Roundtable Interview with Joseph Farrell and Carl Shapiro

Editor's Note: *In this interview with* The Antitrust Source*, Joseph Farrell and Carl Shapiro discuss their views on revisions to the horizontal merger guidelines, pay for delay settlements, and behavioral economics.*

Dr. Farrell is the Director of the Bureau of Economics at the Federal Trade Commission. He is at the FTC on leave from the University of California at Berkeley where he is a Professor of Economics and an Affiliated Professor in the Haas School of Business. He served as Deputy Assistant Attorney General and Chief Economist for the Antitrust Division of the U.S. Department of Justice from July 2000 to June 2001. Dr. Farrell's academic research focuses on competition policy, standard-setting, and patents.

Dr. Shapiro is the Deputy Assistant Attorney General for Economic Analysis at the U.S. Department of Justice Antitrust Division. He is on leave from the University of California at Berkeley where he is the Transamerica Professor of Business Strategy in the Haas School of Business and a Professor of Economics. From August 1995 to June 1996, he served as Deputy Assistant Attorney General for Economics for the Antitrust Division. Dr. Shapiro's academic research focuses on innovation, patents, intellectual property, network economics, and competition.

The interview was conducted on January 22, 2010, by Editor Elizabeth M. Bailey for The Antitrust Source.

Joseph Farrell

ANTITRUST SOURCE: You both have been doing antitrust and competition policy work for a long time. And you both have served as a Deputy Assistant Attorney General in the Antitrust Division, Carl in the mid-1990s and Joe in the early 2000s. What interested you about serving a second time at one of the agencies?

JOE FARRELL: For me, it was a variety of things. One thing that I am very keen on is to combine consumer protection thinking with antitrust thinking. Another thing I am very interested in is the possible use of the FTC's ability to help with competition policy in areas that might or might not be narrowly antitrust.

Carl Shapiro

CARL SHAPIRO: In my case, I served for one year from 1995 to 1996. I found the job very interesting and learned a lot. This time around, I have a lot more experience within academia and as a practitioner. I felt that by serving for another stint I could do a lot to help out the team that Christine Varney, the Assistant Attorney General for Antitrust, was forming. It also seemed interesting to me to come at the beginning of an administration, with the setting of new directions that happens at that time.

ANTITRUST SOURCE: How have you seen antitrust evolve over the last ten to twenty years?

SHAPIRO: Well, quite generally we have seen the Supreme Court move to what I would call a more cautious approach to antitrust. The Court has issued a series of decisions in favor of defendants so there has been some shift in the whole of antitrust law. We've all observed that. At the same time, looking more narrowly in the area of mergers, I would say there has been more and more emphasis on competitive effects and the underlying economics of mergers, as the strength of the structural presumption has declined. Both of these trends have placed more emphasis on the economic analysis of competitive effects. That happens to be my thing, so there's a lot of work to be done.

FARRELL: I agree with all of that but I also wrestle with some things that push a little in the other direction. I am a big believer in competition as a means to have a well-functioning economy. I think that means that one should favor and promote competition even where it is not possible, given our present state of economic science, to prove how and how much or even whether it will benefit consumers and efficiency. I think this is what the antitrust laws and competition policy try to say: there really is a place for a presumption in favor of competition as opposed to just upholding it when you can see how it is going to benefit consumers.

As more economics has been put into antitrust analysis—and in most ways that is a long overdue and very beneficial thing—I also think that there is a risk of misperceiving that one will always be able to prove that competition is beneficial, and therefore forgetting about a procompetition presumption.

At the same time, as we try to put more and more sophisticated and better economic analysis into our decision making, I also think we want to remember that there are areas where competition as a presumption is a good idea, as opposed to just trying to figure out what is a good idea in these circumstances. It's a deep issue that I continue to wrestle with.

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—*Joe Farrell*

ANTITRUST SOURCE: There is an on-going discussing among practitioners in private practice and at the antitrust agencies as to whether the Horizontal Merger Guidelines are due for a revision. As we are having this interview, the agencies have held four of the five workshops scheduled on the subject.[1] What are you hoping to learn from these workshops?

FARRELL: I think that was pretty well expressed in the questions we put out for public comment.[2] One of the things we've learned already is that the general consensus of people who have made comments and spoken at the workshops is that the Guidelines could benefit from updating. There have been some dissenting voices but I think that is the general consensus.

SHAPIRO: We have learned a lot already. And there are a number of items where consensus is forming. Assistant Attorney General Christine Varney is going to give a speech at the final workshop, on January 26.[3] At a high level, I would say we have learned that many of our perceptions about gaps between the Guidelines and actual practice are shared outside the agencies. In addition, in a number of areas there seems to be room for significant improvement in updated Guidelines.

FARRELL: As you mentioned earlier, there is a general view that the structural presumption has become less strong and less central. As a matter of law enforcement logic, if that is true, then something has to take its place because otherwise we really are retreating from merger enforcement. I think it is pretty clear, both from being a practicing competition economist and from looking at the merger retrospective literature, that retreating from merger enforcement would not be a good idea.

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[1] Additional information on the five workshops associated with the Horizontal Merger Guidelines Review Project is available at http://www.ftc.gov/bc/workshops/hmg/index.shtml.

[2] Fed Trade Comm'n & U.S. Dep't of Justice, Horizontal Merger Guidelines: Questions for Public Comment (Sept. 22, 2009), *available at* http://www.ftc.gov/bc/workshops/hmg/hmg-questions.pdf.

[3] Christine A. Varney, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, An Update on the Review of the Horizontal Merger Guidelines, Remarks as Prepared for the Horizontal Merger Guidelines Review Project's Final Workshop (Jan. 26, 2010), *available at* http://www.justice.gov/atr/public/speeches/254577.htm.

ANTITRUST SOURCE: If the structural presumption is in decline, do you have any thoughts on what should take its place?

FARRELL: Some of the things that we look at were raised in the questions for public comment under direct evidence. And as far as unilateral effects are concerned, I think economic science has made a lot of progress since 1992 and we understand a lot better the indicators of likely unilateral effects. I don't know how much detail one would want to put into Guidelines. That is something that needs to be worked out. But I think we know that diversion ratios, gross margins, and plausible incremental cost efficiencies matter centrally. So I encourage my staff to look at these when the data are available for unilateral effects concerns. And I would like personally to see something in revised Guidelines that reflect that.

All of that leaves the 1992 Guidelines out of date in some respects in terms of accurately reflecting how evaluation of competitive effects is done, particularly unilateral effects and price discrimination markets.

—CARL SHAPIRO

SHAPIRO: Let me give a little additional context for that. As part of this review process, we have been receiving public comments, we have been holding workshops, we have been internally reviewing our practice and how it compares with the Guidelines. I personally have gone back to read all the different versions of the Guidelines going back to 1968 to see how they have evolved and how the evolution of the Guidelines has been intertwined with changes in merger case law and agency practice.

The eighteen years that have passed since the last revision, other than the 1997 adjustments to the efficiencies section, is the longest spell during which the Guidelines were basically not changed since they were introduced in 1968. You really see a pretty clear evolution. I doubt many people have read the 1968 Guidelines any time recently. They are rather striking by today's standards. Then 1982 was a big change. You see the ongoing movement towards a more nuanced analysis that gives more and more weight to competitive effects, and then the introduction of unilateral effects in 1992, which generalized the "leading firm proviso" from the 1982 Guidelines. This evolution in practice has continued since 1992.

All of that leaves the 1992 Guidelines out of date in some respects in terms of accurately reflecting how evaluation of competitive effects is done, particularly unilateral effects and price discrimination markets. So those are big areas where it is clear to me that substantial clarification could be made, not changing practice, but articulating what the practice actually is.

ANTITRUST SOURCE: There has been speculation that your recent paper on upward pricing pressure will change the way the FTC and DOJ economic staff approach the merger screening process during the first 30 days. Should practitioners expect that the DOJ and FTC will be taking this type of approach as an early step in a merger investigation involving differentiated products?

FARRELL: Well, I will tell you that I personally find it helpful to look at gross margins and to look at diversion ratios where the data are available. And sometimes that comes out pretty quickly and sometimes not.

In many cases parties will come in with merger simulations. And the staff's reaction to merger simulations is generally a little mixed because it is recognized that they capture something of import in thinking about unilateral effects. But it's also recognized, as is pretty well understood in the published economic literature by now, that there is a fair amount that goes in to the computer program that is not readily visible on the surface and so the question is: What information do you really extract from a merger simulation?

One of the things that Carl and I were trying to do with our paper back in 2008—now recently

revised—was to address what is the robust core of these interesting, but somewhat mysterious, merger simulations.[4]

SHAPIRO: Let me give an answer that goes in a different direction. One of the things I have done in the ten months since I have been Economics Deputy is to catalog—and this is part of the merger review process—how the economists at the Antitrust Division evaluate unilateral effects. A lot of that involves evaluating pricing effects but there are also cases that involve competitive effects associated with capacity or product selection.

Joe and I emphasized several factors in the research we did on the evaluation of unilateral pricing effects in horizontal mergers before we came to the DOJ and the FTC: diversion ratios, margins, and marginal cost efficiencies. In some fashion or another, these are the ingredients that the economists at the Antitrust Division have been using for this purpose for a long time. This is true whether they are looking at win/loss reports, performing some type of merger simulation, or talking with customers about their first and second choices in a bidding context. Those elements are there. And that is nothing new. This is an area where agency practice has advanced a great deal in eighteen years and could be explained much better in updated Guidelines.

So I would say, "yes," lawyers and economists who have merger matters before the Antitrust Division that involve unilateral pricing effects with differentiated products should be looking at those elements. And I think they are. Practitioners already know that the Division looks closely at these elements. Of course, there is a great deal of variation from matter to matter in terms of the types of evidence is available and what type of analysis can be performed. But that just serves to emphasize why the Guidelines could helpfully explain the routes of inquiry we follow, the lines we pursue—not as a change of policy but as an articulation of what has been done for some time at the Division.

ANTITRUST SOURCE: How would someone at the agencies obtain the information necessary to calculate diversion ratios and margins in the first thirty days?

SHAPIRO: We often have really rather fragmentary information in the first thirty days. Now, more and more companies are using the pull and refile strategy which gives us more time, so we can do a little more in some cases. But again, the available evidence varies a great deal from case to case.

Information about diversion ratios may come from contacting customers and getting the sense of who they see as the direct competitors. Diversion ratios can also be estimated by using market shares or shares with some group of products as a proxy for diversion ratios. Margins are not that hard to get a first-cut estimate on in some cases. So the information available about diversion ratios and margins during the first thirty days is highly variable across cases and can be fragmentary. However, the same is true for HHIs. Remember, one cannot calculate an HHI until you determine the relevant market, since that defines the universe within which one is measuring. Technically, defining the relevant market requires estimating price increases for a hypothetical monopolist. Once the market is defined, how good are the data in the industry for calculating HHIs? That is the nature of any simple index: there can be difficulty constructing any simple index accurately in that first thirty-day waiting period.

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[4] Joseph Farrell & Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition* (Working Paper, Feb. 15, 2010), *available at* http://faculty.haas.berkeley.edu/SHAPIRO/alternative.pdf.

FARRELL: I would echo that. The question seems to presume that market shares are easy to calculate. Sometimes they are if you know what the market is, but very often there will be vehement disagreement as to what the market is, and the methods that the Guidelines lay out for resolving that disagreement require a fair amount of information. So the idea that it is very quick and easy to calculate market shares and rather challenging and difficult to calculate diversion ratios, I am sure we see cases where it is true, but I don't think it is any kind of universal.

SHAPIRO: Let me again emphasize something Joe said that is very relevant here. Joe and I, as authors of the paper on upward pricing pressure that you're asking about, and now as the chief economists of the two antitrust agencies, both believe that different tools apply in different cases. There are plenty of cases where the relevant market actually is pretty clear. Perhaps the merging companies sell a relative homogeneous product, and there may be good data on output.

In such cases, the agency might be able to measure the HHI up front, and the agency might very well give a lot of weight to the HHI, and that's great. But in other cases, especially those with highly differentiated products, the market boundaries may be unclear and HHIs probably won't be the best diagnostic in terms of unilateral pricing effects. In those cases, we may well look at other types of evidence and other metrics.

We are looking to use a variety of techniques, depending on which ones are most appropriate and informative regarding the effects we are interested in and which are practical given the information that is available. So I have had some concern to the extent people are saying that Joe or I want to replace one technique with another. That is just not where either of us wants to go. We are talking about using a variety of techniques that are practical and probative.

ANTITRUST SOURCE: I want to ask about merger retrospectives for a moment because that is related to potential revisions to the Horizontal Merger Guidelines. Why do you think there have been relatively few studies assessing how often current merger analysis gets it right?

FARRELL: In a way, your question is best directed at the academic community. When I was in Washington for the first time at the Federal Communications Commission in 1996 and 1997, I was privileged and burdened to also be editing the *Journal of Industrial Economics*. My co-editors and I made a real attempt to bring together the excess of fascinating and difficult and important problems that we see here in Washington for economists to work on with the large supply of smart economists looking around for things to work on. I remain a little surprised how little came out of that effort.

I am not sure why the academic community hasn't done more on that, but certainly some work has been done. The Bureau of Economics at the FTC has been a leader starting with a 1984 article by Barton and Sherman,[5] and I would like to see it continue to be a leader. And there was a project, I believe conceived by then Chairman Muris, to do merger retrospectives in the hospital sector that led to an improved understanding of competitive effects of mergers in hospitals.[6] And

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[5] David M. Barton & Roger Sherman, *The Price and Profit Effects of Horizontal Mergers: A Case Study*, 23 J. Indus. Econ. 165 (1984).

[6] Timothy Muris, Chairman, Fed. Trade Comm'n, Everything Old Is New Again: Health Care and Competition in the 21st Century, Prepared Remarks before the 7th Annual Competition in Health Care Forum (Nov. 7, 2002), *available at* http://www.ftc.gov/speeches/muris/murishealthcarespeech0211.pdf. *See also* Steven Tenn, *The Price Effects of Hospital Mergers: A Case Study of the Sutter-Summit Transaction* (FTC Working Paper No. 293, Nov. 2008), *available at* http://www.ftc.gov/be/workpapers/wp293.pdf; Deborah Haas-Wilson & Christopher Garmon, *Two Hospital Mergers on Chicago's North Shore: A Retrospective Study* (FTC Working Paper No. 294, Jan. 2009), *available at* http://www.ftc.gov/be/workpapers/wp294.pdf; Aileen Thompson, *The Effect of Hospital Mergers on Inpatient Prices: A Case Study of the New Hanover-Cape Fear Transaction* (FTC Working Paper No. 295, Jan. 2009), *available at* http://www.ftc.gov/be/workpapers/wp295.pdf.

I think that has contributed to what may be a more realistic enforcement environment in hospital mergers these days.

There is a lot of good to be done by merger retrospectives, and we have got a lot of work to do. To the extent that time and resources allow, I am keen to have the Bureau of Economics continue its leadership in that but others are already doing so as well and I hope they will continue to do so.

SHAPIRO: Dennis Carlton, my predecessor as Economics Deputy, called for merger retrospectives. Dennis published a paper about how such retrospectives might be done in the most informative way.[7] I totally agree that merger retrospectives can be very valuable, especially if they allow us to test the accuracy of the methods we use to analyze mergers. As a professor on leave, I am happy to issue a call for academics to do these studies wherever they are feasible.

We at the Antitrust Division don't have the authority to issue subpoenas just to study consummated mergers to improve our knowledge base. Furthermore, we have to be realistic about how many merger retrospectives can be done that really nail it in terms of what were the effects of the merger rather than other things that were changing in the market. You never really know for sure what the but-for world would have been like without the merger if the merger went through or what the but-for world would have been like if the merger did not. Unfortunately, we do not have controlled experiments like in the lab sciences, but we should do the best we can. It's hard work.

FARRELL: I understand all that. One of the lessons of the statistical view of the world is that the best response to problems of randomness such as what Carl mentions is not to back off but to do more.

ANTITRUST SOURCE: Let's shift gears and talk about intellectual property. You both have written on the intersection of intellectual property and antitrust. What are your views on how the antitrust laws should be used, if at all, to constrain the exercise of market power related to intellectual property rights?

FARRELL: My philosophy on this is that intellectual property rights are, by and large, a good system of rewarding and encouraging innovation where they provide a property right to someone who has produced an invention that might well not have been available otherwise.

But I get concerned when you have strategies, such as those we have seen in standard setting, where people find ways to cause their intellectual property to exert more power than the contribution they made or where you see flimsy patents used to exercise control of the market in ways that do not reflect the strength of the patent. A similar concern arises in pay for delay pharmaceutical patent settlements.

So, I think there are a number of areas where intellectual property rights cause antitrust trouble, but I stress that I am not against intellectual property and I am very far from being against innovation.

SHAPIRO: The problem of patent quality is one of the really interesting and difficult areas at the intersection of antitrust and intellectual property. Patent quality issues have been addressed by the FTC and the Patent Trademark Office, and Congress is trying to address them as well. These

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[7] Dennis Carlton, *Why We Need to Measure the Effect of Merger Policy and How to Do It*, Competition Policy Int'l, Spring 2009.

issues are central to the ongoing debate involving pharmaceutical patent settlements, obviously an FTC area much more than a DOJ area. At its core, this debate focuses on how to treat uncertain or iffy intellectual property rights. More generally, antitrust has a role to play to indicate the boundaries associated with probabilistic patents.[9]

Then there are a range of topics that have been kicked around for quite a while in antitrust circles, many of which are addressed in the report issued in April 2007 by the DOJ and the FTC titled *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*.[8] Given how our economy has evolved, with intellectual property playing an ever-increasing role in our more dynamic industries, it is inevitable that those issues will continue be central to antitrust. There are many tricky issues in this area; I don't think one can pin down one issue as paramount.

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—Carl Shapiro

ANTITRUST SOURCE: The FTC released a study about two weeks ago on "pay for delay" agreements.[10] Would you tell us about the efforts that are ongoing at the FTC related to pay for delay?

FARRELL: We have estimated that this large and growing problem costs consumers on the order of $3.5 billion a year in the United States, and, if people perceive the law as moving towards per se legality of these deals, we have reason to believe that number is going to go up. We have some cases in litigation and we have been working to try to get Congress to take another look at it.

ANTITRUST SOURCE: Is the implication of that that the antitrust laws have not been effective in deterring potentially anticompetitive pay for delay settlements?

FARRELL: My understanding is that cases have been mixed. Some courts have gravitated towards the view that because there is a patent involved and because, if you read the patent, it appears to allow the patent holder to foreclose competition in this area, then that is okay. And as both Carl and I mentioned, you really need to think of a patent as involving not only a nominal coverage but also strengths and weaknesses. And we think the right test of those strengths and weaknesses is either actual testing in court or, much more frequently, legitimate licensing and settlements—without these reverse payments that mess up the incentives of the licensee to bargain for quicker entry, lower royalties, and so on.

ANTITRUST SOURCE: The recent financial crisis brought behavioral economics into the mainstream. While behavioral economics has been a hot topic in finance for some time, there has only been scattered interest in it as a research agenda in Industrial Organization. What role, if any, do you see for applying behavioral economics to issues that arise in antitrust and competition policy?

SHAPIRO: Any time we are trying to understand and predict consumer responses we need to be attentive to the evidence regarding consumer behavior. That may well involve various behavioral issues.

For example, consumers react to surcharges and discounts differently, and in some cases that can be part of the analysis. We also have to look at things like advertising competition, which

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[8] Available at http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt0704.pdf.

[9] Mark Lemley & Carl Shapiro, *Probabilistic Patents*, J. Econ Persp., Spring 2005, at 75.

[10] FTC Staff Study, Pay-for-Delay: How Drug Company Pay-Offs Cost Consumers Billions (Jan. 2010), *available at* http://www.ftc.gov/os/2010/01/100112payfordelayrpt.pdf.

relates to consumer behavior. We often have issues of reputation or branding that relate to consumers and their response to those images and those brands. So we are regularly dealing with consumer responses to a firm's strategies, which get us into behavioral economics.

FARRELL: I think that's right. Realistic ways of understanding consumer behavior are of course particularly important in consumer protection policy. For example, if you think about policies involving disclosure and consent, you need to understand what it is that is effectively disclosed to consumers rather than just having a lawyer read the wording and say that was or was not disclosed. In antitrust more narrowly, it might bear on the profitability of aftermarket manipulation strategies. That would be an area where, as a matter of being reality based, you would want to pay attention to lessons of consumer economics in some form.

I'm not aware of any model that is anywhere near ripe for replacing profit maximization as the way we predict how firms will behave.

A much broader and philosophical point is that firms do not always do what is optimal. What should policy do about that? I'm not aware of any model that is anywhere near ripe for replacing profit maximization as the way we predict how firms will behave. But it is not a bad idea to keep in mind that firms, like other organizations, can blunder. And that seems to me to be one of the imponderable reasons to want to have alternatives in the market—reasons that are hard to pin down from a narrowly economic point of view, but that are probably important.

ANTITRUST SOURCE: You mentioned that we usually assume a firm's incentive is to maximize profits. Do you ever question that assumption when evaluating a firm's incentives post-merger or with respect to single-firm conduct?

FARRELL: I think the question is what to do with it. I think we basically know firms are imperfect organizations of imperfect human beings. They are not going to literally maximize profits. So, at that level of questioning, sure, all the time. The question is: Where does one go with that?

But it is not a bad idea to keep in mind that firms, like other organizations, can blunder.

—*Joe Farrell*

And, as I said, when we need to predict what a firm is going to do, we should look at its profit incentives, but we also need to remember that even though that is our best predictor, it is not a perfect predictor. Firms sometimes self-destruct or do irrationally harmful things.

And again, let me stress, I am not saying we should base our predictions on that assumption, but we should keep it in the back of our minds as an added reason to seek and try to preserve some kind of biodiversity in the marketplace. That is a difficult issue, and I wrestle with it.

SHAPIRO: I take somewhat of an evolutionary view as an industrial organization economist. Of course each firm does not perfectly profit maximize. Rather, firms and markets evolve in an evolutionary way, guided by incentives and by the profits firms are able to earn. And all of this takes place with whatever irregularities come about due to agency issues and behavioral issues.

When it comes to predicting the effects of a merger, I think we are on solid ground and best served by making predictions based on how the incentives of the firms will change as a result of the merger, be that procompetitive or anticompetitive. That is not to say every firm perfectly profit maximizes, but profit maximization remains our best guide to the competitive effects of mergers.

FARRELL: I agree with that.

ANTITRUST SOURCE: Thank you very much for talking with us today. It has been a pleasure talking with you both. ●