers." It was the extra step. It wasn't just integrating a browser. It was taking that step and making it not just irremovable, but if you tried to remove it—this goes back to the point about commingling code—it would crash Windows.

Microsoft had no technical or business justification for that, and I think that really undermined its story.

And we haven't really talked about credibility in *Microsoft*, but clearly that was another aspect of the case where Microsoft hurt itself before the district court.

KAREN KAZMERZAK: We have one last question, but it's one where I hope each of you would be able to weigh in.

What do you see as the key lasting impacts of the *Microsoft* decision, especially on Section 2 or broadly on antitrust doctrine? Also, if there is anything else that we haven't discussed today that you would like to address, feel free to raise it now.

LEAH BRANNON: I think the D.C. Circuit opinion in *Microsoft* advanced Section 2 law in a number of important ways. We've talked about many of them already.

To me a very important piece is making it clear that the plaintiff has a threshold burden of showing harm to competition. Section 2 is not about intent. The court wasn't punishing Microsoft because Microsoft wanted to crush the competition. The focus was really on the evidence regarding the particular actions that Microsoft took and their effect on competition. The court walked through the actions one by one and looked at all of these different challenged acts, ranging from the restrictive contracts with OEMs through deception of software developers.

I think another interesting piece of *Microsoft* relates to causation. There's one line in the D.C. Circuit's opinion that says that "a court may infer causation from the fact that a defendant has engaged in anticompetitive conduct that reasonably appears capable of making a significant contribution to maintaining monopoly power."[31] The court does not say that a plaintiff can skip showing anticompetitive effects in a monopolization case. The government's "X" graph showed Netscape Navigator's share of browser usage had declined dramatically following Microsoft's challenged actions, falling from more than 70 percent share of browser usage in 1997 before the case was filed to less than 20 percent by the time the district court's findings of fact were issued, while Microsoft's share had done the reverse, growing from 20 percent to 70 percent share of usage. The record also showed that Microsoft had intentionally and effectively grown the "polluted Java market."[32] The threat that Navigator and Java posed to Microsoft's platform monopoly was nascent, but the anticompetitive effects of Microsoft's conduct were measurable and proven by the government.

DOUG MELAMED: I think the structured rule of reason approach articulated by the court is clearly a very important legacy and a valuable one. Regrettably, the fourth step in the rule of reason outlined by the court, which dealt with the situation in which courts find both harm to competition and procompetitive justification, said that the harms and benefits should be balanced, but it said nothing about how to do the balancing. So I think it left an unfortunate ambiguity in the law that courts still struggle with. Usually courts avoid the issue by finding either no harm or no benefit. Nevertheless, the four-step rule of reason is an important legacy.

I want to mention some more things about the *Microsoft* case that are often overlooked. There are lots of things that we take for granted today when we discuss antitrust law that were hotly contested and disputed before that case. They include:

- The existence and importance of network effects;
- The application of antitrust law to "winner take all" markets characterized by leapfrog competition rather than by static price competition;
- Explicit rejection of the idea that a holder of intellectual property is permitted under the antitrust laws to do whatever it wants as long as it doesn't exceed the limits of the intellectual property laws;
- The idea of non-leverage tying—that is, a tying-type offense used, not to gain an unfair advantage in the tied product market, but to maintain a monopoly position in the tying product market;
- The idea that product design decisions can violate the antitrust laws; and
- The idea that Section 1 doctrine in matters like exclusive dealing does not necessarily govern the application of Section 2 in monopolization cases, or at least monopoly maintenance cases.

We take all of these for granted today, but they were very controversial when the case was being litigated.

BILL PAGE: I would agree with a lot of those individual points. I'll just pick up on Andy's reference to the issue of nascent competition. That, in part, depended on the court's acceptance of the narrative that really began the litigation, that Netscape had this potential and Java had this potential to evolve into a cross-platform threat that would "commoditize the underlying operating system," as Gates said in passing in his "The Internet Tidal Wave" memo. So Microsoft itself acknowledged the threat. A complementor that was perceived as a threat by Microsoft and then was the victim of what the court saw as exclusionary tactics—that was enough to show harm to competition. Perhaps this idea of nascence can be extended.

TOM COTTER: Renata and Andy, do you have anything you'd like to add before we finish up?

RENATA HESSE: One thought is that I think *Microsoft* was a "case of the decade." It was an enormous success for the Antitrust Division, and I think it had the effect of actually galvanizing a response on the other side, which led in my view to a series of cases that have really constrained the enforcement of Section 2 in the wake of *Microsoft.*

I think this is a little bit maybe what Andy was talking about at the beginning, which is that there's not a lot after

Microsoft that you can look at and see. So we have *Trinko* and *linkLine*[33] and a number of cases that I think in some way were a little bit of backlash and a little bit of a fear that the *Microsoft* case laid the groundwork for using Section 2 in ways that maybe it wasn't intended. I think that what came after it is an important part of its legacy.

The other thing I'd say is that this idea that antitrust doesn't care about harm to competitors, it only cares about harm to competition and to consumers, has become axiomatic, and is largely correct. We are looking for harm to consumers and to the operation of a competitive marketplace. But what I think is sometimes overlooked is that a lot of the time you have harm to consumers you have harm to competitors as well. I think some of that focus in *Microsoft* has led to this idea that it's sort of a dirty word to say, "Oh well, the competitor will be harmed." Actually, in many instances that really does matter.

ANDY GAVIL: I agree strongly with what Renata just said. In fact, it is especially important to think about harm to competitors in monopolization cases because by definition there aren't a lot of them, and we should be especially concerned when we are dealing with nascent and potential competitors. They embody the possibility of market correction—competition coming into a highly concentrated market—so I think those are important points.

In terms of *Microsoft*'s legacy, I agree with a lot of what everybody has said. The decision has been very significant, but I think that its full legacy is as yet unwritten. I am concerned that going forward it will be trimmed back in its legal significance by increasingly conservative and non-interventionist courts. Renata mentioned subsequent Supreme Court decisions that took very narrow views of Section 2. We know about then-Judge Gorsuch's decision in *Novell*[34] and the possibility that he might view exclusionary conduct more narrowly. We know about the *Amex* decision,[35] not a Section 2 case, but it shows some willingness to embrace questionable economics in support of a defendant and to downplay how formally vertical exclusionary conduct can facilitate horizontal effects.

And I wonder sometimes when I look back at *Microsoft* whether it was not something of a "perfect storm" in terms of the theory and the evidence and the moment all aligning well to reach a result. Going forward, those characteristics may not always be so perfectly aligned. If the decision is distinguished—rightly or wrongly—it could become a more narrow and less significant precedent.

I do think the burden-shifting framework, as all of us have talked about, has been very significant and is likely to endure. It has given some structure and organization to Section 2. In many ways it incorporates aspects of cases we don't fully credit, like *Aspen Skiing*.[36] We haven't mentioned anything about *Aspen Skiing*, but the definition of "exclusionary" and the basic structure of that decision follow in some ways the *Microsoft* framework and inspired it.

I hope that will continue, but as Doug alluded to earlier, we have these areas of exceptionalism, like refusals to deal and predatory pricing, where the Court has carved out distinct and demanding approaches. There is some risk going forward that we will lose whatever clarity we gained from *Microsoft* if judges try to find fault with it and narrow its application.

TOM COTTER: We are at the end of what has been a terrific discussion. *Microsoft* is such a rich decision in terms of its doctrine and analytical framework, and some of these closing comments touched on issues that would be interesting to discuss in depth if we had more time. Thank you to all of you for such a great discussion today. ■

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3 Complaint, United States v. Google, No. 1:20-cv-03010 (D.D.C. Oct. 10, 2020), https://www.justice.gov/opa/press-release/file/1328941/download.

4 *Microsoft*, 147 F.3d at 950.

5 Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977).

6 Lorain Journal Co. v. United States, 342 U.S. 143 (1951).

7 United States v. Grinnell Corp., 384 U.S. 563 (1966).

8 *See, e.g.*, William H. Page & John E. Lopatka, The Microsoft Case: Antitrust, High Technology, and Consumer Welfare 33 (2007).

9 John E. Lopatka, United States v. IBM*: A Monument to Arrogance*, 68 Antitrust L.J. 145, 156 (2000).

10 FTC v. Qualcomm, Inc., 969 F.3d 974, 982 & 1005 (9th Cir. 2020).

11 For a recent discussion, see Andrew I. Gavil & Steven C. Salop, *Probability, Presumptions and Evidentiary Burdens in Antitrust Analysis: Revitalizing the Rule of Reason for Exclusionary Conduc*t, 167 U. Pa. L. Rev. 2107 (2020).

12 United States v. Phila. Nat'l Bank, 374 U.S. 321 1715 (1963).

13 Verizon Commc'ns v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004).

14 Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993).

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21 United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001).

22 In re Microsoft Corp. Antitrust Litig., 333 F.3d 517 (4th Cir. 2003).

23 For criticism of this phase of the case, see William Page & Seldon J. Childers, *Software Development as an Antitrust Remedy: Lessons from the Enforcement of the Microsoft Communications Protocol Licensing Requirement*, 14 Mich. Telecomm. & Tech. L. Rev. 77, 127–29 (2007). For analysis of a very different approach to interoperability, see William H. Page

& Seldon J. Childers, *Bargaining in the Shadow of the European Microsoft Decision: The Microsoft-Samba Protocol License*, 102 Nw. U. L. REV. COLLOQUY 332 (2008).

[24] *Microsoft*, 253 F.3d at 59.

[25] *Id.* at 65.

[26] Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 286–87 (2d Cir. 1979).

[27] Allied Orthopedic Appliances, Inc. v. Tyco Health Care Group LP, 592 F.3d 991, 1000–01 (9th Cir. 2010).

[28] New York *ex rel.* Schneiderman v. Actavis PLC, 787 F.3d 638 (2d Cir. 2015).

[29] *Id.* at 654–55.

[30] Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1208–13 (D.C. Cir. 2004).

[31] *Microsoft*, 253 F.3d at 79; *see. e.g.*, Rambus v. FTC, 522 F.3d 456 (D.C. Cir. 2008).

[32] *See, e.g.*, *Microsoft*, 253 F.3d at 71 (citing Findings of Fact ¶ 143); *id.* at 77 (citing GX 259).

[33] Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc., 555 U.S. 438 (2009).

[34] Novell, Inc. v. Microsoft Corp., 731 F.3d 1064 (10th Cir. 2013).

[35] Ohio v. Am. Express Co., 138 S. Ct. 2274 (2018).

[36] Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).