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1 PROCEEDINGS

2 WELCOME

MS. CALLISON: This is the second day of the Joint DOJ/FTC Workshop on Merger Enforcement. Yesterday contained a lot of interesting information and useful panels. I'm sure today we will follow that up quite well.

I want to let you know that presentation materials from our panelists' papers and slide shows that they have sent in will be available on our respective web sites. I wouldn't look for them on Friday, but they will be there shortly. Likewise, the transcripts of the hearings of the workshop will be available on the web sites at some future date.

Thank you.

NON-PRICE COMPETITION/INNOVATION

MR. FRANKENA: This morning we will be focusing on the discussion of the effects of mergers on innovation. Our panel today is Steve Sunshine, who will speak first, and then Ann Malester will go next, and then Dick Rapp, and after that, we will have an open discussion between the panelists and the audience, with audience participation and so forth.

When I was asked to moderate this distinguished attorney and economist panel on mergers and innovation,

1	my	first	thought	was	to	seek	ir	ıput	from	the	investor
2	con	nmunity	which	didn	't	seem	to	be	repres	sente	ed.

So I asked my friend Tom, who after all has about 1,000 patents, whether he could address the relationship between competition and innovation this morning. Well, Tom couldn't join us, but he reminded me that he had addressed this very matter back in 1889, when someone proposed that his firm, Edison General Electric and its competitor, Westinghouse Electric call a truce in their war to sell electric systems to cities and towns around the country.

Tom explained that he refused to go along with the proposal because, and I now quote from a contemporary letter from Edison: "If we make the coalition, my usefulness as an inventor is gone. My service wouldn't be worth a penny. I can only invent under thought of incentive. No competition means no innovation."

But my real difficulty with this statement, though I -- after I read it I noticed that it was written on April Fool's Day in 1889, so I don't know how much weight to put on it, but that's a statement from an important inventor.

Okay. With that, could I ask Steve to get us started?

MR. SUNSHINE: Thank you. I'm happy to be here

this morning. I was not supposed to be the lead-off
speaker. The lead-off speaker was the distinguished
Professor Davis. He ate some bad fish yesterday and,
therefore, could not be with us. It seemed like a rather
extreme way to get out of doing this talk, but I did last
night consider that.

I struggled for how to title this talk, and like everything else, the inspiration came to me because of something my 12-year-old son did. I was listening to this song by Smashmouth called "All Star," which I'm sure you all have heard. Don't worry. I'm not going to sing it for you.

There is a line in there that says, "I'm not the sharpest tool in the shed." To me, the parallels between that and innovation analysis were just immediately obvious, as I'm they are to everyone sitting here in the room.

The point that I will make generally today is that innovation analysis has its uses. I wouldn't call it the sharpest tool in the shed. That leads to the question, and hence the title, when should this tool come out of the shed?

Just as an overview, I hope that these propositions here are pretty non-controversial, at least the first few ones are.

Innovation is an important dimensional rivalry and intervention of progress. I don't think there's a lot of dispute for this point. I think the studies that have been done over time have said that innovation has been responsible for the vast majority of economic progress that has been made over the last century.

Then when we try to actually apply it to merger analysis, can we actually predict the effect of a merger on innovation? We will talk more about this later. I think it's fair to say that the effects are uncertain. Of course, it's probably also fair to say that the effects of market structure on goods and on the relationship between market performance on goods is not as clear as we would like it to be as well.

That leads me to this is, I think, where we get a little bit more into my view, and others clearly have different views, the legal and economic issues. There are legal issues here, too. We have been focusing mainly on the economics, but there are legal issues here, too, that legal and economic issues require a showing -- I called it "probable effect on output." When I say "output" here, I don't mean innovation output. I mean output in the goods market.

The Genzyme example, we will get to it, we all have our views on it, but perhaps Genzyme is an example

1	where the chairman and the rest of the Commission
2	basically followed the first three bullet points, thought
3	in theory there could be an effect on innovation, but
4	found a set of facts where the merger could not have a
5	demonstrative effect on output, and hence, no case. If
6	that's what they did, count me in. Of course, the facts,
7	we have to talk about.

Lastly, just in terms of what does this mean practically? My general point on this is going to be that the practical application of innovation markets is infrequent. We are not going to see a lot of innovation market cases. They are more likely in certain industries, pharmaceuticals being the obvious example, and that for reasons that I think some of my co-panelists will go into.

One of the many big problems with innovation markets is that they are really hard to define. How do you know an innovation market? We'd like to see a standard more than just as spotters, you know, I'll know it when I see it.

We have to account for trying to identify all the conceivable sources of innovation. We have to account for how do we know what the strengths and significance of the population of innovators are.

Also, the type of innovation that's going on in

the market may be relevant to our confidence in market 1 boundaries. What do I mean?

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Well, are there regulatory barriers that are going to make innovation much more structured? innovation tied to certain sets of production assets, where we know that people without production assets really are not effective innovators?

For that, I would refer to the Department of Justice's complaint in the General Motors/ZF Friederichshafen case. That case of innovation was tied to an existing set of production assets, and no one could innovate new truck and bus transmissions unless they had those set of processes.

Then another way or type of innovation is patents, but patents are really tricky. When you get to patents, patents may mean there are a necessary set of assets. It may also mean that markets have been divided up so that the mergers are complimentary. You have to be really careful.

I won't go through the article that Professor Gilbert and I wrote, but we identify certain sets of factors that you need to find in order to have some confidence that you have an innovation market. If you don't have that kind of confidence, then frankly you should go home at that point. If you can't define the

market and you can't define a few players, there's no point in going on. If you can, of course, there's more work to do.

Defining the boundaries of the market is hard.

This part is even harder. How can you actually predict the competitive effects? How can you assess the merger's effect on innovation and then translate that into an output effect?

We start off with, I think, a very obvious question, structures as a means of predicting performance. Who is right, Schumpeter or Arrow?

Schumpeter basically says you need monopoly rents, and it's possible in some industries you may need monopoly rents to actually provide incentives for innovation. Arrow says, on the other hand, because of cannibalization concerns, expected return, that perhaps monopolists do not have the same incentive to innovate at the same rate as others.

I don't think it's fair to say the economics literature thinks this is completely an unaddressed question. There has been a lot of work done by Scherer, by Spence, by Stidless, that allows you to make some inferences. It's certainly not proven.

I think, also, if you go with just basic intuition, how many around this room believe that time

after time, monopolists really have a high incentive to innovate?

I think it is fair to say that just as a matter of economics, we don't know for sure what the answer to that question is. We might have an intuition. We may have our own belief, but we don't know.

That leads us right into the second issue, which is the problem of the necessity of case specific evidence. I think, given the uncertainty in the economics, that all of these cases have to be driven by the actual facts of what's in front of the Commission, what's in front of the DOJ, what's in front of the plaintiff. You have to believe there is important innovation competition going on between the two, and that each have high incentives to innovate.

Again, the GM/ZF case, I guess I have a little familiarity with, was a case where the evidentiary record showed years and years of the two companies actively targeting each other's innovation activities, actively pursuing incremental process improvements, and then with the signing of their merger agreement, saying we're not going to do this so much any more, but then labeling it efficiency.

That was a fact specific inquiry that led to say, you know, I think we know enough. Maybe Schumpeter

is right sometimes. Maybe Arrow is right sometimes, but 1 we are now in the Arrow camp with these facts.

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I touched on incremental versus revolutionary. This is an idea of how big the innovation is. ways, incremental innovations may be the ones that are a little bit easier to understand how to protect. be easier to define where the sources of that innovation are going to come from. These revolutionary innovations, there's much more profit at stake, so there's more incentive to pursue them, and sometimes they are harder to tell where they are going to come from, what the source of that innovation is going to be.

In the incentives, I don't think you could understand the incentives to innovate until you understand the nature of competition between the innovations. That's going to require looking back at the downstream level.

Are two pharmaceutical companies going to be manufacturing exactly the same chemical compound that, you know, once they get to the market, they are going to be in competition with one another, and there's no orphan drug status. You know, once they get to the market, they will be in competition with one another.

That may lead you to one set of conclusions. If on the other hand these products are so sufficiently

different they are going to be attacking different markets and there will be a high expected return, maybe there will be an incentive for both products to be developed. I don't know. Maybe the second invention is going to open up so many new applications and increase demand that there will still be a strong incentive to invest.

Confidence that the reduction in innovation will lead to an output effect. That goes to all the previous statements, too, but here, I think you have to take into account downstream competition. What if there are downstream products that are competing against your upstream products, and those are going to continue to spur innovation.

I think that what all this is saying is that there are a lot of steps to go through in order to get to this level of confidence. Lastly, I put down here, is the effect outweighed by innovation efficiencies?

Let me just throw in a point just as a matter of personal opinion. I know this is not necessarily accepted by everybody. One of my pet peeves is this whole idea of merger specific efficiencies. People, after the fact, sitting around and saying gosh, I think these guys probably could have done a contract research and development joint venture. To me, that is a naive

1 view.

I think the analysis should be here's the deal, here's what life would be like absent the deal, and is the world a better place or not, but to try to social engineer efficiencies seems to me to be a misguided approach.

What I've done by putting efficiencies as part of the competitive effects, I haven't shifted the burden of the efficiencies to the defendants. I think it is still part of showing -- to show an output effect. Eventually, this really belongs in the camp of the plaintiff, because you can't show the effects unless the efficiencies don't outweigh the other benefits.

Enough about economics. What about the law? I'm running behind.

There have been a lot of consent decrees.

There has been a complaint that the Department of Justice filed that did not go to trial. There have been some other cases where innovation is sort of talked about but not a true innovation market.

Does Section 7 really allow us to have an innovation market? The few cases that exist on this, I think, say that without actual sales and a line of commerce, that perhaps you don't have a market, which if that was true, that would doom Section 7 analysis.

That's my view, and what Gilbert and I wrote in our articles is that it would be misplaced for Section 7 to not recognize an innovation market theory. The reason why I say that, we would start from, I think, a pretty easy proposition that says that merger analysis should be designed to identify those mergers that lead to reduction in welfare, to lower output.

The analysis that I just went through, if you can go through that analysis and come to the conclusion that output is reduced, you have satisfied what is the basic condition. Then the question on an innovation market, I think, is the innovation market essentially identifies the place of competitive interaction where the problem arises, and then the output market actually defines where the effect is felt, and it defines the line of commerce and the section of the country that the law is trying to protect.

In that way, I would draw a loose analogy, and it's not a perfect analogy, to a vertical merger. In the actual output market, there's no direct effect. You could look at input, you could look at innovation as an input or an upstream product in a vertical merger, but I would say if you look at the Medicorp vs. Humanas case and some of the other cases cited in the stuff that we wrote, there are some courts that have gone other ways,

because they are thinking cookie cutter, define a market,
measure the market shares, prima facie case, blah, blah,
blah. That's one way of doing it.

The second point, can plaintiff prove a non-speculative effect in a reasonable amount of time? I think that proposition stands for itself. This would be a defense that I would want if I was defending against an individual market case. This just goes back to the importance of being able to actually have the documents, the market evidence, and everything else to show that this is a real problem.

I know I'm running short and I want to leave time for some conversation. I won't spend much time on this.

Ron Davis, who was going to lead off, was going to say burdens, where's the beef? I was going to say, why all the fuss? The burden of proof is always on the plaintiff. We all know that. We know that PNB and Baker Hughes say that upon the establishment of a prima facie case, that the burden of production shifts over to the defendant, but the burden of persuasion always remains with the plaintiff.

I think in the Genzyme case, while it was just an investigation, it wasn't a case, I have to imagine that the defendants satisfied a burden of coming forward

1 with evidence.

It seems to me that any proper application of this kind of analysis would lead to the burden going back to the plaintiff to persuade they were actually right.

If Commissioner Thompson's dissenting opinion means something else, with a presumption, then he means something else, which I think is not in step with the case law, perhaps even for output markets, but certainly not for innovation markets for the reasons that we have talked about.

Problems of the investigator. The first point, I think, is obvious to everybody sitting in this room. The investigator has a duty to evaluate the transaction before it. In the transaction before you, if you see serious competition in innovation, what are you going to do? You have a duty to look at it. You don't want to just let the transaction go if you think there is going to be a problem. You have to dig in.

The law with the state of the economics, there is no easy path here, is there? We have just been through it. I think the burden of proof, while there could be some adjustments, depending on who is involved, the burden of proof is clearly going to be on the plaintiff, and the plaintiff and the investigator will have to show a number of difficult issues. Innovation

space which will occur, the merger's likely effect on
innovation, the manner in which output will be reduced,
and again, output is output in a goods market, and when
the output effect will be felt. Not easy stuff, right?

We are talking about doing this in at least two
different markets, two different spaces.

Again, as sort of the last resort of the investigator, the importance of empirical evidence from the merging parties in the markets cannot be overstated. Without the evidence, the economics isn't going to get you all the way there. You are going to need the evidence.

I won't go through this in any kind of detail.

I just thought through questions on how I might think
about doing an innovation analysis.

Is innovation an important dimension of rivalry? The answer is no, forget it. Why bother? Look for price effects. Go out with your colleagues for a beer.

Second question, will innovation effect existing product markets in a reasonable amount of time? The answer to that is yes, let's not worry about innovation markets. It sounds like a goods market to me. Let's do a competitive effects on the goods market. As Gil will remember, this was the Microsoft/Intuit case.

1	We toyed with bringing a case in an innovation market.
2	We said we have a real market here, why are we bothering?
3	Innovation is an important dimension of competition. If
4	one of the two players is in the market, then we have a
5	potential competition case.

I had to sit back for a second and say, I think a potential competition case is easier than an innovation market case? Well, there you have it.

Can the boundaries of the innovation market be determined? We went through that. It's not child's play. Does the merger provide incentives us to innovate? Again, I put the efficiencies in with the obligations of the plaintiff. Again, if it's the plaintiff's job to show there is an effect, then the plaintiff should also be comfortable showing the efficiencies don't outweigh the other effects.

And then last, the harm to the output market, without this last piece, not only do we have an economic problem, but we clearly have a legal problem as well.

With that, I know it's all painstakingly clear. Thank you very much.

MR. FRANKENA: Thank you. Ann?

MS. MALESTER: Well, I must say that I'm really surprised that this many people showed up this early in the morning to hear us talk about innovation markets, but

this must mean all of you are certainly aware that we have been having a debate in the antitrust world for well over a decade about what the antitrust agencies should do about the concept of innovation markets, and essentially, should there be any enforcement actions in this area?

As you know, there are those who believe that because the empirical economic data has not been conclusive in showing a correlation between increased concentration and reduced innovation, that really the antitrust agencies should just throw up their hands and walk away and not think about bringing enforcement actions in this area.

There are others, and I count myself in this group, who believe that preserving competition at the research and development stages is really important, but recognize, as Steve has pointed out, that there are some real problems and a lot of difficulties in really assessing how innovation markets should be defined and what the antitrust agencies' role really should be there.

First, let me just give you two reasons why I think that it's vital for the agencies to preserve competition and be vigilant in protecting competition at the R&D stages.

First of all, because in the long run, a merger that reduces the pace of innovation can be far more

harmful to consumers than a merger that results in a price increase of quality decrease.

Second, because in the real world, where companies compete every day, it's very clear that competition is the primary incentive that spurs increased level of innovation.

In preparing for this workshop, I re-read the testimony that the FTC received during the 1995 hearings on global competition. What struck me is that although the economists could only agree that it was really inconclusive and they weren't sure what the evidence showed, the business officials who testified during those hearings were, and I'm quoting the words of the staff's report, "Unanimous and emphatic in their view that competition is the primary incentive for innovation."

I spent well over a decade at the FTC as an assistant director in the merger division. I have seen hundreds of documents, and talked to dozens of business officials, who told us that they supported that conclusion.

When you look at the reality of the way businesses make their decisions, I think it's clear that typically businesses invest more resources, work harder and work more quickly in their research and development efforts when they are faced with the possibility that

they will be beaten to the market by another firm that's working to develop a competing product.

We saw evidence in our investigations that companies often spend a great deal of time tracking the research and development projects of other companies that are working in their general area. Companies seek information about the schedule and progress of competing R&D programs, and they make investment and priority decisions based on the level of competition they believe they face.

They also confirmed that being the first to introduce a new or improved product can be critically important to many industries. A first mover advantage that gives you increased market acceptance, lock in of customers, there are many reasons why in some industries reaching the market first is very important for future success.

Having said all that, I really do agree with Steve when he explained that it is much more difficult for the plaintiffs to predict under what circumstances a merger is likely to reduce the pace of innovation, and we know that it's not that easy to even predict when a merger will result in a price increase.

In many cases, it is difficult to identify all the potential sources of innovation, or to identify

whether the merged firm will have both the ability and incentive to reduce the pace of innovation after the merger, and finally, even harder to decide what type of efficiencies, if any, the merged company will be able to achieve in combining their R&D programs.

I think it's for that reason when you look at the past 10 years in enforcement at both the Justice Department and the FTC, you will see first a relatively small number of cases where the agencies alleged only a reduction in innovation, not tied to an existing current goods market, and second of all, you see those actions that there are generally in the pharmaceutical and defense industries, where first of all, it is quite easy to identify generally the companies that are participating in research and development, and where the barriers to new companies beginning development are extremely high.

Let me turn for a moment to the Genzyme investigation, which is the most recent pronouncement by the Commission, and which brought forth three separate statements by the Chairman and Commissioners Thompson and Harbour.

That decision could be the subject of an entire panel, so I'm just going to talk about two points. First, really the question about whether in innovation

markets, there should ever be a presumption of anti-competitive effects at any level of competition, and second, my own views of what Genzyme might tell us for future Commission enforcement decisions.

On the first point, I was frankly puzzled by the seeming importance that all the statements placed on whether or not there should be a presumption of anti-competitive effects. Somehow, that left me with the feeling that in existing goods markets, where presumptions are raised at much lower concentration levels than was the case in Genzyme, but the antitrust agencies bring an enforcement action every time a presumption of legality is raised. We all know that nothing could be further from reality.

Department and the FTC released two weeks ago on horizontal mergers and the concentration levels and which ones resulted in enforcement versus closing, make it very clear that even in existing goods markets, there are highly concentrated markets where merger may reduce the number of competitors from three to two and even two to one, where in some cases, the Commission did not bring an action or the Justice Department did not bring an action.

What does the presumption mean? It only means that the merger deserves a really close scrutiny, and

that the agency in question will spend as much time as it has to develop an intensive fact based analysis.

I don't think there is anyone at the Commission who believes that Genzyme did not deserve that kind of close scrutiny. Both the agency staff and all of the Commissioners spend a great deal of time and effort in analyzing the large investigatory record, and in assessing what the facts were and what the analysis should be, and that is really what I think the presumption means, that it's a case that warrants that kind of scrutiny.

Finally, let me just talk for a minute about what the impact of Genzyme is and what it tells us about the Commission and its likely enforcement in the innovation markets.

First, I think clearly the Commission's decision indicates that the current Commission is likely to approach any innovation market analysis with a lot of caution, but there are four reasons why I think you shouldn't read too much into what the Commission may do in other cases based on the Genzyme decision.

First of all, I think it's important to note that not one of the three statements that were issued was signed onto by anyone other than the author of that statement. Two of the Commissioners, Commissioners

Swindle and Leary, although they voted to close the investigation, did not join in any of the statements that were the public statements that were issued.

Second, in the Genzyme case, both companies, Genzyme and Novazyme, were actually in the late clinical stages of drug development, which is earlier than the other innovation market cases where the Commission has investigated and taken action before, and that means that the likelihood of both products making it to market is less than in the other cases the Commission has looked at in the pharmaceutical area.

Third, the drugs in question were covered by the Orphan Drug Act, which grants a seven year market exclusivity to the first drug that makes it to market. I think that fact also makes it less likely than in a traditional pharmaceutical market that both drugs would in fact compete in a future goods market, and finally, the Genzyme acquisition was not reportable under the Hart-Scott-Rodino Reporting Act, and the transaction had closed well before the Commission was in a position to assess its legality.

Trying to design a remedy in an innovation market in a consummated merger where the core assets are scientific personnel, know how, access to academic researchers, and many other human factors, really

presents quite a daunting task, and the vast majority of
cases that the agencies face, which isn't the typical
Hart-Scott-Rodino pre-merger review, I don't think raise
the same level of difficulty in designing and
implementing a remedy.

In sum, I think Genzyme was a very important case because it gave the Commission an opportunity to look at a really complete investigatory record, and to take the time, which often doesn't happen with Hart-Scott, to really debate the issues.

Obviously, different people at the agency came to different conclusions on what the facts were and what the conclusions should be. I think it was an important exercise at the Commission.

I also think the specifics of that case and of the market in question and the fact that there wasn't a majority opinion on what the appropriate analysis should be, at least should leave everyone with some caution in predicting what the Commission will do in future cases.

MR. FRANKENA: Thank you, Ann. Dick?

MR. RAPP: I'm in the situation that many FTC speakers are in. I have to issue a disclaimer before I begin, because there are many of my colleagues at NERA that disagree with my extremist positions. Tim Daniel over there, the man with his fingers in his ears, has the

look of participatory mortification on his face, is one of those. I want you to know that my point of view is not shared by everybody at my firm.

I do find myself once again as the extremist in the group, wishing to repeal entirely the use of innovation market analysis.

For those of you who do not know me, I want to assure you that it is not that my position is what it is, not because I'm an anti-interventionist generally, that the good government shouldn't put its aura in, et cetera, that is a poor characterization of my views about almost everything else.

I am an opponent of the use of innovation market analysis frankly for an arcane epistemological reason, and that is there is an absence of underlying theory, and in a nutshell, what I mean is that antitrust works well when it is based upon economics. Economics is a science. What that means is that it uses scientific explanation, a hierarchy of general laws and law like statements.

The horizontal merger guidelines are a wonderful example of economic science for policy purposes. The SSNIP test and other devices invoke the demand elasticity, which is right in the mainstream of the laws of economic science, going all the way up to the

1 law of demand.

Cournot's welfare triangle, Stigler's theory of oligopoly, all underpinnings of the merger guidelines are inherent, and the guidelines have a strong theoretical basis. By the way, we observe consistency with empirical facts as well. That is secondary as far as I'm concerned. I care most about the fact that innovation market analysis is basically reasoning by analogy. The policy premise, as I see it, is the proposition whether the social gain from stopping an R&D merger exceeds the social gain from letting it go through is predictable, that you can tell which way that inequality will run.

I think the only basis for that that I can perceive is an analogy to the relationship between competition, quantity and prices in goods markets, and the analogy is false. I won't dwell on that. I wrote an article, as many of you know, in 1995, that captures my views about that subject.

Looking now in the five minutes I have, because I will not impinge on the discussion period, where you get to drag out of me in conversation, let me make just three quick points, two of them relating to Genzyme and then an attempt to be a little constructive instead of being a naysayer. Steven here is sick of having to accuse me of bothering an ugly baby. Let me see if I

can't do something better than that. Whose baby is that?

I want to point out -- I'm going to go through this whole slide -- it's really the first point that I wish to remark to you about, and that is that I am an admirer of Chairman Muris' statement in Genzyme. It is remarkable to me for the fact that it changes the basic policy rule. It has to do, as Ann described very well, with peculiar circumstances of the case, but one should not lose sight of the pun on the word "competition."

What we are talking about now is a race to monopoly. It has nothing to do with the kind of competition that is output expanding, price reducing competition, the likes of which we talk about when we talk about horizontal mergers. Market power has nothing to do with this.

The underlying characteristic of -- let me say the most basic finding in the majority statement is even though they are nowhere near the end of the race, that the pace of the two parties is predictable, the issue is not who is going to come in first. It's whether or not the second will come in at all or come in sooner rather than later.

The fact that there is no possibility for delay of the first one getting to the deadline as a result of the merger means the merger has no negative impact.

That's my quick two second reading of the majority viewpoint without all of the reasoning that follows.

All I wish to say is that as an analysis of incentives, it makes a great deal of sense to me. It's quite novel. That doesn't bother me as an economist. The lawyers in the group can consider how it would play at Section 7 or FTC Section 5 enforcement, but I think it's unusual.

My real focus is on Commissioner Thompson's dissent, because I have to say in the debate between the extremists and those who favor the innovation market approach, as far as I'm concerned, I can't be both a player and a referee, but I have to say as far as I'm concerned, my reading of Commission Thompson's dissent led me to say game over, I win.

This is a litary of what can go wrong if merger analysis is applied using its very premise, that is to say reason by analogy to the goods market.

You talk about a merger, a monopoly, and speak about market power, even though there are no goods around and market power is not the issue.

I know about presumption of anti-competitive effect without either theoretical or empirical basis.

There is this -- now we are getting back to the lesser things that I won't dwell on so we can get to the

conversation part -- this struck me as extraordinary.

There is a difference to be expected in the resource allocation of Genzyme, arising from the difference between trying to get the first approval with orphan drug exclusivity, to save a lot of children's lives and make a ton of money, and trying to get first approval with orphan drug exclusivity for a longer period of time for the sake of first mover advantage.

I can go along with all of those who say competition spurs innovation. It makes a certain amount of sense. You see how the notion can be, I would say, misused. It represents to me a believer in competition, certainly an oddly crabbed view of human nature.

There is a further litany of errors, errors in economics and logic, but I believe here, in Commissioner Thompson's dissent, we can talk about them if you like, my worry is that some day President Kerry might appoint a Commission with this frame of mind, and that is the reason why a line of by and large sensible -- I won't say unobjectionable -- to me, understandable decisions both by the Pitofsky Commission and the Muris Commission, are not good evidence that we are okay with the innovation market concept.

Let me see if I can do what Chairman Pitofsky did to me at the 1996 hearings, to try and find some

compromise in my extremist position.

At the very end of that panel, he put the following question to me. He said, look, just imagine that Boeing is building the next airframe. There are two jet engine makers. They are about to sit down with their cam systems and start designing the new jet engine that would go along with that.

Do you propose that the Federal Trade

Commission, if they came to us and said we want to merge,
we want to do a joint venture, we want to turn those two
research efforts into one, that we ought to just go away?

My answer to him was no, sir. What I wish I had said is no, sir, and here is why. No, sir, because you can do a goods market analysis, even though the first good, the design and character of either good has not been invented. You have the means to analyze not research effort and whether or not they will pour it on to a greater degree on R&D spending or effort, if they merge, because you can't predict that.

What you can do is you can say, look, this is a case where there are going to be two goods competing with one another versus one, if the merger or the joint venture takes place. We can use horizontal merger guidelines reasoning to deal with that, and that makes it okay with me.

My attempt at a constructive end to my
extremist talk here is to say that to the extent that we
are -- let me put it in terms that Mark used when he
wrote us a series of possible questions to discuss.

I think the distinction between innovation markets that pay attention to R&D effort, about which we know very little and predict very little, the distinction between that and future goods markets, which to me means taking only those cases where we can actually foresee what the goods are and what the number of players, the number of pricing voices will be, and make some attempt at doing horizontal merger guidelines analysis.

That distinction between innovation markets on the one hand and future goods markets is very great, and as far as I'm concerned, one that should strive and be well, and the other should quietly go away.

Thank you.

MR. FRANKENA: Thank you. Just following up on that, I'd like to ask Ann a question. Let's assume back in 1995, the antitrust agencies had completely listened to what Dick said, and had said that henceforth, in going forward, we won't be defining innovation markets. We think innovation is important and we think competition may affect the rate of innovation, but we're not going to delineate innovation markets, so we don't want our staff

1 to be doing that.

My question for Ann is what difference would that have made in the types of investigations, things like that?

MS. MALESTER: I think there are maybe two examples that I can use to show you why I think Dick's approach presents enormous dangers to competition, that would allow mergers to proceed, that I think would have really, really serious anti-competitive impact.

The first might be similar to the case that the Justice Department brought, and I think it was during the time Steve was there, Lockheed/Northrop Grumman.

It was really a step further back from the Boeing example that Dick and Chairman Pitofsky talked about, where the Justice Department raised the concern that there were only three companies left in this country that really had the capabilities of designing military aircraft, and if Lockheed were permitted to buy Northrop Grumman, that would be reduced to two.

There were no specific plans for a fighter aircraft, but as we all know, in military procurements, there are eventualities that arise that very quickly turn the Defense Department into needing something new to meet a new military challenge.

Even though there wasn't a future goods, a

specific program or product on the drawing board, both the Justice Department and the Defense Department felt very strongly that one of the reasons to block that merger was to preserve the capabilities of designing and producing a particular weapons platform.

I think that is a step sort of removed from Dick's position of we have to have a specific good that we are looking at, even if the first one hasn't been produced yet. I think it's a case that if allowed to proceed would have very serious anti-competitive effects for our economy, and in that case, for our national security.

The second point I want to make is moving even further back away from the future goods markets, and this may be something that is specific to the pharmaceutical industry, and that's an industry that I did a lot of work in, but may be applicable to others. I'm not sure.

That is apart from looking at what the impact of eliminating the merger is on the future goods market, is it going to mean that there will only be one company selling a product at some point.

There is actual competition going on during the research and development phase when two companies know that they are both trying to develop the drug, and want to get approval first. Those companies will, for

example, do clinical trials that involve many more patients, to make sure they get a broader range of patients with different kinds of seriousness of disease.

The kinds of clinical trials they do, the amount of effort and outreach to patients they do, there are benefits right now in the present of having two companies competing to develop a drug, completely separate from the actual benefits, potential benefits, that we are not sure will be realized because we don't know yet if both companies will successfully develop the drug.

I think that may not be completely responsive to your question, Mark, but I think that gives an idea of the different kind of scenarios that gives me concern, if we take Dick's position to say absent a very identifiable good that companies are actually producing or are about to produce, the agency should simply step away.

MR. SUNSHINE: Let me just jump in here, too.

I was actually tremendously comforted by Dick's last example, but if we go back to the engine example, and engines take years and years to develop, but if it's that situation where Dick sees a potential enforcement action, what we are talking about is the area of competitive interaction between the two companies is in research and development.

Yes. There will be a goods market, but that goods market is a long way off. Usually outside of what we normally consider to be within the reach of Section 7 of the Clayton Act.

Innovation market is an immediate step to identify where the activity of the two companies come together and where there might be an actual reduction.

In the case that Dick put forward, there will be less innovation competition in developing this new engine some years off, which will translate itself into output.

If you want to say, no, no, that's not an innovation market, that's a future goods market, fine. Now we are talking semantics.

MR. RAPP: Are we talking semantics then if we rule out the application of the innovation market concept to the Genzyme case? There, there is no prediction that we could make about how many goods would otherwise go to market, what the future market would look like. There are no such goods.

I see that as a sharp distinction. In other words, my primary criteria is that the analysis not deal with issues like the degree to which R&D spending will be cut back or reduced. It has to do with an analysis of some future, some prediction about a future goods market.

1	That's the distinction I want to draw.
2	MR. SUNSHINE: How do you get there? How do
3	you get to the output effect on the goods market without
4	understanding what's going on at the research level?
5	MR. RAPP: It maybe that what I'm talking about
6	comes very, very close to the concept of potential
7	competition, where we are already very close to home.
8	You can do that even if the design of the goods
9	hasn't occurred, if you can predict the future. This is
10	a closed conversation.
11	MR. SUNSHINE: But just on the potential
12	competition, you would then relax the two year time
13	frame.
14	MR. RAPP: Sure. It means nothing to me.
15	MR. SUNSHINE: Now, I think we are just in
16	different legal labels for looking for the same effect.
17	MR. FRANKENA: All right. You will need to get
18	a microphone.
19	MR. DANIEL: I'm Tim Daniel, the aforementioned
20	NERA colleague of Dick.
21	I would be curious I liked the jet engine
22	example a lot. Suppose one flows into that going into
23	the production process that Boeing and everyone else
24	knows that there is some probability that this engine

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simply will not be a success, that the project they have

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1	on the table is for an airplane that requires advances in
2	science and advances in material science or something
3	where there is some probability that engine won't work.
4	So, you don't know with certainty there will be such an
5	airplane in need of such an engine.

I would be curious if the panelists generally could just speak to how that analysis might change if that were thrown in.

MR. SUNSHINE: I think it's an essential part of the analysis. Again, the idea has got to be a focus on what exactly are the incentives of the parties, and what effect is the combination going to have, factors in terms of are there efficiencies that come from it, the necessary investments, because of the size of the project and the risk of the project, whether it requires one firm instead of two.

All those considerations go into the question of whether this makes sense or not. For all the reasons we have talked about before, applying straight horizontal merger guideline standards to this innovation question is misplaced.

If this project is so risky that two firms need to do it together or it won't get done, I think that answers the question.

Let me stop there. I'm sure Dick doesn't feel

differently about it. I don't know, Ann, if you have a 1 different view.

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MS. MALESTER: It seems to me it is not only the question of is the standard that Dick puts forward requiring that we know that a particular product be successful, that they will in fact design an engine, which I think really is a pretty extreme position, but I would take the added step of saying if there are only a very small number, in this case, two companies, that have the technology and know how and expertise to design aircraft engines, then we should be concerned about allowing that merger for future aircraft engine developments that aren't even yet on the drawing board, and that was really why I brought up Lockheed/Northrop.

Stealth technology. That was another reason why the Defense Department and Justice Department felt it was critical to keep a number of companies that knew how to --

The quick mental analysis that you MR. RAPP: did to reach that conclusion doesn't really have much to do with an analysis of what is going to happen to R&D It has to do with being able to forecast, even if it is decades down the road, how many goods are going to be available at the end. I'm okay with that because it's processible in economics, as opposed to assertions

about whether more R&D or less R&D effort will arise and whether that's a better or a weaker thing. This slides somewhere in there, but I won't bother illustrating it.

A decade or so ago, we had 27 drug companies, big drug companies. These days, we have seven of them. Is anybody prepared to say that major losses to R&D effort have arisen because of the combination of those? I don't think we are in a position to say that the connection between concentration and innovation --

MS. MALESTER: I think that's a very, very different proposition than what we have really been talking about, which is competition or the lack of competition, not whether or not there are 27 or 10, I don't think in any current goods market that would concern us.

I do think -- I don't think anyone on this panel has said that we can look at the dollars spent on R&D and say it's more or it's less and that means we are going to get a better product, we are not.

Those are really not the issues on the table. The question is whether having competition in designing a new weapons system, for example, is going to provide the purchaser with a better product in the end, a more innovative, a more radical breakthrough.

I think there are quite a number of historical

assessments you can look at that say yes, they do.

2 MR. HOVEN: I'm John Hoven, Justice Department.

I'd like to make the point that each of you were just talking about tools in the shed, and there are many others, and yours are relevant for some purposes and not for others. I think the Lockheed/Northrop merger is a good illustration of that.

The presumption of the innovation markets analysis is that innovation is a very predictable process, just like building bricks. You spend the R&D and you get a product.

A good example is the expectation that the kind of innovation we are looking at is innovation that has a known identifiable product at the end. I think to some extent, that was true, and to some extent, that was not at all true in Lockheed/Northrop, that innovation in many industries is a process of ideas coming together in unexpected ways and you want to preserve an industry structure that allows that to continue to happen, and in particular, in some cases, an innovation structure that generates ideas, products that nobody can think of yet.

I think the general process of innovation analysis ought to be one in which one inquires how does innovation take place in this particular industry, and maybe it's the kind of approaches you are discussing, but

there are a lot of others that should be examined as well.

MR. SUNSHINE: I think certainly in the framework that I put forth, and I think in the framework that actually Muris puts forward in the statements, is the recognition of what you said is exactly right.

The question is should we examine the innovation market and under what circumstances can we actually accomplish innovation effects. It's a small minority of cases. If you can't have the confidence to predict it, then you should go home.

Once you say that, then if you're talking about innovative activity, there are three categories of what can happen. It can be innovations that will be used in the future product. It can be innovations that are used in existing product, or it can be innovations that won't be used at all.

That last category I don't think antitrust enforcement should care about. For the first two categories, now we are talking about legal theories, is it a competitive effect of a goods market, is it a potential competition case. I don't care what the answer to that is. When you get into a court, you are going to have to have developed your legal theory and put it forward.

1	To me, that's the connection. Find the
2	innovative effect, put it with confidence under the given
3	set of facts, if you can. If you can't, you shouldn't be
4	in the business. Identify an output effect, and then
5	there's a case.

MR. RAPP: May I just add a sentence with that in mind? It is perfectly consistent with the majority statement in Genzyme, but I think, and this is the troubling part from my standpoint, that it is also consistent with the dissent, in that Commission Thompson may have used the same reasoning and had sufficient confidence in his ability and that of his advisors and staff to see through these issues. I think it's an example of what can happen when innovation market analysis goes wrong.

MR. SUNSHINE: I agree with your criticism of Commission Thompson's dissent, and I think it is wrong. I think in that dissent, he does make a straight analogy to a goods market, for the reasons we have talked about, that is improper. If that were the policy of the Commission, I think it would be misguided. That's not what Chairman Muris says.

MR. FRANKENA: I have a question for Dick.

Based on Chairman Muris' statement, and if you just

accept the facts, are you comfortable with that word of

1	"analysis," of trying to reason out the effects on
2	incentives and so forth?
3	MR. RAPP: Yes. I'm comfortable with
4	"analysis" as long as it reaches the conclusion that is
5	functionally the equivalent of not making innovation
6	market policy.
7	One of the reasons that I admire what the
8	Chairman's statement does is that it reasons sensibly by
9	analyzing the incentives to an outcome that says let's
10	leave this alone, and what I find hard to imagine, and
11	maybe it's the shortage of imagination on my part, I have
12	a great deal of respect for our former chairman who would
13	advocate this policy, of Steven and Rich Gilbert, who are
14	the parents, but I cannot imagine a well reasoned
15	economic statement a statement that is well reasoned
16	in economics that says and now let's intervene.
17	MR. FRANKENA: Taking a broader view here, one
18	of our panelists wrote in the mid-1990s antitrust laws
19	and merger enforcement in particular have not focused
20	sufficiently on the consequences of market power for the
21	pace of industrial innovation.
22	I'm just wondering broadly whether you think
23	the agencies are doing sort of the right amount, too

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much, and so forth.

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MR. SUNSHINE: Those words sound strikingly

familiar. I don't know where they came from.

Again, those words were written in 1994 and 1995. I think that during the time period after that, there has been a whole set of investigations by both agencies where there has been real focus on innovation.

There are cases where I would certainly agree with Dick that innovation analysis may have been carried to the extreme or inappropriately applied or applied without basis. I would not take the position today that innovation is under enforced, but as I said today and I'm glad we stuck with the analogy of tools in the shed, it is a tool in the shed. It is not the sharpest tool in the shed. It's one that should be used only in the right circumstances. I don't feel it's under used today for sure.

MR. RAPP: I'm going to not answer the question directly but raise an issue that arose out of the global marketplace report, the 1996 report, and it was specifically quoted in Chairman Muris' statement, which puzzles me enormously, and I wonder whether I am the only one.

That is this business of saying we recognize the potential infirmities with this approach, so we are going to be very cautious and conservative and apply it in circumstances where only small number mergers are

1 involved.

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Is that a fair statement, Ann?

MS. MALESTER: Do you mean small number of competitors?

MR. RAPP: Small number of competitors. To me, that is not conservative. That's radical. Am I the only one that thinks that? It's conservative in the sense of avoiding waste, in that if you don't carry innovation market analysis into every seven into six merger, you are receiving resources in some sense, but in those settings, in the large number settings, you are going to have -the likelihood is that the merger is going to be allowed because somebody else is going to win, and if there's a false positive that arises in your innovation market analysis, in your merged number setting, it's not going to be that consequential because somebody else is going to get to the finish line.

My definition of non-conservative radical enforcement is to take this controversial concept to look only to those mergers where it will be consequential because you are intervening in a merger that is going to determine the output of innovation, if you will, and where if you get it wrong, there has to be harm as a result. It's a semantics issue on the one hand, what you do mean by "conservative," but we shouldn't lose sight of

the fact that we are only doing it into two to one
mergers, so it must be benign. At least in my view, the
opposite is true.

MS. MALESTER: I think really the reading of what that global report meant and what the Chairman, I think, alluded to, is simply the consensus that an unilateral theory is by far the most likely if we are going to apply an innovation market at all, and generally speaking, you are looking at a very small number of companies that have the specialized assets, so to speak, to be innovating in the market before you are even starting to think about unilateral theories. That really was the impact of that.

MR. RAPP: I don't disagree.

MS. MALESTER: In terms of your point of yes, it's radical because where it makes a difference, we will just turn it around and say it makes a difference, and from my point of view, because I think protecting competition where it makes a difference is important, I think it is the right place to put our efforts.

MR. RAPP: If that statement were always prefaced by the prior statement, that the reason to be conservative is that we are dealing in a realm of uncertainty when we can't be all that confident that the decisions that we make will be the correct ones, if it

weren't for that, I could go along easily. The combination of those two things together strikes me as problematic, my only point.

MR. SUNSHINE: Let me ask you one question tied to Genzyme. Suppose that the drug in question did not qualify for orphan drug status. Does that change the outcome of the case? Orphan drug status, for those of you who are not pharmaceutical, it's not a winner take all situation.

MS. MALESTER: I think there are a lot of facts that go into coming to a decision. In my own view, the orphan drug situation adds a complication, but in and of itself, shouldn't bar there being a case altogether, and it's one factor you look at in a very large number of factors in assessing whether or not the Commission should take action.

MR. FRANKENA: Just one final question. Is there anything that you think the antitrust agencies could or should try to clarify about their approach to analyzing the effect of mergers on innovation? Is there anything left they could actually do?

MR. RAPP: I think conversations like this are illuminating. I can't think of anything other than that. You know, seeing Greg Werden and Luke over there sitting side by side leads me to ask a question. If it's not

1	fair, forgive me.
2	Are there or have there been interactions
3	between the agencies about the differences in the
4	application of it? I won't ask for specifics. That's
5	the comparison. Obviously, the FTC, with its focus on
6	drugs gets a lot more cases where entry barriers are high
7	and things like that. I'm curious to know about whether
8	or not there is interaction between the agencies on
9	enforcement of innovation markets.
LO	MR. FROEB: Not on specific cases, but
L1	certainly on general policy matters, I'd say yes.
L2	MR. WERDEN: None that I participated in.
L3	MR. SUNSHINE: I thought Greg and Luke were
L4	working on the 2004 innovation market merger guidelines.
L5	MR. FRANKENA: Thank you very much. I'd like
L6	to thank both our panelists and the audience.
L7	(Applause.)
L8	UNILATERAL EFFECTS
L9	MR. FROEB: Welcome to the session on
20	unilateral effects analysis. We have five speakers
21	today.
22	We have Greg Leonard. He's here. I know he's
23	here. We will start with Valerie Rabassa from the
24	European Commission, followed by Joe Kattan, Greg Werden,

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and Tad Lipsky, and then Greg Leonard, if he gets here in

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time. He will bring up the rear. There he is.

I want to thank the panelists for agreeing to come on relatively short notice. I also want to thank the staff who has put together this conference, and also worked on the enforcement data, getting the enforcement data together, and releasing that as part of our desire to be more transparent to the external bar and the external community.

I also want to acknowledge the efforts of my predecessor, Dave Scheffman, who began much of the work that is now just coming to fruition.

By 1999, they had displaced the structure conduct/performance paradigm in industrial organization economics, thinking on pricing and output coordination in oligopolies had evolved considerably from the view that it made coordination almost inevitable.

While economists never entirely rejected coordinated effects theories for mergers, they did reject exclusive reliance on them, and they had more plausible theories for many cases. Thus, it was not surprising that unilateral effects analysis appeared prominently in the 1992 horizontal merger guidelines, which were jointly promulgated by the FTC and the Department of Justice.

The unilateral effects analysis satisfied the attorneys' demand for simple intuition that they could

understand and explain to a judge, and at the same time, it satisfied the economists' demand for more rigorous analysis. It wasn't long before economists began using structural theoretic models to make quantitative predictions of unilateral competitive effects.

In a price setting model, price goes up. In an option model, firms don't have to bid as aggressively to win. In a bargaining model, the merged firm gains bargaining power. In the equality setting model, well, we learned that mergers aren't usually profitable with equality setting models.

The controversy surrounding unilateral effects analysis has focused on the application of structural models to individuals cases, their main virtue is they force assumptions to be made explicit and they provide a clear mapping for the facts of the case to the effects of the merger.

The shortcoming is that the models are necessarily unrealistic and abstract away from the important features of the industry. As such, the results may be quite misleading.

Unfortunately, we have little evidence on whether these models can accurately predict the effects of real mergers. Instead, we are left with controversy about what is the best way to analyze unilateral effects

1 theories.

What follows is we will hear from Valerie

Rabassa, Joseph Kattan, Greg Werden, Tad Lipsky, and Greg

Leonard on this and more general topics. Let's start off

with Valerie.

MS. RABASSA: Thank you, Mr. Chairman.

Let me talk about the Lagardere case. It's a European case which took place last year in France. It was analyzed by the European Commission. It is one of the leading 2003 cases of the media industry.

Let me talk about the transaction. It was very simple. The transaction concerned a transaction between the first and second player of the book industry. The book industry in Europe is characterized by a very high level of vertical integration. Different animals in this industry. In the upstream market, you have the publishing right, and who sell the rights to the publisher, and distribute the books to the retailers who distribute or sell the books to the final consumer. And given the particularity of these cases was an econometric study carried out for the Commission by Professor Marc Ivaldi, and it studied basically the effects of trash and trees in the downstream segment.

It was very interesting because it was the first time that we incorporated an econometric study into

a final decision. In this study, they will in effect measure, as you know, the entire concentration, the fix in price, and then we have the impact to the final consumers who produce and choose a profit of the firm.

So this was the launch with VUP, if Lagardere had decided to increase price obviously unilaterally, some of the final consumers would turn to the other competing publisher, who may reach VUP. So I've always thought of the concentration with VUP has shared a subsidiary of Lagardere to accept part of this competitive pressure, and so can recover part of these customer.

In this case, we use a very strong model, the nested logic model, which is quite adapted to the book industry, which is characterized by differentiated products. The logic model, as you know, is from the family of the discrete choice model, which was very interesting in this case because obviously you cannot buy too seminal a book.

The consumer in this case made a discrete choice, a model, a different set of economists and then choose a book on the concerned list. Simulation is consistent with the Bertrand Model of competition and the estimation was three stage least-squared.

So the reasons why it's quite interesting is

because we find that the end price of the books were significantly increased in the downstream segment.

Obviously, we were looking at the consumer surplus and we find that consumer surplus will also fall significantly, which was equivalent to a very negligible part of the turn-over of industry in the field I'm generally tied to.

What was wrong obviously there is that the price increase was linked with the market size, and we were able to reconstitute the market size in this case.

Again, we decided to receive -- the results were quite robust to incorporate it into the final decision, and we have used a boot strap method to construct confidence intervals that are quite often used in the econometrics field and we find that there is only five percent variability that the price rise to the concentration that could be including significant a significant interval of plus or minus one percent, with the mean value of the price change.

Results were quite robust because of the very high number of observation to at least 10,000. The different statistical traits were quite significant, and the main parameters, I mean the marginal ATAF of a given book and the intra-brand correlation were quite stable. Altogether I feel that's reasonable to quite robust as for when we decide to incorporate this econometric study

1 into the final decision.

2 Thank you very much.

MR. FROEB: Joe, you're next.

MR. KATTAN: I want to talk about, I think, differences between the ways that lawyers tend to look at unilateral effects and the way economists do, and particularly with reference to the new models, the merger simulations that are being done increasingly in unilateral effects cases.

I want to begin by just talking a little bit about the 1992 guidelines and what they say, and to contrast that a little bit with the new simulation models and pose the question whether we are asking the same questions, that is do the guidelines give guidance or do these simulation models answer the same questions that the guidelines are asking.

I think it's pretty clear that the 1992 guidelines really changed the way that people look at unilateral effects before 1992. Unilateral effects were basically thought of in terms of monopoly or dominance, and the insight of the guidelines was that unilateral effects can arise outside the monopoly context.

The merger of Daimler and Chrysler does not exactly have the same effect as the merger of Daimler and BMW, and if you were just looking at HHIs and market

shares, you may get a misleading answer.

Some people thought we were returning to submarkets, which was a term that had been discredited at least within the Beltway. Certainly, if I were litigating a case on behalf of the agencies, I would rely on the submarket nomenclature simply because it is something that the courts are familiar with and are comfortable with, regardless of whether that nomenclature really makes a lot of sense in terms of the way we do the unilateral effects analysis.

I think it is certainly the case that inclusion of unilateral effects was the most important change in merger law since the 1982 guidelines, and had a very profound effect on merger enforcement, and it wasn't that very long ago that one could hear people talking about whether unilateral effects was in fact the only valid theory for looking at mergers. I think the pendulum has swung back a little bit.

I think it's fair to say that what we saw in the guidelines is a synthesis of good economic theory, but also practical judgment about the qualities of the tools we have available to us in merger investigations, and how refined a judgment we can make about the effects.

To repeat very briefly what the guidelines say, not to state the obvious, but to give a benchmark for

what we are looking at, the guidelines focus on spacial separation between products and product space. The focus is on localized competition where certain sellers compete more closely with one another than with other sellers who are in the same product market.

According to the guidelines, that requires that there be a significant set of shares of consumers who regard the product of the merging parties as their first and second choices, and certainly the way that lawyers go about applying the guidelines is by asking very often about whether we are dealing with first and second choices. That's one of the first screens one applies when trying to look at a case for the first time.

We have a 35 percent screen for the merged entities' market share, the debate whether that is a safe harbor or something else, but in fact, we have seen cases where the market shares were lower than that that have been brought.

I think these reflect a pragmatic tradeoff
between quality of the analytical tools that are
available in merger investigations and the theory. It is
certainly possible to argue, in fact, it has been argued
by Greg Werden and others, that you can have an
anti-competitive effect in a merger where the merging
parties are not the first and second choices of

customers, and you can certainly draw the theoretical picture that would be supported and have numbers to support it.

The question certainly in 1992, and not accounting for all developments and the analytical tools that have taken place since then, was what are the tools that we have and how refined a judgment can we make, and the judgment was, at least at that point, we are going to look at next best substitutes.

Now, the way that the lawyers tend to approach the issue of unilateral effects is, I think, familiar to most people here. You look at markets, first of all. You define a market, and you do that because not only the guidelines say that, but Section 7 case law says that.

More broadly, I think doing an antitrust case without defining what the market is is a recipe for disaster.

There was a recent case involving Rambus

Company that is in the news, where Infinion brought both antitrust and fraud claims against Rambus. The antitrust claims were thrown out because Infinion forgot to define a geographic market for memory chip technology, something that probably would have taken two paragraphs in the expert reports.

I think economists often take the position that

defining markets is superfluous if they can get to the answer more directly, and that may or may not be right, but certainly from the viewpoint of the courts, if you don't define the market, you may find yourself out in the street, given a case like <u>Infinion vs. Rambus</u>, where the definition of the geographic market was clearly a red herring.

Once you define the market, I think the lawyers focus on the issue of next best substitutes. Why?

Because that's what the guidelines say, and the analysis is driven by interviews and documents. A lawyer's fetish is to ask for way too many documents so that you can have boxes and boxes of documents stacked up in the hallways.

I think there is a critique that one hears from the economists that lawyers use models but don't articulate them with sufficient particularity.

Certainly, the legal method does not require articulation of the model the way the economic method does, and when you look at the economic model, it tells you what the assumptions are and if assumptions are not made, what the limitations are. Lawyers don't tell you exactly what the models are.

The model effectively if we look for significant market share. We look for next best substitutes, and that embodies certain assumptions on the

effects of the internalization of loss sales. That is sales that would have been lost to the merger partner that now is internalized as a result of the merger, the effects of that on the merged firm's incentives.

It's certainly true that the economic models spell out their assumptions with greater particularity. Lawyers have an advantage. The decision makers and the courts are lawyers. You cannot have a legal argument thrown out on Daubert grounds, you know, the economic models, which may be equally valid, are subjected to a different kind of scrutiny, at least once you get it to the court. It's a different issue at the agency.

The economists, I think it is fair to say, are less bound by the guidelines because the methodology of looking at what the rules are and applying them, that is a legal methodology, and in fact, I've heard countless times from various economists in various contexts, mergers and otherwise, that the whole process of defining markets and driving the analysis that way is an artificiality, and if we have the tools that allows us to get to the answer more directly, you know, why bother.

There is certainly an institutional bias against the approach that the lawyers use. I think the economists have a desire to try to get closer to "the real answer." The tools that the lawyers use are fairly

crude in many cases, making predictions about the future, relying on assumptions, some of which are stated, some of which are unstated, and have various degrees of support, and obviously, if through the application of the data methods, data analysis, you can get closer to the real answer, why not try to do that.

It is certainly the case that the economic approach has the advantage that the models have well articulated specifications, which the legal approach does not.

One of the things that we see now is that economists have an insatiable appetite for data. The lawyers want documents. Economists want data. There is a belief that virtually everything can be solved through data exercises.

We have these models, and we can talk about -Tim made the comment to the effect that the analysis not
helped by relying on the jargon, but I think there are
questions about whether the constraints of Bertrand
models are realistic in the context of differentiated
markets because they allow one point for differentiation,
which is price, and in fact, at least the way the issue
is posed in the guidelines, we are looking at a host of
variables that affect the positioning of different
competitors in product space.

The insinuations are with us, and I think they
are going to be with us for a long time, whether or not
the lawyers like it, we are going to have to deal with
it.

Modeling simulations can be mutual if we are all comfortable that they are attuned to the market realities, that they are based on defensible assumptions, and that's obviously where the debate has been.

One criticism has been that a small difference in the assumptions can make very big differences in the results. The answer that I think you will hear from the economists is well, we have different ways of doing things, we should probably do it more than one way and impose some kind of reality check on your analysis and also try to use the method that's the most conservative from the standpoint of the party that you are.

I'll pose the question whether there is a conservative assumption from the standpoint of the plaintiff, as all these models seem to be designed to show a price increase.

Part of the issue that I have is price increases are assumed in these models based on structural assumptions, even though we are trying to run away from structural analysis.

The question is what are we trying to show

here? Are we trying to show what the magnitude of the price increase is. I think everybody will tell you no, that's not what we are trying to show, but I think that's where it comes out.

When you get somebody telling you that I can predict with 95 percent degree of confidence that you have a price increase of 7.4 percent, you know, some if it even has a decimal point, it sounds so precise that you can debate that. Of course, there's a footnote that says, well, if you accept all my assumptions and that's also before I take into account issues like repositioning of product entry and efficiencies.

There is a risk, I think, of false empiricism where you have these results which are so precisely given with high degrees of confidence and decimal points, you know, somebody is telling you this is the price increase they are going to get.

I think this is fairly paradoxical, but the economists' approach is more likely to identify problems with a merger than the more traditional way the lawyers do, simply because the models are designed to predict a price increase, and because these models will predict a price increase, even in relatively unconcentrated markets, I think they tell us something, which is either the models have a problem or the guidelines are wrong

because the models will predict a price increase in situations where the merger would not even get a second look under the guidelines, things that are below 1500.

The economists' answer is well, we are not really trying to predict the price increase, we have to take into effect entry repositioning and efficiencies, but in fact, if you accept this methodology, then what you have done is really shifted the burden of proof to the merging parties, because you have said on the basis of some data analysis that you have a price increase unless these other factors come into play, so now please prove to me that this price increase will not happen.

In fact, to really say to the parties in most cases prove repositioning, because anybody that has done a lot of mergers will know that most mergers, the efficiencies that we see are not efficiencies that affect the incremental costs in a meaningful way. Most of the efficiencies that I've seen tend to be overhead synergies. They are very important and they are very real. They drive merger economic efficiencies, but at the end of the day, they are not the type of efficiencies you can expect to translate into a beneficial price effect. Entry is kind of a defense of last resort. It's very hard to show entry, particularly when you are talking about differentiated product markets, where you

have large investments integrated with differentiation, that is promotion, advertising, and also distribution arrangement.

The parties are now in a position of being told your merger is anti-competitive, you have to prove it's not going to have a price effect, and really your resort is repositioning. Repositioning is pervasive. It's common. At the same time, we are in effect shifting implicitly the burden of proof to the merging parties by effectively assuming a price increase and really saying the only issue is how big a price increase.

Another question to ask is what happens to the next best substitutes analysis. We talked at the beginning about what the guidelines say. The guidelines say, well, we look at whether the products of the merging parties are first or second choice of the large share of the customers, and what we wind up with are legit models, and really instead of being differentiated by product attributes or by promotional issues, products are differentiated by their sales level. That is the form of differentiation that the analysis assumes because that is really what we are looking at.

Of course, we are assuming identical cross elasticities of all products with respect to a given product, which given the assumption that some products

are closer substitutes to each other than others, it seems to at least raise some issues.

The more complex models, they impose great cost. They have an insatiable appetite for data. There are issues with using retail level data as a proxy for wholesale competition.

Dave Scheffman and others have put together a very detailed analysis of that, and it deals both with implementation issues, what do you do when a price increase takes place in mid-week, but the data you have collects prices on a weekly basis, as well as conceptual issues, that most wholesale prices now really are two part tiered and relatively fixed and a variable element, and obviously consumer prices are an one part tier.

The issue that I guess I will end with is whether these models follow the guidelines. If the source of anti-competitive unilateral effects that the guidelines are talking about has to do with the spacial separation of product, are we really obscuring that issue by looking at models that are defining differentiation effectively based on the levels of sales, are we also shifting the burden of proof to the merging parties implicitly by doing that.

I was actually heartened to see that one of the recent presentations Luke did showed sensitivity to the

1	cost of doing these types of analyses. The fact is
2	anybody who is doing a merger now is kind of forced to do
3	that as a defensive measure because the economists are
4	going to come to you and say, well, this is what DOJ is
5	going to be doing, and we need to do this because
6	otherwise, we are going to be unprepared for their case.
7	It's another burden of merger enforcement on top of the
8	endless boxes of documents.

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My feeling is that the current models are going to have problems in court, but at the same time, most cases are decided in front of the agencies, and parties will be foolhardy to ignore these models because they have become part of that decision making process, and what needs to be done, which is very difficult because we don't have the investigative tools to look at consummated mergers and see what happens and calibrate the assumptions in these models to actual market results, is to try to refine them and make them better.

Thank you, Joe. Valerie, just MR. FROEB: because Joe raised this question, did you look at the retail sector to see what kind of contracts they had with publishers? Did they use mark up pricing or two part tiers?

In the Lagardere case, we had a MS. RABASSA: big problem to gauge that, because frankly, the sale of

books to retailers and wholesale was the sale of books to the final consumer. We had many problems getting the right data. We can talk about this problem later, the problem of getting data.

MR. FROEB: Thank you. Greq?

MR. WERDEN: Before I get to my prepared remarks, I want to respond to a couple of things Joe said. The first one was a serious misquotation of my views. He paraphrased the guidelines, which I will actually quote to you, and then said I disagreed. I don't.

The sentence I will quote says "Substantial unilateral price elevation in a market for differentiated products requires it to be a significant share of sales in the market accounted for by consumers who regard the products of the merging firms as their first and second choices."

I totally agree that is a very nice way of putting the point, notice it said significant share, not a large share, I think Joe wants to switch it to large share, and you don't need a large share. Second, he wants to then translate this into saying there is some global ranking of the products, one, two, three, four, and the merging products have to be closest in this global ranking. That is wrong.

The crucial thing to know is that typically in differentiated products, different consumers rank the product differently. That's why some people buy one product and some people will buy another one.

What the guidelines say, which I totally agree with, is are you using a significant number that is viewed as the first and second choices.

Secondly, he suggested that modeling, the kind that economists do, merger simulation and other things, is more likely to find mergers problematic than whatever it is that lawyers do instead. I find this a remarkable statement because that's just totally contrary to my experience.

One of the reasons Luke and I got into this 12 years ago was the lawyers had tremendously exaggerated notions of likely anti-competitive effects of mergers, and the only way we could think of to bring them down to earth is with economic models, and it has worked.

In a lot of cases in which the models have shown that it was implausible there would be significant price effect. It was implausible they would be large enough, even with very small efficiencies, that the net price effect would be positive. These are cases we didn't bring because of the modeling.

It's hard to say, because we did do the

modeling, but when most of the modeling said there was no significant effect, we didn't bring the case, in every single one of those cases that I know of.

I think modeling has probably kept the agencies from bringing some cases, although it might have caused them to bring some other ones they should have brought, and in both cases, that was for the better.

Starting with my prepared remarks, the concept of merger simulation. If the same well specified oligopoly model reasonably describes the outcome of the competitive process, both before and after the merger, a lot of conditions, then that model can be used to generate a quantitative prediction of the merger's unilateral competitive effects after it is first calibrated to match the prices, shares, et cetera, that would prevail but for the merger.

All it says is if we run a model in our standard tool kit that fits the industry, and we think it is also going to fit the industry, except for the merger, second assumption, and if it predicts what we care about, like prices and maybe more, then we know how to use that model. We know how to calibrate it to match the prices and shares and elasticities or whatever we observe for the industry, and to generate what the post-merger equilibrium looks like, taking into account the

internalization of the competition between the merging firms.

We can put numbers on what the guidelines talk about in some cases.

From a plaintiff's perspective, and since I've worked for the Department of Justice, that's the perspective I usually take, I think that's very helpful in several respects. In the first place, it's one thing to tell the judge that there is a significant number of customers who view the merging products as first and second best alternatives, and it's quite another thing to say the likely implication is they will raise price 10 percent.

I think you are much more likely to win the case if you can make the latter statement than if you can't, and if you have something to back it up, of course.

Plus, there is a way to put things in perspective, like cost reductions. You can trade them off if you do a quantitative analysis. You can't otherwise.

That's really my second point here in the slide. There are certainly cases in which mergers may have significant efficiencies or in which we think even if we don't have specific evidence of efficiencies, it's

1 very plausible the merger will have some efficiencies.

2 It's very easy to take those into account in merge

3 simulation and very easy in some cases to show that

4 plausibly the net effect is a price decrease, not a price

5 increase. We don't bring those cases.

Merger simulation can be an useful way to focus an investigation or try by identifying which factors or assumptions really matter. If you can show in the modeling exercise that one assumption gives you one result, another assumption gives you a very different result, then it becomes a very crucial fact which is which of those assumptions is the right one or the better one. That can be a very useful process.

You can also find some things really don't matter much, so you shouldn't put your resources on figuring those things out.

Limitations. The fundamental limitation is no economic model is going to capture every nuance of competition in the real world, but you don't have to.

All you have to do is capture enough to be able to usefully predict.

Second. Price increase predictions can't be any better than rough estimates. There is a whole lot going on that isn't in the model. All kinds of things are going to happen in the world that you can't possibly

anticipate. You are only given some idea of the likely effect of the merger, but that's a whole lot better than no idea of the likely effect of the merger.

Third. Merger simulation is basically designed to predict price effects, possibly other short term effects of the merger. It's never going to predict the long run evolution of the industry, but the good news is Section 7 doesn't care that much about the long run evolution of the industry, which in any event, we have no tools in law or economics to really predict very well in most cases, so what merger simulation gives us is something that the law is looking for, or what it can give us.

The basic theme of my talk is that before you use a merger simulation at trial, and for that matter, before you use it for any other purpose for which you give significant weight to the actual predictions, it should have to pass an admissibility screen from the rules of evidence. Rule 702 interpreted by cases like Daubert, Joiner, Kumer Tire, and many antitrust cases of less prominence.

What I take away from Rule 702 and the case law applying it as it applies to economic testimony in antitrust cases is that testimony is admissible if the witness is an expert in the relevant field of economics,

if the testimony employs said methods from the relevant field of economics, and if the testimony reliably applies those methods to the facts of the case.

I'll elaborate these a little, mostly the third. I think the required expert knowledge is a fairly low hurdle. I like to quote a lot from Werner Heisenberg, a famous physicist, who defines an expert who is someone who knows the worse mistakes that can be made in his subject and who manages to avoid them. That's the kind of expertise we need in any area, including merger simulation. There are some really bad mistakes you can make, and you have to know better than to make those.

What merger simulation does is use absolutely standard, well accepted tools from economics, so in that sense, theoretical sense, merger simulation is the application of sound methods necessarily.

There is also the empirical sense of soundness, which can be very important, and as Luke mentioned in his opening, we don't know very much about the predicted accuracy of merger simulation. However, we don't know very much about the predicted accuracy of anything else, so in a relative evaluation, merger simulation certainly doesn't do worse in predicting than anything else anybody has ever come up with.

I won't offer some of my favorite pieces of

dicta from Supreme Court decisions here. First, from

Daubert itself, which held that expert testimony is

admissible only if it is sufficiently tied to the facts

of the case and will aid the jury in resolving a factual

dispute, i.e., only if there is a good fit between the

testimony and the inquiry.

Daubert didn't come up with this fit concept.

It was borrowed from a Third Circuit decision. I think it's a very good and precise way of describing what we are looking for, and it's something that certainly antitrust cases are looking for.

The same theme expressed in a different and also useful way in the Joiner case. The court should not admit opinion evidence that is connected to the existing data only by the ipse dixit of the expert. A court may conclude there is simply too great an analytic gap between the data and the opinion proffered.

In my view, it is not uncommon to have expert economic testimony that is merely ipse dixit. The economist doesn't closely tie his theories to the facts of the case, and I think Joiner is right on track saying this is the kind of thing that courts should not allow.

As an example, a very well known one from an antitrust case, the testimony of Robert Hall was excluded in Concord Boat because his oligopoly model, the kind

that you might use for simulation, although hardly anybody does, was not grounded in the economic reality of the industry. This wasn't the only knock on the model perhaps, although I happen to read the case as saying there were like six different ways in which it wasn't grounded in the economic reality of the industry, so I think all of the critiques were fit critiques.

The court said there was nothing wrong with the model as a matter of theory, it was a sound method, but it wasn't the right method for that case. I think that's exactly the kind of inquiry a court should do, and I think in the case of Concord Boat, the court was exactly right, it wasn't the right model for that case, and in particular, at least the way the model was calibrated by Hall, it predicted that the defendant would not have more than a 50 percent share without engaging in the challenged practices.

The fact was the defendant had a 75 percent share before engaging in the challenged practices, and I would say that's got to be improper calibration. Not the only problem with the model the court pointed out, and some of the other ones I think were important as well.

A less well known case but perhaps a more well known economist, Frank Fisher's testimony was excluded in the Booksellers case for purposes of at least determining

damages, which was pretty important in that case, because it contained too many assumptions and simplifications that were not supported by real world evidence.

I will not comment on the merits of Fisher's testimony or the court's analysis of it, because I don't know enough about either one, but I will comment on the language used by the court here in excluding the testimony. I think this is exactly the right way to think about some economic evidence and if it is the right way to think about that evidence, and the right conclusion is that it should be excluded. If it depends on too many assumptions and simplifications that are not supported by real world evidence, then it doesn't fit the facts and it isn't admissible evidence.

What are the key elements of fitting the facts, and I will emphasize these are key elements because this has to be a case by case determination, depending on what the facts are, what the model is, and what you are trying to do with the model.

An oligopoly model used in simulation has to reflect critical aspects of competition in the short term at least. That doesn't mean it has to reflect all aspects of competition. It's not going to. You have to have a basis for saying it reflects the critical ones.

Some fact based analysis by your experts has to

lead to this conclusion, and he has to be prepared to convince the trier of fact that he is right in thinking about the industry and the model in this way.

at a fairly high level of generality, especially the intensity of competition, as I like to think about it, as reflected in price cost margins. There is a lot that can be explained by models, how the industry has responded to shocks, the level of prices as compared to costs. A model should be able to explain these things, not necessarily with exquisite precision. There is no reason why a model should explain day to day price movements.

We don't care about day to day price movements.

The ultimate test, another way of restating the fifth requirement, is that every modeling choice should be justified on some basis. It could be dictated by economic theory, for example, the assumption of profit maximization, and needs no further justification. That is what economists do. If you don't want somebody to assume that, don't call an economist.

It can be supported by industry data, for example, if the model is calibrated properly, that fits the price and shares of industry, that kind of data I have in mind. Also, the data may speak to diversion ratios or demand elasticities. There are lots of

different ways in which models could be supported or refuted by data.

It should be consistent with stylized facts of the industry. How does competition work? What are the important elements of competition?

If you have a typical differentiated products case and it involves a retail sector, how does the manufacturing sector interact with the retail sector and how does the retail sector behave?

These are the kinds of stylized facts that have to be studied before you can properly model an industry, and you should be prepared to explain how the facts support the particular modeling choices.

Fourth, some modeling choices may turn out to be unimportant. You may be able to try a particularly different choice. There may be a major difference in choices. You may find out for that particular thing, the model doesn't really matter. That is a perfectly fine justification.

Finally, particularly when you can't do any of the above, it may be in addition to doing some of the above, you can justify a choice by doing a sensitivity analysis and showing that over the range of plausible assumptions, you have picked one that if your plaintiff, for example, leads to relatively small price increase

1 projections.

There are some modeling choices in merger simulation that you are not going to be able to justify, and that's what you have to do.

A couple of illustrations. This is, I think, the easiest and best one of some kind of modeling choice that you are never going to be able to justify based on the facts of the data, and that is what is the assumed functional form for the demand curve?

Here I have plotted between the competitive prices over in the lower right and the monopoly prices in the upper left, four demand curves that have been used in merger simulation. As you can easily see, going from the competitive price to the monopoly price, it involves a vastly larger price increase for some demand curves than others.

Where you are going to see one of these or perhaps some other functional form is when you do a merger simulation, and it's going to affect in a very substantial way the price increase predictions. If I'm for the plaintiff, I would be using linear demand, which produces small price increases, absent some strong evidence I can't imagine ever having, that one of these other functional forms fits better.

A final illustration has to do with demand

1	elasticities. In differentiated products, merger
2	simulation is a way of translating the demand
3	elasticities into price increase predictions. Obviously,
4	those predictions are sensitive to the demand
5	elasticities, and it should be obvious that we never know
6	exactly what those elasticities are.

Well, so you should consider what the price increase predictions are for a range of elasticities. Here is a very simple illustration of how that might work for the WorldCom/Sprint merger, where a very strong assumption about demand is made so that we can place parameters on this model just based on two elasticities.

One is the aggregate elasticity demand for residential long distance service, and the other is WorldCom's firm level elasticity for its long distance service. For each of these elasticities, this plot considers a very wide range of plausible values.

The academic literature is estimated in elasticity demand for residential long distance of about one, and this gives quite a wide range around one, from a half to one and a half. The range for WorldCom demand elasticity here is from 1.25 clear up to 4, which is a huge range of elasticities. It's highly likely that the truth lies somewhere in that interval.

What this plot shows is that for some

1	combinations of parameters, a 4/10ths of a price increase
2	on up to 1.2 percent price increase for the average price
3	over the whole residential long distance, which of course
4	includes AT&T and all these other little guys which
5	collectively had, I think, around 70 percent a few years
6	ago, so WorldCom and Sprint were at least a relatively
7	small portion of the industry, significant, but
8	relatively small. So we are averaging out over these
9	other residential long distance service companies that
10	are going to have vastly smaller price increases than the
11	merging firms. That is why these numbers are so small.

asy for merger specific efficiencies to swamp that, and for the net price increase to be negative. Up above one percent, that's not really so likely, and that's probably a price increase big enough that the agencies would worry about it, and you might say very plausibly that WorldCom and Sprint were closer substitutes than this model assumes, if so, the price increases would be even bigger, and the contrary is also correct.

MR. FROEB: Thank you, Greg. Joe, do you want equal time now or later?

MR. KATTAN: I'll wait.

MR. FROEB: Tad?

MR. LIPSKY: Thanks, Luke. It's a great honor

1	to be on the same stage with such distinguished
2	practitioners of these various economic approaches to
3	antitrust, and I have to say in listening to the
4	unilateral effects theory, you would almost be grateful,
5	I suppose, that you have a merger before the Commission
6	and before the DOJ where the theory is going to be
7	innovation markets or potential competition where now
8	this is applicable and you can't do simulations because
9	you have no current output for both firms. That might be
10	nice.

MR. WERDEN: You need an option model.

MR. LIPSKY: As I said before, I think we are focused on the wrong ex-Frenchman. Bertrand was an IUV study, and I've said elsewhere many times before, pretty much what passes for antitrust economics right now was all in the original core notebook back in 1838. I don't think unilateral effects were in there. Maybe it's an option of the theory of monopoly.

I want to go at some specific issues that have been alluded to but haven't been raised directly. Maybe I can give a somewhat different focus.

Who decides and how effective are those economics in this process. I'm going to back over the first principles that I don't remember thinking about since my first day in econometrics as an undergrad, and

probably I should have been thinking about them a lot more than I have, but I think it helps ground the discussion and reveals my approach to some basic points here.

First, there are facts, and some facts are really facts, like how much and how long it takes to build a factory. There are models which are basically mental constructs of mathematical models, oligopoly models, what have you. I have here sort of the classical model for merger law.

If an industry is more concentrated, the output will be lower and price higher than if it's less concentrated, ceteris paribus. Then there are statistical tests which are propositions that grow out of the application of a specific econometric method used to estimate the parameters of a specific model, and I have no idea what I'm saying here. Obviously, the silicon-based widget market doesn't exist except in my head, but this is the kind of assertion you would find at the end of the articles back in the 1960s and 1970s as to what you actually needed to apply econometric methods to a model in a particular industry.

I want to echo something I heard Joe say earlier. Maybe I won't put the words in your mouth. I think it has do with the idea that we are all decision-

makers and we are not all judges, we are essentially lawyers. There is a certain assumption that they don't have enough economics or econometrics to understand really what is contained in an assertion like that, and that's one of the problems I'm going to get to a little later in the presentation.

The value of a statistical test, the values of the parameters and all those squares and all that neat stuff that the economists roll around and try to persuade you that what they have done is great or is viable at least, let me give you a very concrete example based on something we have heard today.

We had a description of a statistical outcome for a model estimated in the context of the Booksellers merger. I happen not to know a thing about that merger, but I will tell you right now, if the combined market shares of those two firms in the defined book market are say in the 5, 10, or 15 percent range, I can guarantee you I will find some problem with the econometric model that was presented. If you get up to much higher market shares and you talk about entry and market conditions and other sort of stylized facts about the way book publishing works, I would be entirely prepared to accept that those statistical results are valid, but the key point is that the econometric exercise is useless if you

have a significant reason to doubt the validity of the underlying model.

There is sort of the red letter error type thing. That's where you give your data to Greg Werden and you tell him what your model was and he comes back half an hour later and says, oh, you screwed up, you forgot to adjust for elasticity or you have too many multiple linear variables or whatever it is.

Even assuming that the econometrics is done perfectly, it doesn't mean anything if you have a significant doubt about the truth of the model.

I think this has had a fairly profound impact in my professional lifetime in the area of merger analysis, which is when I entered grad school, people I think we're beginning to have doubts about this long series of econometric studies showing a correlation between concentration and prices or concentration and profits, and looking back, I'm not sure which was the more popular, based on your original structure conduct performance paradigm.

Why is it that it was thought to apply econometrics to these models 30 or 40 years ago, and now, I think it would be fair to say that those types of models have been fairly thoroughly discredited. It's a process that not only involves "better econometrics."

I'm thinking particularly of Porter's 1972 Review of Economic Statistics Paper, where he said, you can take these regressions that are being used as evidence that concentration and profits are positively correlated, and notice that even though there is a claim for the validity of that relationship, the statistical tests show that the coefficients are small and the statistical confidence intervals are rotten.

I've discovered one reason why that might be.

We divided the samples in two groups, one is sort of
convenience goods group, where it was sold in drug stores
and grocery stores, a small amount purchased at any given
time, very little consumer search behavior for the
characteristics of the product, often very subjective
characteristics of the product. You put that off to one
side.

The particular model that had been applied worked pretty well in that set of industries, but it didn't work at all in a different set of industries, which was things like cars or consumer durables, where you do have significant consumer search behavior and a lot of the other underlying variables represented by the method of retailing which were thought to be important.

Time marches on. It's not like you put it in at one end of the lab and get it out at the other and

have a high degree of confidence that it's right. It's much more an art, as I think somebody else said.

Economic model is critical to the entire process of antitrust decision making because you have to decide a specific case, and every litigant, as I put here in the middle, every litigant tells a story, and every story has a model. Sometimes the model is unstated, which is very bad, and I agree with the earlier remarks that the focus on the unilateral effects of the merger simulation approaches sometimes gets you a long ways by making the assumptions that the underlying model is explicit, always a good thing to do.

Then the way the economic model really comes to the floor in indicia decision making -- it's one of the interesting phenomena, I think, in recent antitrust jurisprudence.

In Matsushita, for example, the narrow issue decided by the Supreme Court was whether an expert report about the possible existence of a predatory pricing conspiracy could be admitted, with the majority saying no, because it's crazy, essentially, and the minority led by Justice White saying wait a minute, what is the seventh amendment for? A jury trial? Expert testimony? What is this?

Justice White wanted to pretend, for purposes

of his very powerful decision and opinion in Matsushita, that the validity of the expert's testimony was a fact. I don't think that testimony was a fact. It was something different. It was a model. It was a story about a model. It was a story about why a model should be applied to particular facts, but the fact that the Matsushita majority said we are essentially entitled to disregard what this expert says. I think it was something of a turning point in anti-trust jurisprudence.

State Oil vs. Khan. There is a very explicit example of saying reasoning about maximum vertical price agreements was wrong and, therefore, the per se rule was wrong.

Brooke Group is kind of interesting because the oligopolistic disciplinary pricing model in Brooke Group, the plaintiff's story was this is a big nasty oligopoly, six firms. The smallest firm really started to discount like crazy, and the third largest firm decided to lower the boom on the smallest firm, confident that the leaders of the market, R.J. Reynolds with 38 percent of the market, respectively, would stand by that Williamson discipline licit, later owned by Brooke Group, and the court, maybe because they were represented by Phil Areeda, but the court said that could fly, it could be an oligopolistic disciplinary pricing theory under the

Robinson-Patman Act, and sometimes I wonder and at the same time feel thankful for the fact that there aren't a lot more cases. Maybe the Packers and Stockyard Act has an oligopolistic disciplinary pricing theory that is being tried out in this Tyson's case, but it's amazing that nobody else has tried such a theory.

The Supreme Court says you must be covered under the Robinson-Patman Act. What they said in that case was that doesn't apply here. This is why I put it on my list and use it for this point, Brooke Group was essentially the rejection of an expert report. An expert who said, I observed the factual pre-conditions for and the theoretical apparatus for appreciating this oligopolistic disciplinary pricing theory in this case, and the court said no, that's crazy. It's inconsistent with the facts, not a crazy theory, inconsistent with the facts.

A particular fact that the court was dealing with was that the main underpinning for the oligopolistic disciplinary pricing theory was that the cigarette industry was an oligopoly, with high prices, high profits, sticky prices, sticky shares, all those things we associate with oligopoly.

Well, it just so happens that I was senior executive for the plaintiff that testified it wasn't an

oligopoly, prices weren't sticky, that profits weren't abnormal, and I think the court had a hard time swallowing the expert relying on a theory which was essentially contradicted by the leaders of the plaintiff.

We have this weird situation where the judges are deciding economic issues. They are rejecting models. They are rejecting expert testimony. I think the Daubert Quartet, the four cases that really form the Daubert line, are in a sense an extension and may have even been suggested by Matsushita and Brooke Group, chronologically it works out, I suppose we will never know. Maybe 25 or 30 years from now when the papers are disclosed we will find out, but judges are getting more and more uncomfortable with economic theorizing.

The problem that we have is, as has been previously said in the panel, the lawyers control this process. The lawyers present the case. The lawyers are the ones who are appointed by the politicians to hold the positions at the agencies. There are just lawyers all over the place.

Whatever economic content has been suffused into anti-trust, I think there is a great deal of it, it has to come through the lawyers and judges. There is no existing institution that filters out the quality of economic testimony and compares the relative

persuasiveness of different economic views of these particular cases that is really designed in a way you would want an institution designed, to get to the truth of the matter.

We have an advocacy process run by lawyers. We don't have time to sit around for the process to work. You have some guy who is bringing cases based on the notion that concentrations and profits are strongly correlated, we don't have time to sit around and discover that is wrong.

You have a failure in the antitrust realm.

It's not like the Challenger disaster, where the market blows up and everybody says whoa, something really went wrong. There are antitrust disasters.

I think the United Machinery case is an antitrust disaster. That company driven out of business, case founded, I think, are illegitimate theories of violation, suing remedy. United Machinery was destroyed, but it took about 10 to 20 years to happen. You can debate as to whether the machinery industry was really one that was destined to remain in American business anyway, given all the things happening in the world.

I have summarized Matsushita and Brooke Group.

I mentioned the Daubert Quartet. I also want to focus
you on the sources -- judges articulate their

dissatisfaction with the process by which economic expertise is applied during antitrust cases. They do it in other cases, too.

Justice Breyer I don't think has ever mentioned antitrust in his talking about this issue. I understand he gave a talk at AEI recently on this same thing, and might have mentioned antitrust. His focus is more on toxic torts and that kind of scientific evidence.

He has basically proposed in a speech to the AEA a few years ago, we really need to weed out the cranks. We need to have the AEA or some responsible professional body weed out the people who know what they are talking about and the people who don't.

I'm not so sure that's a great solution for antitrust. I can't imagine the American Economics

Association having a qualifications panel for antitrust economists.

Judge Posner, in HFCS, a very intricate exploration of the economic elements of that case that were relevant to the judgment of whether there is adequate evidence of conspiracy. He pretty much beat on the district judge and said, look, when this goes back down to explore this issue. Now that I have reversed the summary judgment in favor of the defendants, it would be a really good idea to use Rule 706 of the Federal Rules

of Evidence and appoint some experts so you can figure this out at least as well and maybe better than I did.

If you haven't read Posner's decisions in <u>Asahi</u>

<u>Glass vs. Pentech</u>, and there is sort of a cluster of cases that are related, you really need to read these decisions.

Richard Posner, sitting as a district judge, can you imagine, and going through unbelievably complex cases involving a patent settlement and is that illegal, there's some infringement issues along with other stuff, you can learn about disappearing polymorphs and other chemical curiosities. It's just wonderful.

The reason it is inserted in my remarks here is that Posner makes some rather pointed remarks about some theories that are now popular in the analysis of pioneer generic patent litigation settlements. He is obviously itching to see lower courts be more rigorous and more explicit about how they confront economic modeling.

Just to treat unilateral effects as essentially a case study of what I've been talking about, the fundamental inside unilateral effects is really a no-brainer. Sure, A's customers could go to B. After the merger, they won't be able to go to B. How high a crater do they have to climb to get out of a hole. Is that going to impose any kind of long run pricing and

1 imposition on consumers? Is that going to decrease performance?

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We have already heard a lot this morning and I'm not going into the fact that the analyses by which you can get at these phenomena quantitatively require a whole bunch of assumptions.

I conclude with the issue of kind of baseline credibility. If we are going to continue to live in a world in which the decision makers do not have the expertise to decide whether a model or econometric study offered is worth a darn, what is the point at which we are going to allow econometric testimony to influence the decisions in antitrust cases?

I think it's a problem. Let me suggest, and here I want to run straight at an issue that Joe raised, which is it's the lawyers who decide, to me, the lawyers shouldn't decide. Maybe independent economists should review everything that goes into an antitrust case, sort of certify for the judge, not that the expert is a good expert, but that he thinks the analysis is pretty plausible, hasn't found any particular issue with it.

It's not easy to imagine institutions that would effectively accomplish what I'm trying to drive at, but think about that issue. Should the economist actually decide? Should the judges, should the lawyers

1 be bound by what the economists say?

David Scheffman, who has written and I think as others have mentioned this morning, the judgment on these economic issues is done simultaneously, you can't separate them out. Read Fred Kahn's testimony in the Nabisco Brands case that was decided, where New York challenged a merger that both Federal agencies had passed on and found that Hippocrates was not fringed.

This is from the first sentence of the Aphorisms, his little sayings about good medical practice. Bill Baxter was a great fan of Hippocrates. Do no harm. That wasn't the first sentence of the Aphorisms.

The first sentence is "Life is short, and Art long, the crisis fleeting, experience perilous, and decision difficult." That applies here, too.

These are some criticisms I have of typical enforcement agency modeling. Market definitions tend to be narrow. They tend to focus on isolated time periods. There tends to be, I think, heavy discounting of dynamic effects, and it's wrong for obvious reasons. No one necessarily does it consciously, but it tends to encourage the bringing of enforcement actions where otherwise somebody a little more relaxed on those assumptions would not have any concern.

L	Also, there is a tendency to go to extremes.
2	We will often hear arguments in the front office that
3	make it sound as if the parties have been unable to agree
1	on anything in terms of the assumptions that are going
5	into their arguments, their story.

I've mentioned some of these alternatives, reliance on neutral experts, Rule 706. Do we need to have a category of economists who work for the agencies but don't really have a role in cases, or maybe they should be outside consultants, people who theoretically won't have any percentage in the outcome because they are not going to be involved in either the prosecution or defense of the case. I don't think that's such a great idea. I just raise it because this is the kind of thing I think we should think about.

Can we get more peer review, maybe can we get more industrial organization professors to look at these things? I think a lot of them do.

Finally, my last desperate gambit, maybe a Federal judicial center should be given a pot of money to study all this stuff.

Just to remind you of why they liked the per se theory, <u>United States vs. Topco</u>. I loved that footnote that says if we were to consider the economic justifications for this joint venture, it would send us

1	into	the	wilds	of	economic	theory,	so	welcome	to	the
2	wilds	5 .								

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MR. FROEB: Thank you, Tad. Greq? are waiting for Greg, I want to ask Greg Werden a question. Both Tad and Joe raised questions about merger simulation, it's a seldom useful exercise, too costly, too time consuming, and it's persuasive only when we are using it to justify something we already know, like from the totality of the facts, we know that the merger is not going to raise price, here's an economic model that says 11 that.

> Do you have any reaction to that? frequently it is used, how frequently it influences decision making at the DOJ?

MR. WERDEN: In the first place, I don't think either of them were as negative on merger simulations as you suggested they were, particularly not Tad.

It's helpful to clarify. MR. LIPSKY: I would agree the outcome is seldom very persuasive. It doesn't determine the outcome and often is really not sufficiently persuasive to have a major influence on the judgment.

I think there are two kinds of MR. WERDEN: major influences. One, at a very early stage, there certainly have been cases where merger simulation helped

decide not to proceed with an investigation. Very quick and dirty merger simulation, confirming what some people already suspect, it's pretty easy for this merger to not raise price much, to lower price, next case.

Also, there are a number of cases in which I think sophisticated analysis was given a lot of weight in the agency decision about challenging or not challenging a merger.

MR. FROEB: Greq, go ahead.

MR. LEONARD: Thanks. Luke, Greg and I were part of a group of economists who got the ball rolling with merger simulation 10 or 12 or 14 years ago, whatever it was. It quickly became pretty popular and it happened quickly. I think what happens when you have something that gains popularity very quickly is that a backlash occurs subsequently, and I think that has happened a little bit. We have been talking about some of the problems.

I thought what I would do today is try to address some of the questions that have been raised about merger simulation.

Let me just start by saying, and this has been mentioned so I'm going to go fast, basically, you have the fact based inquiry, which are reviewing the documents, reviewing the depositions, interviewing

1	customers,	so	forth	and	so	on.	Then	you	have	merger
2	simulation.									

They shouldn't be substitutes for each other.

They really should be complements. They both add

something to the party.

ones are out there.

Merger simulation has two pieces to it. The
first is what I'd call guesstimating consumer demand
functions. You can do that with econometrics. You can
do that possibly by looking at documents, if the correct

The second case is the model of firm behavior you are going to use. People have been talking about oligopoly models. That's what I mean there.

The two pieces together are what constitute merger simulation. When I talk about it, I'm going to mean to include both pieces.

Let me first say what does merger simulation add where you have the documents. Attorneys certainly like it. With economists, I would say they have value. What does merger simulation add? I guess what I would argue is it helps move merger analysis closer to what I would call science. What do I mean by "science?"

The most important thing is that the analysis is based on a set of theories or a theory that is testable. That's really the essence of what science is

about. We come up with theories. We test them. If they
pass the test, we accept them. We keep trying to test
them. Eventually, they may be rejected, and we come up
with a better theory. That's what the scientific method
is all about.

Second, and what has been mentioned earlier today, the underlying assumptions of the analysis are very clearly delineated. The third thing is the results of the analysis can be replicated by somebody else.

Finally, scientific analysis typically will allow you to calculate the precision of your results. I think Tad mentioned that it is conditional on the assumptions, and that is certainly true.

Why should merger simulation aspire to be a science? I guess the first thing I think as probably the most important is it gets closer to objectivity and further from subjectivity. That is again what science is really about.

Secondly, it provides some certainty. If you know what the rules of the game are, and that's the whole purpose for the merger guidelines, I think, to lay out some rules and to say here is how the game is going to be played, and then gives people an idea about how the analysis will go and allows them just to know how things are going to fly.

Next is the sources of disagreement between the parties, I think, are a lot more easily identified when you have some scientific approaches on each side, a larger definition, arguments that are based on documents. There is a lot of subjectivity. There is a lot of hidden assumptions, a lot of judgment. If you can instead replace that with an analysis of elasticities, then you are talking about hard numbers. There may be issues about how you get those elasticities. Arguing about the elasticities, I think, is better than arguing about some vague ideas that come out of documents.

This is what I said before. What we are going to get is bad methods are going to be replaced by good methods, and good methods are going to be replaced by better methods. That is the essence of the scientific process.

Obviously, if you come out with a result that is very uncertain, you are going to put a lot less weight on it.

In large, merger simulation is in fact a science or a scientific analysis. It's based certainly on well established economic theory. We have the theory of consumer demand that drives the demand equations. We have the econometric theory that is behind the estimation procedures used to get at the demand elasticities. We

1	have the oligopoly theory, which as someone was pointing
2	out, is based on infringement from many, many years ago.
3	It has been around for a long time.

We tend to lay out the assumptions, the underlying assumptions, very clearly, and this is a very important point. It says assumptions can often be tested. I think that is another aspect of all this that is very important.

For instance, the demand model you choose can be tested. We can distinguish between a logit model and an AIDS model perhaps, under the right conditions.

I can give another economist the data and I can say here's what I did, and that person could hopefully get the same results, replication.

There are going to be choices along the way and we may disagree about those, but at least we know what those choices are, and they are fully described.

Finally, you can get a standard error for a predicted price change. Again, it is conditional on the assumed demand models and assumed oligopoly models, but hopefully again those have been subject to some testing along the way.

The so-called document approach, it is not really a science, at least in the same sense. First of all, usually not incredibly well linked to economic

L	theory. Lawyers have models in their minds. I don't
2	think that's true, but they are not very well
3	articulated, and so the assumptions themselves aren't
1	laid out very well. The assumptions often aren't tested.
5	A lot of times, they don't even know what the assumptions
5	are.

I think if you think about what is in these documents, that really is one of the problems. We look at these documents and we assume that the authors of them are discussing things or analyzing things in the way that is actually meaningful for the merger analysis we are trying to perform. I don't think that is necessarily always the case.

If you look at the Staples case, there was a certain set of analyses done. They were done for an entirely different purpose. I think further analysis was necessary. I think even the economists on the FTC side agreed with that and went forward and did an additional analysis.

Similarly, customer reviews are used a lot. I think there are some serious problems by sampling. The customers that care are the ones who come forward. They may also tend to be the marginal ones. What do we make of that.

Another problem with the documents is the

results can't be replicated, at least in the same way
that a merger simulation can be, because you are going to
have two different people look at the documents and
review them and come up with very different conclusions.

Finally, in terms of some questions that have been raised about merger simulation. Is it a perfected technique? The answer to that is clearly no. That is true of almost any scientific inquiry. It's never complete. It's never final. Things are always refined.

It doesn't need to be finalized to be useful. Whatever the current state is, it can be useful in certain ways, even though it may be improved upon later. I think it's a theory of evolution.

In Darwin's original formulation, he thought that evolution occurred gradually over time. When they looked at the fossil record, you would find one organism that clearly evolved from an earlier one, but they were very different, and it was talked about as being gaps in the fossil record, we were missing the fossils for the organisms in between.

The punctuated equilibrium theory was developed and basically what it said was wait a minute, evolution isn't gradual. It happens in short bursts and there is no change for long periods of time in between. It explains the facts better, and it is perhaps a better

1	theory	than	the	original	one
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If you go back to the 1930s and 1940s, it doesn't mean Darwin's formulation was useless. In fact, it formed a lot of scientific thought.

The second question that comes up is does merger simulation provide an answer. No, it doesn't. That's one of the consequences of the fact that in this science, we have to go out and test the assumptions, and we might find the assumptions aren't valid. Then the merger simulation is not going to be -- at least in that format, is not going to work.

It would be impossible to capture all the economic processes in a model that is going to work, given we are not going to be able to do this merger simulation in that case.

If you contrast that to the documents approach where you can't always get an answer, you can get any answer you want within the bounds of reason. You can often get two answers, one for the defendant and one for the plaintiff.

I would argue that because it's a science, you are not always going to get an answer, and that's a fact of life, I think.

Does merger simulation involve choices? Yes, it clearly does. The good thing is the choices are

clearly articulated, and you can get down to brass tacks and have the experts on each side argue about what the right choice is. Often, the choices are subject to testing. Again, very important. That's a way to resolve the arguments.

If you contrast that to the documents approach where the assumptions are often not expressly stated and often can't be tested or certainly aren't tested, I think there the choices are so hidden. That makes it very different. And the fact that there might be disputes among experts about what choices to make. It doesn't make merger simulation any less a science. Scientific disputes have existed forever. There are ways to reserve them.

Is merger simulation the only co-scientific merger analysis, and I would say no to that. Certainly, there are other kinds of analyses that are co-scientific that are helpful. We can look at what happens in the industry when one firm's plant blows up and isn't able to supply the market any more, and see where customers turn to and what other firms do in terms of prices.

You can also look at what happens when there is a new product introduction. There are obviously complexities about these types of analyses as well, and choices and everything else. In certain cases, they are

1 going to be more appropriate.

FTC vs. Staples is an example of that, where the analyses were done based on looking at markets where there were a different number of competitors or where the number of competitors changed.

Should the merger simulation approach replace the documents approach? As I said at the outset, absolutely not. A lot of times, you can look at the documents and it is going to give you very useful qualitative information that allows you to fit the model better and give you institutional details, and perhaps even allow you to do some testing of the model, as I said, is very important.

What I am going to turn to is some of the problems that I think merger simulation faces. The first is it may not appeal to attorneys. We have heard a little bit about that earlier. The first thing is it really does require a fairly high level of economic expertise, and I think attorneys, it may seem like a black box to them. They not feel as comfortable with it.

Secondly, I think when you end up in a battle of experts like this for each side, talking about very sophisticated choices, as we were talking about before, you just end up in a situation where no one understands what the heck they are talking about, and the two experts

1	basically	cancel	each	other	out	and	the	fact	finder
2	doesn't pa	ay any a	attent	tion to	o it.				

I think there is some of that. What Tim was talking about before, perhaps having an outside expert to resolve some of those things would be helpful in that regard.

There are some that feel merger simulation is too new to be attempted in a courtroom. I think it is true that law tends to move more slowly than science. As an example, I was thinking about intellectual property damages cases.

What happened is you basically had to show there were no acceptable non-infringing substitutes to get any lost profits at all. Of course, there is this reasonable royalty side of things. It doesn't mean you don't get any damages, but you don't get any lost profits.

In terms of the share based approach, it kind of made things better, but again, it is based on assumptions that an economist would question, I think, or would want to test at least.

I think simulation would really help in these kinds of cases and hopefully will be used sometime soon.

Greg already talked about this stuff, so I'm going to skip that. I just want to say one thing about

1	the usefulness of comparing predictions from merger
2	simulations to actual outcomes. It is absolutely a
3	standard scientific practice to do that.

I have this paper with Jerry Hausman where we try to do that a little bit, I think with mixed results, but fairly positively.

Since every industry is really very different, I'm not sure how much it would help to say in these five industries, we have validated the merger simulation approach. It's not clear to me how much that would help us when we were applying it to the sixth one.

Finally, I guess I'll just finish by saying as I said before, this is a development process, as is all science, and there are clearly areas where merger simulation can be improved. I think number one on the list is the old Darwin model. Bertrand has taken a beating today. It's absolutely true, just in economics generally, it would be great to come up with a better oligopoly model. I think that is really where the future of merger simulation lies.

Thanks.

QUESTION AND ANSWER SESSION

MR. FROEB: Thank you, Greg. I know we are heavily weighted towards economists on this panel. I want to give the attorneys some time to rebut or say

1 whatever you want.

MR. KATTAN: I actually find myself in agreement with most of the things that the economists have said. Certainly when they critique the legal method. I think they have a valid point. Their models are out there. Their assumptions are clearly articulated, and we can beat up on them by saying, well, I have a problem with that assumption or this assumption.

The models that are explicitly by lawyers are a lot more difficult to discern. There is certainly a difference in the level of opacity, and therefore, in the susceptibility of the model to questioning, and the deck is stacked institutionally in favor of the lawyers, largely because they control the process.

To me, the issue is what do I do when I have a set of choices, each of which is going to predict a price increase no matter what, and I'm told basically take your choice, which poison do you want.

I would ask Greg Leonard, how do you sell to a client the idea that they really have to do this, you know, however many thousands of dollars it is going to cost them to pay you, to come with a model that will predict the price increase, next to which you will have yes, but if you count for efficiencies, you account for this, you account for that, that price increase will be

obviated or it's such a small price increase, that it really shouldn't matter.

MR. LEONARD: I think you have to go into it realizing that the model is going to predict a price increase, unless those costs and elasticities are zero, which is unlikely in a lot of these cases. If you get one percent or two percent, it is just not enough to worry about, especially because there are probably offsetting effects. If they are even small efficiencies, that is going to wipe it out.

MR. KATTAN: There is this language in the merger guidelines, which I can't recite as well as I should be able to, due to the fact that the five percent test is not a tolerance level for price increases, and we have certainly seen cases where the predicted price increase was very, very small, and a challenge in fact took place.

I don't take comfort in the prediction of an one percent price increase and the argument that well, you wouldn't need a lot of efficiencies to obviate. I worry about my ability in most cases to show any kind of efficiency that is going to bring prices down. You can show significant efficiencies that are driving the deal, but as I said before, they are usually going to be more in the overhead category.

MR. LEONARD: If you go back to the guidelines and say well, that's sort of how we should do things. If you follow the guidelines strictly, next best substitute or second, if it turns out it's the third one, you can still have a price increase there, too. This is just the economics of it and I don't know how you get around that. I don't think following the guidelines versus merger simulation saves you from that. Again, you are making an assumption in there, that we don't care about it if it's the third on the list. I don't know if that's right.

MR. FROEB: Tad?

MR. LIPSKY: I think part of the problem -- I think there are some respectable roles for simulation, making explicit the hidden assumptions is a good one. I feel that a lot of these analyses, what triggered the thought was the mention of the five percent. Back when the 1982 guidelines were written, one of the principal reservations about using the five percent SSNIP test was that it would suggest an unsustainable degree of precision.

You know, this is going to become a standard and the lawyers are going to seize on this, it's a very specific number used in a very specific way, and sure enough, that's exactly what happened, to the point that you may recall that the major feature -- there was

1	actually an 1984 set of guidelines issued by Paul
2	McGrath one of the major features of the 1984
3	guidelines was this big introductory statement that said,
4	now, wait a minute, you totally have the wrong idea on
5	this five percent test. Some markets could be seven and
6	some markets could be 1.5. This is just meant to suggest
7	the right question and the magnitudes we have no idea
8	about.

Similarly, I think, in the simulation area, if you can be confident about the sign of the first derivative for any of the major variables, whether it is price, output or whatever, someone is going to triumph from the fact that you can establish it from any modeling device at all, that would be real progress.

I really liked the analogy to the dispute over evolution. We know that even after punctuated equilibrium was popularized as a theory, there are some modeling gradulists who describe punctuated equilibrium in a manner intended to be pejorative as evolution by jerks. Of course, there are punctuated equilibrium guys respond by calling the gradulists evolution by creeps, which suggests something of the flavor of the debate over unilateral effects theory in antitrust law.

The question I want to pose is this, and let me say it very bluntly. My view is that most of the

shortcomings in the way that economics is applied to antitrust decision making, it's not economics isn't perfect, everybody knows all the stuff we have been saying about you don't have the facts and the modeling is crude, oligopoly assumptions, but just the question of getting everything on the table in an efficient manner, where the non-experts are in a position to judge exactly what the limitations are on the analyses being presented.

I personally would like to see, as you could tell from my presentation, I personally would like to see economists somehow, and particularly neutral economists as opposed to economists retained by parties, become more directly involved in antitrust decision making.

Maybe an independent panel where the decisions on the economic issues have to be in some sense credited or respected by a court, or even incorporated in the decision.

We have a bunch of economists on the platform here who have had a lot of experience with use of economics and antitrust agencies and antitrust cases before courts. I'd like to hear whether that idea sounds like a good one.

MR. FROEB: Greq?

MR. WERDEN: No.

25 (Laughter.)

1	MR. WERDEN: There are a million obstacles that
2	stand in the way, not the least of which is you don't
3	have the time. That would take extra months, I think,
4	and you don't even have extra days in most of these
5	merger cases.

It would be fairly expensive, but I'm sure you would campaign for extra funds for the agencies to support that.

I don't know that the decision makers who still remain lawyers are going to care about the independent guys. I don't know that they care about the inside guys. I don't know that it would be given any weight.

I can imagine doing something like that, much more outside of the agency than inside. I suppose if you hire these people as temporary employees, you could solve the confidentiality problems, but then these guys would never be able to write about these things and they may not want to do that.

Getting people to make the commitment to get up to speed on these things is tough. We find it hard even when we are paying people \$800 an hour to get them to put the time commitment in. It's not going to be easy to get volunteers for this sort of thing, and it creates conflicts of interest. I don't think there are going to be a lot of takers.

L	Court appointed experts, I have somewhat more
2	sympathy for, but I don't think it has ever been done
3	successfully. There haven't been a lot in antitrust
1	cases, but I think never successfully. The track record
5	isn't so good.

I think that might make some sense,

particularly if what the court appointed expert was asked

to do is what Tad suggests, which is to tell the judge

does this theory make sense, is this in the mainstream,

what does this theory really depend on, is there some

fatal flaw in this that any neutral person would see,

that they are trying to paper over, and these two extreme

positions I'm getting from the two sides, which is

closest to the truth.

There are a lot of things that a court appointed expert might be able to do successfully, although if they are appointed the way Fred Kahn was appointed, like an arbitrator, by striking people from a list, you are going to get the least common denominator expert, not the best expert. I don't think that is going to work too well.

MR. FROEB: I want to turn from merger simulation, which unfortunately or not, it seemed to suck up all the debate on the panel. There are a lot of other issues associated with unilateral effects. I wanted to

toss them out to our EC visitor, to Valerie.

Is it possible to allege both unilateral and coordinated effects in a merger case? Have you ever tried to do that?

MS. RABASSA: We have tried to do that.

MR. FROEB: We have 10 more minutes. I want to give each of the panelists two and a half minutes, and I'm going to be strict here, to sum up kind of a big picture type question. What criticisms do you have of the guidelines, the question of unilateral effects, and what positive suggestions do you have for its improvement.

Greg, do you want to start?

MR. WERDEN: I guess my main conclusion would be it would be silly to re-write the guidelines. They would come out worse. They always do. These committee projects are not good ideas. Any one person could probably do better than both of the agencies can do together. My main advice always is don't write guidelines, and that advice has been taken on a number of occasions.

I don't think there is much in the way that I don't like in the unilateral effects section of the guidelines right now. It articulates in very general terms the theories. That is what guidelines are supposed

1 to do. It doesn't say very much about the evidence.

2 That is what guidelines don't do very well. It doesn't

3 say anything about modeling.

Joe was suggesting a tension between what economists do in the guidelines. I don't see it at all. I don't think the people responsible for the 1992 guidelines would see it. The guidelines do not specify methodology. Bring it on. Whatever methodology you have that addresses the questions in the guidelines, the guidelines are happy with it. That's why the guidelines are useful, because they are not a straight jacket for merger analysis. Any economic analysis anybody comes up with that addresses those issues in the guidelines is acceptable. Of course, it has to pass certain screens and it has to be sound methods. Bring it on.

The one thing I don't like in the guidelines I guess, and that's only because it is misunderstood, is the 35 percent. There is no 35 percent safe harbor in the guidelines. Read the sentence as often as you want. It is never going to say this is a safe harbor.

It is going to say something else that people can take to be a safe harbor, but the economists who were involved in crafting those sentences made sure it wasn't, and since it just does more damage than it's worth, I would just cross that out.

1 MR. FROEB: Joe?

MR. KATTAN: I actually agree with much of what Greg said, and in particular, I'm not sure that we could do much better with the current guidelines, which do address the issue at a level of generality that I think is appropriate.

Jim Rill has voiced some of the similar criticisms that I have, so I don't think it's necessarily true that none of the people involved in the 1992 guidelines have concerns about modeling, but it's absolutely correct that the guidelines say absolutely nothing about modeling, and I'm not saying the simulation approach isn't appropriate, but I think it is the case that it necessarily asks a somewhat different question than the guidelines do, whereas the guidelines focus on the spacial separation based on qualitative attributes, product attributes, marketing attributes. Many of the simulations define differentiation by necessity based on market share. That is the significance of firms is based on market share.

The 35 percent issue, Greg is right that if you read the language very closely, and read like safe harbor language, on the other hand, has there been a case since 1992 where unilateral effects have been alleged under 35 percent?

1	The reality may be different. I think it is
2	the case that most people do view it as a safe harbor.
3	MR. FROEB: Greg?
4	MR. LEONARD: I guess I wouldn't want to stop
5	at the 35 percent, getting rid of that, and getting rid
6	of shares altogether with differentiated products, then
7	they really just are entirely meaningless.
8	I think the guidelines are trying to use some
9	terms that a lot of different people can understand, and
10	lawyers and the companies that are thinking about merging
11	and so forth. Aside from the share issue and the 35
12	percent, I probably wouldn't change anything either.
13	MR. FROEB: Valerie, I am going to open it to
14	you. You can talk about our guidelines or the newly
15	promulgated EC guidelines. Feel free. Do you have any
16	suggestions for change? Big picture?
17	MS. RABASSA: After only two weeks, we have to
18	wait.
19	MR. FROEB: Tad?
20	MR. LIPSKY: I guess I don't have any problem
21	with the way the guidelines are written. The problem
22	with simulation and types of analyses that are made in
23	support of unilateral effects approaches are lack of
24	realism in the underlying model of behavior and the

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dynamic assumptions.

1	This broader institutional problem, which I
2	think allows the first problem to survive, to continue,
3	which is that decision makers, because they are lawyers,
4	are essentially free to ignore what the economists are
5	telling them. The solutions ultimately we are trying to
6	get to is again analyses that are closer to the truth,
7	and I think the way to do it is to make it less easy in
8	some way for decision makers to ignore what the
9	economists are telling them, but, also, I think there is
10	a degree of want of a better term, no insult intended,
11	the conversation between the contending economic theories
12	needs adult supervision, both within the agencies and
13	before courts.

We have touched on some of the institutions that might be used to accomplish that. That, I think, is the direction to look for, a discipline that will facilitate scientific progress.

MR. FROEB: I am going to give the last word to Dave Scheffman, who is sitting here.

MR. SCHEFFMAN: This is a very good panel, a lot of good discussion. It did focus too much on simulation. Very clearly, the simulation models really aren't so complicated. It is sometimes A and B and some equilibrium conditions and stuff.

What you don't think about is the A/B model

doesn't necessarily mean there is going to be a price increase. In fact, I think one of the problems with the lawyers is in industrial markets where the lawyers will chase unilateral effects cases on seemingly just as good as a basis, the economists will chase them off, competition is much more complicated, you can't look at it that way, but all of a sudden you say brand, and all of a sudden you have a theory that works.

I keep saying the economists -- I don't think it is true because most times economists and agencies are doing both simulation and you have some other economists actually getting into the details of competition, you have to do that in either case. Simulation can be useful, but I caution you and I keep saying this, A and B analogy is very good and there is nothing wrong with the guidelines. It's a rebuttable presumption. It's rebuttable all the time in industrial products mergers. Economists don't seem to forget that when they estimate demand elasticities.

Let me give you one example. There are a lot of problems with retail versus wholesale. I have been working with soft drinks for over 20 years, and I am not convinced there is a substantial percentage of people who are in between Coke and Pepsi when prices are near a parity. That is the demand curve is very flat. No one

1	estimates a demand curve like that.
2	That is just one of many reasons why you think
3	about why this theory may not work. Actually, the demand
4	curve may be very flat, may have kinks, whatever.
5	Those are the things we worry about in
6	industrial products mergers, because we ask the customers
7	and they say, well, I'm actually not worried although A
8	and B are my two premier qualified suppliers, because I
9	can get it somewhere else. We say, well, that doesn't
10	work.
11	We need to think some more about the
12	fundamental theory in the guidelines. There is nothing
13	wrong with that, but it's a rebuttable presumption. We
14	need to think about as to whether it is right or not.
15	MR. FROEB: On that note, I want to thank all
16	of the panelists and the audience.
17	(Applause.)
18	(Whereupon, at 12:30 p.m., the workshop
19	recessed for lunch.)
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AFTERNOON SESSION

COORDINATED EFFECTS

MR. KNIGHT: Good afternoon and welcome to the panel on coordinated effects. Coordinated effects analysis might be best summed up by the observation that predictions are tough, especially about the future. Of course, Section 7 of the Clayton Act calls for predictive analysis, and the Agencies have invested great effort over the years in an attempt to answer the often difficult question of whether a particular merger is likely to enhance or diminish competition in the relevant market.

Historically, much of that focus has been on concentration. Indeed, concentration continues to serve as the threshold test for coordinated effects. However, as the 1982 Merger Guidelines recognize, and recent agency pronouncements confirm, a lot of the concentration data provided a starting point for analyzing the competitive impact of the merger.

What comes next with regard to coordinated effects analysis is the topic of this panel. The Merger Guidelines consider two theories of competitive harm, unilateral effects and coordinated interaction.

During the 1990s and continuing through today, much has been written and said about the coordinated

effects theories and various approaches to assessing coordinated effects of mergers.

Recently, both agencies have significantly renewed their interest in the analysis of coordinated effects.

This panel represents a continuation of that effort. Today, we are delighted to have a full list of esteemed guests.

Deborah Majoras is with the law firm of Jones,
Day, Reavis & Pogue, where she practices in the area of
antitrust law, among others. From April 2001 to the end
of last year, Debbie served as Deputy Assistant Attorney
General at the Department of Justice Antitrust Division.
During her tenure at the Justice Department, Debbie's
responsibilities spanned the civil, international and
foreign -- she oversaw numerous matters involving a
myriad of industries, from software to financial networks
to defense, health care, media and entertainment, to
industrial equipment.

In addition, she served as the chair of the International Competition Networks Group and oversaw policy initiatives such as the DOJ's review process initiative, best practices project, the merger remedies manual, and the day to day DOJ/FTC health care hearings. She was often a frequent speaker on behalf of the DOJ.

1		In her	current	practice,	Debbie	actively	speaks
2	and writes	on an	titrust	issues.			

Dr. David Scheffman has recently rejoined LECG as a director, after a second stint with the Federal Trade Commission as Director of the Bureau of Economics. He is also a professor in business strategy and marketing at the Undergraduate School of Vanderbilt University, where he was a chaired professor in the 1990s.

Dr. Scheffman is a noted scholar in the area of antitrust economics, among others, and has written several important articles and books.

In his most recent role as Director of the Bureau of Economics, David was instrumental in stimulating quantitative analysis in antitrust investigations, promulgating best practices for interaction between the Bureau of Economics and outside parties, including economic and financial consultants.

Dr. Andrew Dick is with Charles River

Associates. Prior to joining CRA, he was the Acting

Chief of the policy section at the Antitrust Division.

While at the Justice Department, he directed the agency's re-evaluation of coordinated effects analysis for merger investigations, and he prepared to serve as the Division's testifying expert in coordinated effects merger investigations.

1	Andrew has worked on a wide range of merger and
2	non-merger projects on electronic networks, steel,
3	broadcast and media, computer software and services,
4	insurance and health care.

Dr. Steven Salop is a Professor of Economics at Georgetown University Law Center in Washington, D.C., where he teaches economics and economic reasoning and the law. He is a consultant to Charles River Associates, focusing on microeconomics and regulation. He has written numerous articles on various areas of economics and law, exclusionary conduct, joint ventures and tacit coordination.

His research has focused, among other areas, on various aspects of mergers and joint ventures, including market definition, ownership interest, and efficiencies. It also includes telecommunications, electronic commerce, computer hardware and software, financial services and consumer products.

Dr. Jonathan Baker is a Professor of Law at
American University's College of Law, where he teaches
courses in the areas of antitrust and economic
regulation. From 1995 to 1998, he served as the Director
of the Bureau of Economics at the Federal Trade
Commission. From 1993 to 1995, he was a Senior Economist
at the Council of Economic Advisors in the Executive

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Dr. Baker has served as Special Assistant to
Deputy Assistant Attorney General for Economics at the
Antitrust Division of the Department of Justice, and as
Assistant Professor at Dartmouth's Tuck School of
Business Administration, as well as Attorney Advisor to
an Acting Chairman of the Federal Trade Commission.

Professor Baker is currently involved with the American Bar Association's division for antitrust law, and is a senior consultant with Charles River Associates.

Paul Yde is with Freshfields, a newly established antitrust group in Washington, D.C. as of May of 2002. He is the current chair of the antitrust practice group. He has served as advisor to two Federal Trade Commissioners and as a litigation attorney in the FTC's Bureau of Competition.

In addition to being recognized as a leader in antitrust law, he has been active in the leadership of the antitrust division of the American Bar Association, he's been a speaker and author on antitrust issues, and he has sat on the editorial boards of the Antitrust Law Journal and Antitrust Magazine.

As the moderator of the panel, I will attempt to lead the discussion through a number of relevant issues. While my questions may actually be addressed to

1	actual panelists, all panelists are encouraged to jump in
2	the discussion at any time and pose questions of their
3	own.

With that, let's go ahead and get started.

Perhaps as good a place as any to begin is the discussion of the definition of coordinated effects. What do we mean? The Merger Guidelines focus on assessment of whether a merger may lessen competition, and I want to start by asking David Scheffman, is that an appropriate definition?

MR. SCHEFFMAN: Thanks, Mike. Sorry for the long introduction. I should have given you an abbreviated bio. I am going to try as always to be provocative. I've given a handout. I'm not going to talk about all of this.

Let me step back to the beginning, to my beginning in antitrust. When I came to the Commission, and Steve Salop was here, too, when I came to the Commission, we were litigating the Cereals case, and both of the antitrust agencies had very active enforcement efforts against oligopolies.

If you think about what was in the Cereals case, which I am not a big fan of, but it was a very interesting case. If you look at how the Commission and what the litigation was about in that case, and looking

at how we analyze mergers in concentrated industries now, there is a total disconnect. That is partly what I want to talk about here.

I am going to jump to slide three, and partly this has happened as a result of the focus on unilateral effects.

We say that it's true formally that the models that we use in unilateral effects are "oligopoly" models. What I learned back in the dark old ages of economics, is they are the most primitive oligopoly models. These are models that do not include exactly what you think might happen in industries that we typically review these days for mergers. Specifically, in Cournot and Bertrand, the assumption, which everyone realized must not make any sense in a concentrated market, is that each competitor assumes that its actions do not stimulate reactions by the other competitors.

Economists have known for almost 100 years that this assumption probably doesn't make sense as analysis of real behavior in concentrated markets, but that is the sort of analysis we have in unilateral effects including in "oligopoly" models like Cournot and Bertrand.

In fact, game theory is much richer than Cournot and Bertrand.

Some people have said unilateral effects is all

you need because if you build coordinated interaction on top of that, it is even worse, so if you have a case with unilateral facts, then you have a coordinated interaction case, too. That could be true under some particular models. However, what we see in many concentrated markets is much more competitive behavior than what we predicted by Cournot or Bertrand, because a lot of the behavior is not about picking a price on a demand curve, but trying to shift your demand curve at the expense of your rivals.

What happened in coordinated interaction, i.e. oligopolistic interdependence? In the 1980s, there were a lot of coordinated effects cases, primarily because of the level of concentration. They were, in fact, collusion cases. The analysis was the checklist and arguing about whether or not collusion was possible in a given industry and in a more casual manner, what the merger might have to do with that.

The most complete record of that is the case in which the Bureau of Economics memoranda were actually discovered by the other side, and you saw the big tension between the lawyers and the economists about this.

What has happened since? Coordinated interaction has gotten some renewed emphasis with the new Administration, although it really had never gone away.

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If we go back to the 1982 Guidelines, the theoretical foundation of the 1982 Guidelines was Stigler's theory of oligopoly. Stigler's theory of oligopoly was a brilliant paper, but it was a theory of collusion. What occurred since the Stigler paper we have the development of dynamic game theory. There are a lot of results in dynamic game theory. You can get almost any result. So, it's not very helpful. But, the focus of dynamic game theory, particularly as to antitrust, is on collusion games. But there are a lot of "things" in between collusion and perfect competition.

What I am suggesting is that we need to go back to something like oligopolistic interdependence, not tacit collusion. Collusion theory doesn't usually really fit the merger situation, although there are few situations where it does fit.

What we should be analyzing is whether the industry, or the oligopolistic coordination in this particular concentrated market is likely to lead to adverse effects as a result of the merger, not the tacit collusion test, which is too strong a test.

I think what we don't know is what we mean by non-unilateral cases. What we tried to convey in the Scheffman/ Coleman paper is the different categories of

1	cases, types of cases. One category which I would add is
2	situations where we have the oligopolistic coordination,
3	which seems to lead to what is the ideal competitive
4	circumstances that might be adversely impacted by a
5	merger.

on. I think that is what the agencies actually do. I think that's what the attorneys actually focus on. I think in coordinated interaction cases, what the attorneys are focusing on in most cases these days is what is the actual nature of competition. They are trying to prove, for example, in a unilateral effects case, not that A and B are the closest substitutes, which often these days is not the primary test, but that they are particularly close competitors.

In non-unilateral effects cases, they are looking for evidence that the parties to the merger in some sense are behaving "cooperatively."

This is the area that I think the economists could have the most impact, in theoretical presumptions of theories, which don't really explain very much of what we are actually trying to analyze.

MR. KNIGHT: Thank you. Jon?

MR. BAKER: Thank you.

Let me first respond by trying to put this in a

little bit of perspective. What are the stakes? Why are we debating what is coordinated and what is not? The issue is how do we make sure we are applying the correct economic analysis?

I guess in listening to you talk, Dave, it seems like you think coordinated and unilateral are dirty words, and there is some third category that we don't fully understand without a model, and that's where all the cases are. I'm not sure I fully understand that yet. I'm going to have to go back to your paper to see what's there.

I want to stick with what we do in the Guidelines with coordinated and unilateral. I think it is a mistake to interpret the recent reinvigoration of coordinated competitive effects analysis as somehow reflecting questions as to the soundness of unilateral effects analysis.

We want to focus on the technical issues in coordinated effects analysis here; the outcomes you get when the firms are following strategies that take into account the past conduct of their rivals. These are the kind of outcomes that are represented as a result of oligopoly supergames, and they can differ from oligopolistic interactions, because punishment threats can support less competitive outcomes, if the firms are

able to identify and reach those outcomes.

That's why when we do coordinated effects analysis, we are spending a lot of time thinking about whether firms can reach a consensus on coordinated effects outcomes.

There are a bunch of examples of in the Guidelines, and when I was working on cases in the Antitrust Division and working under the 1992 Merger Guidelines and other cases at the FTC.

MR. SALOP: You all might be surprised but I am actually in sympathy with what Dave says here, the way he framed it today. You have to understand, Dave and I are both old guys. You have to put this back in the context of the sort of models that we learned when we were in graduate school, back before there were graduate schools.

Basically, what Dave is talking about is what used to be called conjectural variation models. You start off with a basic unilateral effects model and you expand it by saying there is some conjectural variation, that if firm one raises price, then firm two will react by changing its price a particular way, and firm one will anticipate that reaction of firm two. They are more complex sort of Nash-Bertrand equilibrium models.

I think we need to think about those models. I think as a modeling strategy, the unilateral effects

model is closer to the sort of modeling we do and closer to sort of the intuition we have when we are thinking in terms of conjectural variations.

In addition, this notion of conjectural variation, not stating it as such, but conjectural variations are contained within the 1992 Merger Guidelines in analysis of unilateral effects.

MR. KNIGHT: Andrew?

MR. DICK: I'd like to echo the point that Jon was making. I think at the heart of coordinated interaction theory really is the notion of repeated interaction. If you look in the Guidelines, I think the critical phrase is that a coordinated effect arises from strategies or actions that firms take that are only profitable because of accommodation by rivals, or an expected accommodation by rivals, and a mutual accommodation arises most naturally when there is repeated interaction amongst firms.

Think of the three sort of tasks which Jon briefly mentioned that are mentioned in the Guidelines that would-be conspirators have to accomplish.

First, they have to reach some kind of understanding or terms of coordination, talking about actions they are going to take in the future that are conditional upon an expectation that each firm is going

to accommodate each other's activities. There is already a natural forward looking event there.

The second task that they have to successfully accomplish is monitoring whether there has been compliance with that agreed upon accommodation. Again, the notion is over time they are going to learn whether they can trust one another. Again, repeated interaction is key.

The third task, of course, is in the event that there is deviation from the agreement, they have to have a way to punish. Again, that's forward looking. If we are in the last period of competition, there is no scope for punishment and everything unravels.

I would agree with Jon that there is a very simple and elegant point made in the Guidelines, which is that all the profitability of these coordinated strategies is contingent upon accommodation, and economics, and game theory in particular, has repeated interaction as being essential to that.

MR. KNIGHT: Let's move to the Guidelines for a moment. They do focus the analyst on looking at the post-merger market, in particular, whether it is one that is conducive to coordination -- conducive to reaching terms, to monitoring and punishing.

They refer folks to what has been called the

1	Stigler-Posner checklist of factors, to look at that
2	post-merger market and try to determine if it's one that
3	is conducive to coordination. Those factors include the
4	availability of routine information concerning market
5	conditions, transactions, and competitiveness,
6	characteristics of buyers and sellers, characteristics of
7	typical transactions, and whether there has been previous
8	collusion.
9	Let me start with you, Steve. Is that still an
LO	appropriate way to go about it?
L1	MR. SALOP: Every fact we get is one more
L2	brick, one more brick in the understanding of the
L3	dynamics. I think this sort of simple checklist that we
L4	have has really a lot of shortcomings. There are several
L5	types of shortcomings.
L6	First of all, the screens in the checklist are
L7	imperfect. For example, with respect to the HHI, we know

imperfect. For example, with respect to the HHI, we know that there is often substantial competition despite high HHIs. The opposite is also true, there has been successful price fixing in markets even that have safe harbor HHIs.

Take list versus negotiated prices. The checklist said list prices and don't discount, where there were competitive concerns. That's true. Price fixing conspiracies in many industries are with

negotiated pricing. Acidic acid, vitamins, and so on.

Even if the prices are individually negotiated, as we learned from Mr. Wilson in the ADM movie and Weissing movie, we know if you can monitor quality, then you don't have to look at prices at all.

It's the same with many of the other elements in the checklist. Excess capacity. While on the one hand excess capacity can reduce the likelihood successful coordination by giving firms a greater incentive to cheat, but on the other hand, excess capacity increases the likelihood of coordination by increasing the ability of firms to punish.

Big buyers. Big buyers can keep the market competitive, but big buyers can also induce to sellers to raise the costs.

Even efficiency benefits in a coordination model, we think cost savings generally reduce the likelihood of coordination by giving the firm who reduces its costs a greater incentive to cheat. On the other hand, the cost savings increase the ability of the merged firm to punish its rivals who defect from the agreement.

Even the Department of Justice in 2001 recognized that cost savings can increase cost similarity across the firms and thereby increase the risk of coordination.

1	All these factors can go both ways. There are
2	serious interaction effects. I think everyone agrees
3	that the longer the detection lag, the less likely the
4	coordination will succeed.

I think everybody also tends to agree that product homogeneity tends to facilitate coordination by ensuring a rapid response to the event of cheating.

If long detection lags, then product homogeneity increases the event of cheating because you have more to gain.

I think the checklist is just too simple to be relied on for more than just a guide, a basic guide to thinking about the industry. I would certainly hate it if the agencies made a decision and said, well, we have five in this pile and three in this pile, so we are going to bring the case, and it would be even worse if they say, oh, I have at least one in this pile, therefore, the policy maker might say I have discretion to come out in either direction, so I don't need to worry about the facts at all.

MR. KNIGHT: Debbie, are the checklist factors useful?

MS. MAJORAS: Yes, I think the checklist factors are very useful. I know that David Scheffman has shared some views. I'm going to defend the Guidelines a

little bit on a couple of fronts, not entirely, but a little bit here.

First of all, the checklist is a misnomer. If it's true that the agencies were doing what Steve Salop just said, and sort of making a list on this side and this side, and whoever has the most, that's the way it comes out, then sure, I would agree that would not be a particularly responsible analysis.

Starting with just what the Guidelines say,
maybe I'm reading it differently from everyone else, but
they say "depending upon the circumstances, the following
market factors among others may be relevant." How many
wiggle words do you need? And then when you go through
it, it's not a checklist of just very specific market
facts.

For example, it says you have to look at marketing and pricing practices, characteristics of buyers and sellers, characteristics of typical transactions.

The number of firms that I have seen, and there are those of us at DOJ who have worked very closely with Andrew on working on some analysis on coordinated effects, many of the things we are talking about that need to be done in a rigorous analysis are within the Guidelines. In fact, if you look at what Joe Simon said

about the cruise lines investigation and the analysis that was done there, he says in his speeches, that was a very straightforward application of the facts to the Guidelines, Guidelines to the facts.

I don't mean to argue about semantics, but I think we do have to be careful when people say throw out the checklist.

The other thing that we need to remember any time we talk about risks of common characteristics that might be red flagged for an agency, red flagged for counseling clients, is the following. A lot of the antitrust work and analysis that is done, very important antitrust analysis, is done two times.

First of all, with counsel counseling their clients well before the agencies have ever heard about it, well before it has hit the press, when there hasn't yet been time for a truly extensive market analysis. But in fact, you have a client who wants to know is it even worth my trying this thing. That's the first place.

The second is within the first 30 days at the agencies. If the agencies can't have some factors that we can agree on that are at least red flags, that if those are not present, the agencies could then have some comfort based on other factors, including market share and concentration and entry and the rest, gee, this isn't

one where we need to keep going, issue a second request
and go forward, then we may be in trouble because a lot
of work is done in that first 30 days. I think the
system depends on a lot of work being done in the first
30 days.

MR. YDE: Let me just add to that. Debbie stole most of my lines. The question here is what our objective is. If we are talking about revising the Guidelines, changing the way that we organize evidence, to move away from the checklist and design something else, that's one thing.

If we are talking about actually changing what economic theory we actually rely on in applying the Guidelines, that's another thing.

Let's go to the first part, which is what

Debbie was referring to. I certainly have never read the

Guidelines as a checklist. We look first at the

underlying economic theory, that I think everybody agrees
is the basis for the coordinated interaction section.

Then we look at the standards and the objectives that are
stated just in that section as well as in the overall

purposes of the Guidelines in trying to interpret what

the "checklist" says.

I think as long as we read the Guidelines first of all with the objectives in mind and understanding what

the underlying economic theory is, then you don't end up with the Steve Salop range of factors that he suggested.

I guess there is a more fundamental question which is what I think I didn't fully appreciate from what Dave was saying when I first read his paper, which is the suggestion that the theory of oligopoly, Stigler's theory of oligopoly is not an appropriate theory for predicting outcomes for mergers or for determining whether a merger should be unlawful in predicting there is a substantial lessening of competition.

This goes to Jon's point. That seems to me not to be just a technical point. There is a technical point about what kind of evidence is being used to predicting anticompetitive effects, but if Dave is saying that we shouldn't be using the likelihood or the possibility of collusion or at least the theory of oligopoly as a means of predicting whether a merger is anticompetitive, that I think takes these Guidelines and throws them out and starts over.

MR. KNIGHT: Is that what you are saying, Dave?

MR. SCHEFFMAN: I'm glad you said that. Let's

remember where the checklist came from. It came from

somewhere else. Posner was just brilliant about

implementing it. It came from the theory of oligopoly.

That was a brilliant paper. It was a set of conditions,

1	really the 40,000 foot level of sort of very broad
2	industry characteristics, that you could maybe make some
3	pronouncements about in a very general model about
4	whether or not they were conducive or not conducive to
5	collusion.

Again, that paper is the theory of collusion.

Lots of people have said that. It's not really the theory of oligopoly. It's the theory of collusion.

I agree with Debbie. The agencies are much more sophisticated in the use of this. The paper Mary and I did said let's really get down on the ground in thinking about a "checklist" sort of analysis. If George Stigler would have actually applied his theory to an actual industry and had all the evidence and facts we have on a situation, he would have looked at the same thing we do, which is look at all the factual details rather than broad industry characteristics at the 40,000 foot level.

I think the checklist used in its broadest sense, which is to look at the details of an industry and how competition works or not, to see whether there is a viable basis for coordination, is always very useful. It's useful for what I'm proposing, which is worrying about oligopolistic interaction.

The problem is that like a lot of such tests,

it only has power in one direction. Given certain facts, it can reject the viability of any sort of coordinated behavior. In cruises, which was an interesting example, we had a merger with something that sounded bad to some people, which is yield management, so that there must be a case here. The only reason why there wasn't a case is we got down in the facts and said, well, where is the evidence of coordination? If we could have found any sort of coordination in there, we would have had five votes against the cruises merger. We couldn't find it. However, if we found "it," that still would not prove that the merger was anti-competitive.

The problem you get into these days in coordinated interaction cases is the basis of the case? The problem is increasingly, that the attorney not surprisingly turns his focus to what is the competition and to arguing that there is some oligopolistic coordination, there are some things that look suspicious, where if it's four to three, we have to block this merger. Sometimes they are right and sometimes they are wrong, from an economic perspective, and we have to provide more help on the economics side.

That is where the real gap is. Economics does not give us much to answer to that in this gray area where maybe something can happen, the checklist passes in

There is some basis maybe that it would be 1 a sense. possible to coordinate on something. I'm not saying collusion could never arise from a merger, but that's not the primary problem, as I see it.

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In mergers, we are worried about whether it's going to change the nature of competition not in a collusive way, and not in the particular dynamics games models we are talking about, which we never see. Think about those models. Look at equilibriums where the collusive equilibrium is sustained because there are punishment strategies and you see price wars and things like that. You hardly ever see that in any real world industries we see. You see it in a few. Hardly any of the industries that we see do we see that. Nonetheless, we see some "oligopolies."

That is where we have to develop more analysis. This is where the attorneys run things, where the economists have to have something more to say. can't say per the checklist, it fails the checklist in the large, so there is no basis at all for coordination, When you have what looks like look at the data. coordination in some sense, that's where we have to get more economic analysis into the decision making.

> MR. KNIGHT: Jon Baker?

MR. BAKER: Let me first comment on what we see

and then what the factors in the Guidelines say.

In terms of the empirical economic literature, what we see is that in a lot of industries, firms behave so that they are not acting competitively; we reject competition. There are a lot of studies that say firms find some sort of way of interacting that leads to outcomes that are less than competitive.

We also see in lots of these industries that the firms are paying attention to strategies -- this is the outcome of a dynamic oligopoly model of the sort that coordinated effects analysis in the Guidelines is all about.

It is perfectly plausible that the coordinated interaction model is the sensible model for understanding lots of oligopoly interaction without expressed collusion. That is why they developed this coordinated interaction model. They wanted to explain strategic behavior without expressed collusion.

There are two issues in coordinated effects. Whether the firms can solve their cartel problems, whether they can reach consensus after the merger. That is what the factors that we call the checklist are all about.

There is another question about how the merger changes the outcome. It's in the Guidelines, too, but

1	it's not really analyzed the way the first question is,
2	whether after the merger, the firms can solve their
3	cartel problems.

In order to analyze that question, you are looking at a lot of factors, in terms of dynamic oligopoly interactions. I agree with Paul and Debbie. It's an innovative analysis of evidence that focuses on the question of whether the firms can solve their cartel problems, and whether they can reach consensus.

MR. SALOP: I don't think any serious economist would say that you would like to get rid of the coordinated effects section of the Guidelines. I believe the issue is whether there should be an extra section put in, which is called -- I don't know what to call it --

MR. SCHEFFMAN: Non-unilateral.

MR. SALOP: Dave, we will let you name the section when you come back to being Bureau Director for the third time.

If the idea is that we are anticipating rivals will follow the price increase. The firms may think about it in just that way, without thinking about it in terms of consensus and punishment. If you have to have that sort of anticipation, that sort of strategic interaction into the context of consensus, deviation, you are going to have trouble.

You would like to have a section that takes
that into account. I think David is right. Consensus
and deviation flow out of collusion, it doesn't flow out
of the theory of oligopolistic interaction.

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MS. MAJORAS: Steve, you are not suggesting that sort of situation has just been completely ignored in merger analysis, are you, just that it's been sort of --

MR. SALOP: I don't think it has been ignored. I gave you the example of the repositioning, and the example of the shampoo merger, where there was a highly concentrated industry, there was decent information on It wasn't perfectly transparent. decent information. What was motivating the competitive interaction was the fear that if you did something to "restrict" output, the other people would respond by entering or creating repositioning. If you raise the price, you anticipate entry, in a pricing model. It is within that, and you can handle it that way. By the same token, us old guys, we were doing unilateral before the 1992 Guidelines came out. You talked about wiggle words. Although you could work it in, it's certainly true detailing it in the 1992 Guidelines was a major contribution. When you actually write it down, you are more careful.

I would say the typical non-unilateral effects case is the case I'm talking about. You have read as many lawyers' memos as I have, and they are not about collusion analysis. They are about competition is going to be reduced somehow as a result of this. It is focused on the right question. I don't always agree with the conclusion because there is no anchor there. That is where we need some more economics to help.

If we keep talking about dynamic collusion, we are never going to bridge the gap.

MR. SCHEFFMAN: I don't agree. I think the analysis was all about whether we could find anything in the data that would indicate that there was either a basis or some existing sort of parallel or coordinated behavior going on now. Is there evidence of oligopoly now?

In cruises, the obvious thing which was, well, why don't we just wait longer. Well, the data show that was not a viable theory at all for lots of good reasons. We looked for all sorts of patterns in the data. If there was anything to indicate even parallel pricing of some kind, then they would have been dead. We couldn't find it. They would have been sued for sure if we had found it. It was not about collusion. It was all about whether there was some evidence that indicates some sort

of parallel conduct, and we couldn't find it.

MS. MAJORAS: David, just to round that out. I agree with you. It may be that the Guidelines are imprecise, not that somehow there is something so missing from it that the agencies haven't been able to use the Guidelines' analysis.

We have done it in cases where we are looking at past collusion. The analysis there was a little different.

MR. YDE: The fact that the memos that are coming forward and the analysis that is being presented by the attorneys -- and I'm sure also by a lot of the economists -- the fact that that analysis is not well grounded in the theory of oligopoly and the collusion theories that are stated, or at least described, in the Guidelines, that doesn't necessarily commend that analysis.

There should be some rigorous economic analysis applied, and if it was the analysis in the Stigler theory, that's going to be better than just sort of a suggestion that we know it's anticompetitive because there is going to be a reduction in competitors.

MR. SCHEFFMAN: Absolutely. The Stigler theory only has power to reject. You can prove, as I think we did in cruises and some of the other examples, that your

1	theory can't	possibly	hold he	ere, given	all	the
2	unsystematic	noises i	n these	industries	5.	

The Stigler theory doesn't tell you when you don't have -- a lot of industries actually look like it -- it doesn't tell you in the situations that don't look like hard core oligopolies but look actually more oligopolistic in some of the outcomes, what you should make the decision on. This is when the lawyers say it's concentrated and looks suspicious, so we have a case. That is not a proper basis, but I am saying the economists have to get into the game here, and the models that we are using aren't the right tool.

It's partly going to be empirical analysis, but we also need some theoretical development to shed better light on whether we have a problem or not.

I think the DOJ folks have advanced the ball in thinking about whether the merger --

MR. YDE: Is there any empirical analysis that suggests that the use of the Guidelines or the Guidelines as they have been used, the checklist, however you want to describe it, that mistakes have been made or mistakes are being made, or that the change in the approach that you are describing will improve results?

MR. SCHEFFMAN: I'm saying that the approach I'm suggesting is the approach that is used. Showing

1	that numbers of competitors makes a difference, you have
2	a case. You don't need a theory other than that.
3	"Suspicious" oligopoly conduct, what the attorneys think
4	are suspicious oligopoly conduct, that is a situation
5	where the economists and the lawyers get into serious
6	arguments, and where we need some more economic and
7	theoretical analysis to do that.
8	Are there mistakes? In the enforcement
9	decisions? We know yes, because we see hardly any
10	consummated mergers that anyone is complaining about. We
11	also know that the economists disagree, much less than
12	they used to, but they disagree on some significant
13	percentage of the cases. Probably sometimes they are
14	right.
15	We don't usually get it wrong on industrial
16	mergers and with relatively small numbers of customers.
17	I'm happy to rely on the customer assessments like the

agencies do. We get those right.

Branded products. We have middlemen. Supermarkets. It's not clear we are getting it right. I think we get it wrong enough of the time that we could do a better job.

23 MR. SALOP: That is what we call good lawyering. 24

25 MR. KNIGHT: Andrew?

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MR. DICK: I'm not sure in listening to this discussion for the last little while that there is really as much disagreement among the people up here as maybe meets the eye. I think almost everyone would agree that we don't want to throw out the checklist factors or whatever we want to call them. At the same time, we also want to be very careful in how we use them.

As Steve pointed out in his opening remarks on this topic, on this question, clearly the checklist conditions are not necessary for coordination because we can observe counter examples, nor are they sufficient because we can observe industries where we can count up on both hands the number of favorable or allegedly favorable checklist conditions and yet there doesn't seem to be any evidence of coordination.

They shouldn't be taken literally. I have always thought of them as not telling us something about factual conclusions so much as sort of guide posts, telling us what directions we should be looking for evidence specific to an industry or specific to a market. They are very handy sort of things to have in your back pocket to say you know, here is where we should start looking, and it is not to say this is the only place we should look or if we can find and show these factors one through ten, that we are done.

1	The other point that I wanted to mention is
2	that one of the deficiencies of course of the checklist
3	factors is they can be pretty helpful in describing or
4	characterizing coordination or collusion pre-merger, but
5	they are not by themselves all that helpful in terms of
6	telling us about post-merger conditions for the simple
7	reason that many of these conditions can be changed
8	directly through firms' actions, through the actions they
9	take.

Sometimes they can be helpful in identifying pre-merger constraints on coordination, but they may not tell us how the merger will relax or change those constraints.

MR. KNIGHT: Jon Baker, we will give you the last word on this particular topic.

MR. BAKER: Steve may want to come back after this.

I understand where we differ, Dave, and I think it's instructive. What I think I hear you saying is that the circumstances of the coordinated effects category applies narrowly, it's only on collusion of some sort, and the circumstances of unilateral effects apply -- everything else, and I think you would say most of what we do in merger analysis is some other category where we don't have models and the Merger Guidelines don't give us

1 quidance. I just think that is wrong.

I find the Guidelines very helpful in understanding competitive effects, including collusion and competitive effects analysis, which I think is important.

MR. SCHEFFMAN: As Greg Warden has indicated and articulated, the Guidelines by their nature are vague enough to incorporate anything. I don't think it's so much a problem with the Guidelines. They can be misleading as to actually what the practice is.

I don't have anything against unilateral. I have a lot of problems with Bertrand, for lots of reasons, and in a lot of circumstances. I don't have any problem with unilateral as a more general theory, as many of us might use it.

I do have a problem in the gray area where we don't think we have unilateral, but we think we might have a case because of coordinated interaction, and the dynamic super games are not the answer, they are not going to give us an answer to whether we have a case or not, but the problem is the attorneys don't use them anyway. They will go ahead and they will generate a case. We need to have a better answer. The tools we use don't give us much help to answer those difficult issues in the four to three merger where it is difficult and

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1	it's clearly not unilateral.
2	MR. KNIGHT: We are going to get to some of
3	those additional tools that we might use. Before we do
4	that, I want to take a slight detour to talk about
5	mavericks for a minute.
6	The Guidelines' coordinated effects section
7	does indicate that a merger can contribute to coordinated
8	interaction by taking out a maverick firm.
9	Jon Baker, does that analysis make sense, and
10	if so, when should it be applied?
11	MR. BAKER: It seems it should always be
12	applied.
13	When you think about the question of how does
14	the merger change the outcome, how is the constraint
15	being changed by the merger? It is all about mavericks.
16	It makes it sound like it is some sort of special
17	analysis. It comes right out of thinking about the
18	dynamic oligopoly theory, firms are going to differ in
19	all sorts of dimensions in these settings.
20	If a merger involves non-maverick firms, then
21	you need to analyze how the merger is affecting the
22	maverick.
23	MR. KNIGHT; One of the criticisms that we have

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heard at the agencies is that the investigating staffs

are all to quick to label the acquired firm as a

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1	maverick.	Τσ	that	fair?
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MR. BAKER: I don't know about the agencies

now. When I was there, I wouldn't say that. Analysis of

coordinated effects has occurred since I left. I know

there were some cases where we thought about whether a

firm was essentially a maverick.

The real focus of the agencies' on coordinated effects theories has been since I was gone. It's not a criticism.

You have to think of what it means to be a maverick in order to figure out what that maverick is. The concept isn't something that has some firm that is observed as disruptive. These could be mavericks. Just because a firm cuts price doesn't automatically make it a maverick. Maybe there is a temptation for people to think otherwise.

You have to think about whether it has a greater incentive to cheat or it has a greater ability to punish. There are a bunch of things you can do.

You can't always identify the maverick. Even if you can, you aren't always sure how the merger will affect the maverick. But, that is a way to think about how coordination would be affected by the merger and why the merger matters.

MR. KNIGHT: Steve?

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1	MR. SALOP: I like the maverick theory, this is
2	not meant to be critical but rather to just emphasize
3	several points.
4	First, I think "maverick" is an unfortunate
5	term, because maverick gives you the idea that there is
6	someone who is not going along with everyone else.
7	It is possible that the disruptive firm might
8	be the firm with the greatest incentive to cheat, and
9	that is what is found in the Guidelines for the most
LO	part, but a disruptive firm could also alternatively be
L1	the firm with the greatest the firm with 60 percent of
L2	the market, any time anybody cuts price, he slams them.
L3	That firm would be the maverick. He's the one who
L4	determines the equilibrium.
L5	I think we shouldn't simply think about the
L6	maverick as being the firm that is least likely to go
L7	with the price increase.
L8	We should also ask for an alternative to
L9	mavericks.
20	MR. SCHEFFMAN: I like the maverick, but
21	probably not for reasons you would appreciate. I'm
22	always having arguments. I have big arguments with hard

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I, as a strategy professor, say firms choose

core economists who think this maverick stuff is b.s.

their competitive strategies. Most of this is about

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shifting the demand curve one way or the other. It's about shifting customers to you from your competitors to gain new customers. That is what I think a maverick is.

I think shoehorning that into the collusion thing is the problem. It is not about whether the industry will break out in collusion. It is that the industry would be less competitive. The maverick does get misused. The lawyers confuse competition with meaning somehow that the merger is going to make a difference. Those are not the same thing.

MR. KNIGHT: Let me squeeze in two questions. First of all, if coordination is not the theory, is not the underlying theory, why do we need principles on what is a maverick? And, how do you re-write the Guidelines so we make sure the maverick theory is not abused?

MR. SCHEFFMAN: I do think that you have to have -- I think what isn't done well is developing the factual basis. It really is a maverick, but this is the firm that actually is making things more competitive. I think if you have a factual basis showing that's true and that company is being acquired by someone else who doesn't have that strategy, you have a strong start to a case.

The problem is often that what would seem to me would come up is evidence that that company is competing

like other folks, not evidence that they are making the prices lower than they otherwise would be. You can do that factually, and there is some discussion in my paper about that. You can do that sort of analysis.

I think if you have proof factually that it is true that the firm is actually making things more competitive, then you have a good start for a case. I think very often, that is the part that is missing.

MR. YDE: What is the policy implication of saying in the Stigler oligopoly theory that everybody is a maverick? What is the policy implications for mergers?

MR. SALOP: It should say you should stop this snipe hunt. As I said before, I think the concept that you are looking for here is broader than just the low price leader. It could also be the powerful one.

In Jon's model, the maverick is the price leader. Jon mainly talked about that in his article as the firm with the low cost. The leader could also be the firm that prevents the price from going down. It's a much broader concept than simply the price leader. Do you agree with that, Jon?

MR. BAKER: I agree that one way you could have a maverick is a firm could be indifferent between cheating and colluding and therefore keep the price from going higher. Another way is indifferent to punishing

more. Did I say that backwards? I think a maverick is
where he does not want to punish as much as he should.

I think in real world situations where firms differ and the firms can't find ways to punish or to make side payments, some firms are doing more of the work in constraining coordination than others.

It seems a perfectly reasonable thing for me to do to find out who the maverick is in order to understand whether the merger --

MR. SALOP: I would hate to see coordinated effects analysis to be reduced to whether a firm is a maverick.

MR. DICK: There's a corel to this, too, in terms to the response to the second question Paul asked, which is there is always a firm on the cusp, there is always a maverick, more than one maverick, and the question is if the merger eliminates that maverick, who is next in line, and if they are very similar, close in terms of the constraint they place on coordination, then the merger, even though it eliminates a maverick, would not have a very significant effect. You always have to look at the next guy and why he is going to replace the guy that got knocked out.

MR. SALOP: Just like the next best substitute.

MR. DICK: Right.

1	MS. MAJORAS: I just want to come back to
2	something David was alluding to, which is I was wondering
3	whether when I was at DOJ whether I saw the maverick sort
4	of being over-used in case recommendations under
5	coordinated effects.

I don't think so. There is not a maverick identified in every case recommendation. Sure, there were some and some of those cases were brought in the last year. I don't believe they were called a maverick.

For example, if you look in the UPM complaint, the evidence showed that UPM had come into the United States, had been quite aggressive, and expanded their U.S. sales, and there were facts -- I should say I was actually recused on that matter -- that were part of it. There was also evidence that perhaps some coordination had already begun, so that was an important factor as well.

In another case that you may not have looked at because it resulted in a consent decree, Alcan, believe it or not, was identified as an aggressive new competitor. Alcan obviously has been in aluminum for a long time, but this particular product was new to the United States, and there was some evidence there.

Sure, we saw it some of the time. We also had cases in which there was evidence of past collusion in

1 markets and I don't recall searching for a maverick.

To the extent that we are really in investigations sometimes looking for one, I think the reason for that comes back to something that you have been saying here, David and others, which is if the question you really need to answer is why does this merger matter, not just what is the structure and what are the market characteristics today, and what would they be post-merger, but how is this exact merger going to make an impact. That is a very hard question to answer.

That is one of the reasons at DOJ we tried to reinvigorate looking at the theories and looking at what we have and looking at what we have left to do. The sense was we weren't doing a very good job of answering that question.

When you have a maverick to point to, that's very specific -- this merger, this guy, is having this impact on the market and presumably won't have that impact any more.

It's not surprising that we would fall back on that, that the enforcement agencies would.

MR. YDE: On the definition of a maverick and how you can define a maverick, who is identified as a maverick, in Northwest/Continental, where I was on the other side, Northwest -- I'm sorry Jon I haven't read your paper yet, I did read your deposition and your expert report -- Northwest

was not a company that could have been so identified, at least as far as I understand it, there wasn't any underlying structural factors that suggested why they would be the maverick. Nevertheless, it did appear, at least you argued that it may have been the case and it may be supportable in some way, that they had a strategy that on a repeated basis they historically had not gone along with the generalized price increases that were proposed in the industry.

I guess this goes also to your analysis, David.

Is it ever sufficient that you just find there is a historical record of maverickness? I would think you would have to identify some underlying structural factor, either in its costs or excess capacity or whatever else broadly defined, that suggests why after a merger its maverickness being lost is important.

MR. BAKER: I think you are much happier if you can identify why. In the Northwest example, you basically had your facts right. It was hard to pinpoint it. The behavior had gone on for so long and so consistently that it was hard not to reach the conclusion this really was a firm that for reasons that weren't clear based on market structure was constraining coordination.

I would have been happier to have understood why.

It really takes a long history of years of multiple incidences of doing that before I was willing to come up

1 with the conclusion in that case.

2 MR. YDE: Do you think it is important that you 3 can explain to the court --

MR. SCHEFFMAN: As a business strategy professor, I draw on more bases than what we use in simple economic models. It is going to be obvious that you have a maverick. It's going to be pretty obvious and you are going to have natural experiments to be able to prove you had a situation where the one firm never follows the price increases of the competitors and price changes are important, they show up on the shelves. Then you are going to have a track record like that or you are going to have in some cases a relatively small share of firms that go around and are used to voice the bigger firms in industrial markets.

A real maverick, you are not going to have to hunt for. You have to prove it actually affects the prices. They go around and knock on the doors and try to get business. That's fine. Do they actually have an impact on prices? That's the critical point.

MR. KNIGHT: We have talked on a number of occasions here about the additional approaches and tools that the agencies might begin to use to assess coordinated effects. Andrew Dick was sort of involved in the efforts at the agencies to reinvigorate the analysis. Can you tell us a little bit about what you see the agencies could be doing

or are beginning to do in utilizing coordinated effects?

MR. DICK: Sure. I had the pleasure to work with Debbie and Charles James and Michael Katz when I was in the DOJ, as Debbie mentioned earlier, to try to reinvigorate some of the coordinated effects thinking. It really started with just trying to understand what we knew about coordinated effects now and to identify what we didn't know,

which was equally important.

I think there is a sense that in the Division as speeches by Charles and by Hugh and by Debbie have articulated, which is there is sort of a focus on a two part question. The first part is what is it that constrains coordination right now before the merger, and secondly, and obviously the really critical question, which is how will this or will this merger in fact relax in any significant way some of those pre-merger constraints, some of the binding constraints?

That is sort of the general question the Division has used to frame some of this analysis. The question is now, where are those constraints found, where should we go and look for them?

One of them we have just been talking about, that is sort of the maverick firm, and more broadly, the disappearance of a significant competitor, and significant in what sense. The maverick is one way of looking at it.

Another way that people have looked at that, or have started to look at it, is whether a firm might be pivotal in a sense that the removal of that firm is going to significantly change the incentives of say a subgroup of competitors to engage in coordinated interaction, or the incentive and the ability of firms, say the firms that aren't part of this alleged cartel or group of conspirators, to take actions that would tend to undermine coordination.

One can try to look at various indices such as controlling excess capacity, as I think Debbie mentioned briefly in the UPM case, in the complaint. In addition to the factors that Debbie mentioned, there is also discussion about the acquired firm representing a very large share of the excess capacity in the industry. That is something that the complaint emphasizes.

And then working that notion into whether, in fact, the firm that was being acquired in that merger was pivotal to the success or the likelihood of coordinated interaction.

Another category of constraints is asymmetries between competitors. In our earlier remarks, we talked a little bit about asymmetries. I think Jon mentioned that. Asymmetries in cost structure, in planning horizons, in product positioning, geographic coverage, discount rates. A lot of the factors that come up in the checklist indeed, but

here the question is not whether those factors are present or not but could the merger in some significant way change those factors, change those constraints, relax them, by narrowing cost asymmetries. That was one of the allegations, for example, in the Primdor Masonite case that the Division brought two or three years ago.

A third source of constraints could be narrowing the opportunities for firms to deviate from coordination, and under that category, I think people usually think about the degree of transparency in the market, that firms observe each other's strategies and can they observe each other's payoffs, which is market shares and so forth.

Also, the pace of innovation. Is this a market in which new products are continually being introduced or cost changes are continually occurring that may create opportunities or lend themselves to opportunities for mavericks to take advantage of openings to disrupt coordination?

None of these concepts, I think, is particularly new. Probably what the Division did, which was, I think, nonetheless very helpful, was to try to add a little more rigor and put them in a more structured framework.

I had one slide that was sort of helpful to walk through one example. It relates to the point of how we interpret historical evidence, which is something that has

Let me just sort of walk through it in the interest of time. If we find the slide, we find it.

The question is, should history matter? We have a history of coordination, let's say, in this industry.

Should it matter, and if so, how?

In practice, the courts have placed substantial weight in many cases on historical evidence. In the grain case, a history of price fixing was thought to be very important. In Cardinal Health, the history of tacit coordination was thought to be important. Price leadership in the Heinz case that Jon worked on, and in Hospital Corp of America, the notion there was cooperation, not necessarily anticompetitive, but cooperation in general in the past was thought to be possibly relevant to analyzing a current transaction.

History has clearly shaped how courts have thought about this and has clearly shaped how agencies have heard evidence and influenced sort of where they have set the bar for assessing merger effects going forward.

There is an empirical basis for thinking history matters that is sort of grounded in some empirical evidence. At its base, it's really driven by correlations, rather than sound microeconomic theory.

In many cases, we talk about history as sort of a

summary statistic for unobservable information, unobservable data. We don't know why firms were able to coordinate, but we observed they did. That sort of gets us over the initial hurdles of thinking maybe they could do it again and maybe they could do it even better after the merger.

Starting with that base, I think one of the things that the new approach has taught us is that we need to first undertake sort of a reality check.

The empirical evidence on whether history matters is actually relatively mixed. There are case studies, and Jon has a very nice one in the Journal of Law and Economics a number of years ago looking at the steel industry and whether firms were able to learn more from coordination and continue even after sort of the initial impetus for it was removed.

On the other hand, there is lots of crosssectional evidence in studies of cartels and time series
evidence that indicates recidivism is relatively low or
rather infrequent, and when recidivism does occur, that
successful cartels seem to break up much more quickly than
the first set of cartels or the first incarnations.

That is a reality check and it calls a little bit into question the basis for extrapolating to the future from the past.

It also brings up the next point, the next sort of

lesson of the Division's new learning, which is to say we have to identify very clearly the micro foundations for why history might matter.

As Debbie mentioned a few minutes ago, the critical question is how will this merger effect competition or effect coordination in this market. In the context of looking at the historical evidence, we have to ask, will history affect coordination after this specific proposed merger?

There are a number of good theoretically- grounded reasons why history might have that effect. History can help build understandings amongst firms. It can help reveal the types of firms, their cost parameters, their discount rates -- information that theory tells us is relevant to whether coordination is sustainable.

History can teach firms how to coordinate. That is the example that Jon analyzed on his paper on the NRA codes for steel. History can also sometimes improve the accuracy of current and future monitoring; say that over time firms learn more about that underlying demand conditions and seeing they are relatively stable may help them in the future in terms of monitoring and punishing.

The final point that has to be added to this, pointed out by the Division's new approach, is there has to be a sensitivity check. We always have to ask, has history

1	changed significantly since we last looked? Has there been
2	significant entry? Has the geographic market broadened?
3	Have power buyers emerged? Have capacity constraints been
4	relaxed? Can we demonstrate whether in fact those changes
5	in the historical evidence have really led to important
6	changes, say in pricing behavior?

I just took this detour to talk about history as one example, but I think the new approaches are intended to build from the checklist approach and say is there something there that might tell us about where we should look for evidence, and sort of try to be realistic about it, apply reality checks and sensitivity checks, and above all, develop a good firm micro theoretical foundation for why that factor matters.

MR. KNIGHT: Following on that, Dave, you talked earlier about that the economists may have more to contribute, particularly in assessing current markets pre-merger. Can you talk to us about some ways that might come about?

MR. SCHEFFMAN: I sort of alluded to that. I've talked about it in various ways already, which is, I think you need to look beyond the checklist and then said that the agencies clearly do that. I think it should be clear to everyone that we do, the agencies do.

Look at the details. We are talking about mergers

affecting price. That is what we are usually concerned with. Where is price determined? In most of the markets we look at, price is determined between the seller and the individual buyer. It's not like the wheat market and hardly any of the markets we look at are like that wheat market.

You need to look at actually the details of those prices and the determination of those prices to get some idea whether or not you think there is coordination viability. That is the main point of Mary's and my paper. Looking at the detailed transactions level data, looking at in detail what information firms have from one another.

Mary and I had a wonderful case once where we had just terrible documents that our client was the price leader, all the competitors thought it was the price leader. It turned out that we looked at all the data and it was pretty hard to see from the data that there was any leadership going on. As I tried to tell our client, it's hard to be a leader if you don't have any followers.

What looked like from the documents a classic oligopoly, that they were tracking what each other were doing, looking at who they were gaining sales from and losing sales to, and everything like that, and tracking that by looking against the other company, there was no match in the data. Looking at how they track capacity, which they try to do very carefully, and then we could check that

against what the other companies actually did, that sort of detailed analysis is clearly very relevant and it is spelled out in detail in the paper.

To get into the details of whether you really have any sort of coordination going on or you have a basis for it, again, I think it's very good stuff, but it's only a one way test. You can actually do that. I've worked on a lot of markets that you might think are oligopolies, but the data you see, say in a chemical merger, it's hard to find real oligopolies these days showing up at the agencies.

When was the last merger case DOJ had that generated a serious price fixing investigation? Not too many.

Antitrust attorneys are going to look at, talk to people and look at, the documents and say there is no way you are going to do this merger. There is another reason why that is not a very viable theory. You are not going to see it hardly, even where it does exist.

I think we need to be looking at something else and where we play, given the pre-screening, which is does the merger make a difference?

MS. MAJORAS: DOJ does have one now.

MR. SALOP: Two caveats, I think, are worth pointing out. The caveat is it has been pointed out these tests are one-sided tests. All they can do is reject the

1 coordination model. You can only win, you can't lose.

What we need is tests that can reject coordination or we need other tests that can reject competition.

Otherwise, the tests are really problematic.

The issue of whether we are going to grandfather existing coordination or whether, in fact, we are going to hold existing coordination against the merger. The 1992 Guidelines don't resolve this issue fully.

In my view, I don't think we should grandfather pre-existing coordination, for the simple reason that absent the merger coordination might break down if and when market conditions change, but if you permit the merger, it could entrench the coordination and prevent the breakdown in the future if and when market conditions change.

The Merger Guidelines really do focus on the incremental effects of the merger, and they never explicitly say that they are worried about this entrenchment factor.

There is this one place, in Section 1.11, in market definition, where the Guidelines say that the agencies use prevailing prices, unless pre-merger circumstances are strongly suggestive of coordinated interaction, in which case, the agency would use a price more reflective of the competitive price.

To the extent there is any coordinated interaction or a chance of it, that means you should apply this, and

that means you can't do the SSNIP test based on the current price, and it means critical loss, one more reason why you should throw out simple critical loss analysis.

I don't know of any cases in which the agencies have ever applied this proviso. They say maybe they will use a different price SSNIP test, but I've never seen one.

MR. SCHEFFMAN: I guarantee you any industry in which the staff has pretty convincing reason to believe that prices look suspiciously high because of funny sort of behavior, you are going to get a merger blocked.

MR. BAKER: I have one point to add to Steve's comment about the prevailing price, which I basically agree with. The emphasis that both of the agencies have been making recently, and especially the FTC, on gathering empirical evidence on issues as to whether the merger is really useful.

There are interesting ideas about things that might be tested and you can look at on tacit coordination.

The point I want to make about all these empirical studies is that they are tied to specific theories of how firms solve their cartel problems, just as what we used to call the checklist factors. They have to be integrated into the theory of how firms can -- the empirical studies have to be conducted with what the theory is.

Just as the checklist factors have to be analyzed

with an eye towards what the theory of the case is, the empirical studies have to be conducted with an eye towards what the precise theory of the case is as well.

MR. KNIGHT: Dave mentioned a case in which the documents suggested one story and the analysis, empirical analysis, suggested another. What do you do in that instance?

MS. MAJORAS: It's hard to imagine a case where all you would have would be some documents and then some of the empirical analyses. You are going to have a lot of other factors, too. I don't think there is any question that you have to take all those factors, you have to weigh each piece of evidence, because obviously, that is the ultimate analysis for the agencies. They are going to have to go into court and prove something.

As you are going through and having to do a balance of the various factors in the marketplace, you have to weigh them and you have to weigh them against each other. I don't think there is any way you can say in the abstract that one is going to have more weight than the other, but I will say this. If you look at courts, I think most people have had this experience, courts are going to put a lot of weight on the actual, on pieces of paper, on what they see. They will give credence to theory, for example, but they are going to put a lot more weight on the pieces of paper, on

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	TITOLU	ıııcaı	racts.

We can say those damn lawyers, it's terrible that we have to put up with them, but we are part of the process, and that is what we ultimately have to do. It's governed in the end by what you have to do in court, and that's a good discipline.

MR. YDE: We don't want to divorce the documents from the theory. What you are doing essentially with documents is taking admissions in documents and formulating them in theory, what is consistent with those documents, and particularly other evidence that may suggest that the transaction is not anticompetitive.

I think you want to take those admissions and formulate a theory that is consistent with those admissions.

MS. MAJORAS: Yes, there's no question, and besides that, you have to take those documents and you have to analyze those in the context of all of the other documents. You can't just pluck ones out of the file and say this is evidence.

MR. KNIGHT: As these analyses move forward at both agencies, how do you see this affecting the way in which you counsel clients?

MR. YDE: There are three different things we do.

I think Debbie would agree. First, there is the counseling on transactions, counseling up-front, making predictions

about what is likely to happen on a transaction in front of the agency, the course of review at the agency, and related to that is the way that you negotiate the provisions in the merger agreements.

The second is the representation before the agencies, and the third is litigation. I'll cut to the chase on litigation. There is almost nothing that is going on in the agencies that has any effect on the outcomes of litigation. I'm sure the people in the agencies right now would disagree with that, but if you look at the court's decision in the UPM case, I think you recognize that the courts aren't paying any attention to the theories that the agencies -- at least the more rigorous descriptions of the theories that the agencies that the agencies -- are propounding.

On counseling, the most significant effect or the most significant event in all of this for counseling a client on mergers is when the leadership of both agencies said we intend to reinvigorate coordinated effects analysis. That was pretty much the beginning and the end.

Once you are told that the agencies intend to focus on coordinated effects theories, you need now to take that into account in the way that you are making a prediction about the course of agency behavior and, also, about the way you are going to negotiate the risk allocation provisions, especially if you are looking at a transaction

in which there is likely to be a small part of the overall transaction that comprises the potential coordinated effect, and you know you have to negotiate something to deal with that in the agreement.

Andrew was just describing the rigorous approach and Dave described the quantitative methodologies and techniques that are being applied. Does that really affect the way that we are going to advise a client? I don't think so. It's done at a pretty gross level, depending on the things we have talked about before, a history of activity at the agencies in the industry that you are dealing with, especially with a company that you are taking in. Hot documents, if you have any bad admissions, whether it is public and, of course, customer complaints.

On representation in front of the agencies, it is a much different thing. It affects substantially the arguments you make, the representations you make.

I think you have to be affected by what David was saying when he was the Bureau Director, what Jon was saying when he was the Bureau Director, and what Andrew and Debbie were saying when they were in the Department of Justice.

You have to know what impacts their analysis, what they think is the most important way to formulate the -- what techniques they think are important.

When Joe Simons came into the agency, if you were

1	not presenting a critical loss analysis on every case you
2	had before him, you were probably making a mistake. The
3	same thing is true here. I would just suggest the manual
4	that has been put together by the Department of Justice
5	actually should be generally distributed to the general
6	public. I haven't seen it yet, but I would suggest that
7	would be helpful to everybody in predicting how the agency
8	is going to look at your deal and how you should present
9	your case.

It's to give guidance to the staff and management about how the leadership wants the staff and management to look at the case.

There is some feedback. You want to do some of the analyses upfront to see whatever it happens to be that is being suggested by the agency as being influential. You want to do some of that upfront to see how it is going to look when you go in.

It generally doesn't have a big impact on most of the sort of gross level judgments you are making about whether to proceed.

MR. BAKER: Why bother to do it if it doesn't matter for the outcome?

MS. MAJORAS: He isn't saying it doesn't matter for the outcome.

MR. YDE: It is the question of whether you are

1	going	to	proceed	with	the	transaction	or	not
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- 2 MR. BAKER: Isn't it expensive to do this in advance?
- MS. MAJORAS: The client doesn't often give you
 time to do two months worth of a pricing study to tell you
 what to do. They want to know tomorrow whether you think
 they ought to give this one a shot.
- 8 MR. YDE: Like most things, you can generalize too 9 much. What I said was a gross generalization.
 - MR. SCHEFFMAN: I want to clarify something Debbie said, because I'm sure she didn't mean it. Documents and other qualitative information are not necessarily "facts."

 And fact-based analyses, often not econometric analysis, can corroborate or disprove the "facts" appearing in documents and depositions.

In my last stint at the FTC, we had a difficult case and the attorneys really had convincing evidence. But it was difficult to figure out what the market was. The market is customers that have these attributes, and it seemed right. That's what the documents said. However, the economists analyzed got the customer lists of the companies. The market wasn't anything like that.

MS. MAJORAS: I'm not saying that the analyses are always going to come to documents. I thought I was being asked a general question. You have to play them according

to what you have in front of you. In addition, there are times where I might actually disagree with you, where I might think the documents, if it is registering what in fact a company thinks one of its competitors is doing and reacts accordingly and that turns out to be wrong once an economist comes in and does a study, so what. That firm was behaving because of what it thought, it had imperfect information, so that was actually relevant, even though it turned out to be not the actual facts.

One final thing, one thing that I think is interesting in counseling clients in mergers, and talking about coordinated effects versus unilateral effects, I think I saw some of it in the dynamic on the other side of the table when I was at DOJ, and that is it is almost psychological.

It's very hard to get clients focused sometimes on the right issues when you are talking to them about coordinated effects, because they take it personally, because they become very angry. You can actually see it in meetings sometimes on the other side, where we would spend 45 minutes with members of a firm explaining to us what great people they are and how they are very honest people, and they are never going to do bad things that would put them in jail and that sort of thing.

I just mention that because it is sort of an

interesting fact. It is true, I think, when you counsel clients, it takes a long time to get the client to sort of calm down, not just be sort of ticked off at the agency, and not just want to keep protesting, but to understand we are not just talking about explicit collusion. We are talking about other forms of coordination.

It's not going to be helpful to go into the agency and tell them you have learned your lesson, you are very good now, this is never going to happen again. If the market hasn't changed substantially, that just is not going to be persuasive.

They don't really understand this. They want to know why did you make me put in place all these wonderful compliance programs and now it isn't going to do me any good. On the other hand, when we are talking about unilateral effects, nobody takes it personally if you suggest they might act like they are the king of the hill.

It is always an interesting factor, I think, when you are counseling.

MR. SALOP: I disagree with Dave that simple correlations are going to carry the day in court. That is what econometrics is all about. One side puts in a simple-minded correlation and then the other side shows that it didn't control for that factor, and when you put the controls in, it turns the result around.

The lesson is that U.S. Tobacco didn't put any
econometric response to the shoddy study that was done. If
they had, they could have blamed the damages away in a
district court.

I think we see time and time again that people do super correlations, then the other side does some sophisticated econometrics, perhaps just explained as further variables, and they blow away the initial data.

MR. SCHEFFMAN: I said you won't find a correlation or a regression in there at all. It is just simple facts. Yes, here's the prices. Take a look at them, see what you think. I'm not saying that is the only thing. Economists can do more than that. If you do something other than that, which you sometimes need to do, then you need to be sophisticated about it, of course.

I was just responding that sometimes economists can do something and they sometimes forget this, let's just develop the basic facts here and see whether what the lawyers are saying is true, and sometimes it is not because often the business people don't have it right. That is often where there is a big margin of opportunity. That is not to say you can do any sort of modeling and correlation, you better do it right.

MR. KNIGHT: In the minutes that we have left, I want to give each of our panelists a chance to answer this

1	question	and	then	to	make	any	final	points	they	wish	to
2	make.										

It has been suggested that perhaps the bar should be raised on coordinated effects analysis, to bring it in line with Sherman Act standards.

Does anyone see that developing, and if so, any time soon? Again, make any final comments you may have.

MR. YDE: Because we have a short amount of time,

I am going to preface this by saying I think you have to

read the paper and then you will understand my comments, but

I think he has it exactly backwards.

I think effective coordination is not the standard for drawing inferences in Section 1 cases, and effective coordination is a standard in determining whether a merger is likely to be anticompetitive or likely to violate Section 7.

I just disagree with the underlying premise and I think it is exactly backwards.

MR. DICK: I think the standard is applied appropriately or where it is applied is appropriate. You have to prove that a merger will substantially lessen competition. You have to establish there is a reasonable likelihood that it will do that. Also, the lessening of competition standard.

I think Jon was the one who quoted some of the

1	language from the Guidelines about the merger making
2	coordination more perfect, more complete, and more durable
3	It doesn't say it is absolutely perfect or absolutely
4	complete or durable in all respects. It's a directional
5	implication.

MS. MAJORAS: I agree with Andrew. I think it is more important that the various pieces that we use in Section 7 analysis have some consistency as to the standard that is used, as opposed to find consistency between a Section 1 analysis and a coordinated effects analysis.

Just taking off on what Andrew just said, if you contrast that with Section 1, when you are looking for an agreement, one of the major differences is there, you are looking backward. It has happened or it has not. What you are doing is looking at circumstantial evidence usually, if it has gotten this far, to decide whether in fact an agreement has occurred.

Somebody knows the answer to that question, and the purpose of the proceeding is to present evidence to find this out.

When we are in Section 7 analysis, it is completely forward looking, as Andrew says. That is a difference. If you raise the bar, while it would make a lot of our colleagues happy, truthfully, it would take it out of kilter with the rest of Section 7, and in fact apply a

standard that I don't think was intended by Congress.

I agree it is an interesting paper and there are times when you are working through a Section 1 problem and you switch to a Section 7 one and that contrast becomes quite clear and seems a little odd, but when you really step back and look at it, it makes sense within the context of the statutory framework.

MR. SALOP: I agree. A closing remark, what I want to say in closing is that I think it is very important that we economists not oversell what we are doing in coordinated effects. The unilateral effects model goes back 100 years, it's a mainstream economic model. It might be true that dead Chicagoans are held in higher esteem than dead Frenchmen, but maybe not.

I think to some extent economists weren't cautious enough in explaining limitations of unilateral effects to the lawyers and policy makers to begin with, and the lawyers understand it as, we believe you can predict the price effect to three decimal points, and we were saying you don't need lawyers, you can just run the regressions, and the documents, depositions and so on don't matter.

I think with respect to coordinated effects, as we make it more sophisticated, as we build coordinated effects models and have empirical tests and so on, we need to make it clear to policy makers that these are just little pieces

adding to the proof. This is not an attempt to replace what

we do now.

MR. SCHEFFMAN: I've done both Section 1 and Section 7 cases. It's pretty obvious we have Section 1 standards for merger cases. I think we use the word "collusion," but that is not really what we are doing at the agencies. We are looking at substantial lessening of competition, SLC, that the market is going to become less competitive. Sometimes the way you say it, it is collusion, you need to think as an economist, it is perfectly valid -- how we distinguish tacit coordination is that the unilateral incentives are different. Unilateral incentives are quite consistent with equilibrium.

I think this collusion thing is a red herring. We really are just looking at is there a reason to believe there is going to be less competition than there otherwise would be. If you have a bona fide maverick, I don't think it has anything to do with collusion. They are dragging the price down lower than it ever was or would be. It's not that they are going to start colluding after. I think that is a red herring. It is not what we actually do. It isn't fancy economics.

MR. KNIGHT: Jon Baker, again, you get the last word.

MR. BAKER: I think what we need to do is find a

1	case where we have in front of us a set of facts and where
2	we can characterize it as coordinated or not. At the next
3	panel, that is what I will propose, the next time around.

I wonder whether merger analysis today would differ if it were conducted entirely under Section 1. I agree there was a difference when Section 7 was promulgated. A lot has changed. It seems to me the Sherman Act and Clayton Act are converging. And is Section 7 analysis very different from Section 1 analysis at the end of the day.

MR. KNIGHT: On that note, I want to thank all of our panelists for a tremendous job. Thank you all.

(Applause.)

13 UNCOMMITTED ENTRY

MR. GEBHARD: Let me begin by welcoming everybody who has been hardy enough to stick around for this last session of the day. Hopefully, you won't be disappointed.

My name is Ted Gebhard. I am an attorney in the Policy Office in the Bureau of Competition here at the Federal Trade Commission.

As the program indicates, the topic of this session is uncommitted entry, a topic that is found at Section 1.3 of the Guidelines.

As many of you know, the term "uncommitted entry," not the concept but the term, first appeared formally in the Guidelines in the 1992 revisions. The concept of short run

supply substitution, however, is hardly new to antitrust analysis. It has indeed a very long and distinguished history.

Indeed, in the 1982 Guidelines the authors, in attempting to provide a more rigorous algorithm for defining markets and identifying market participants, spoke specifically to the concept of supply substitution.

The 1992 Guidelines advanced this notion still further and, in particular, articulated in a far more precise manner the means by which the agencies will evaluate entry in their merger analysis.

As I noted, the term "uncommitted entry" appeared first in 1992 and, simultaneously, the term "committed entry" appeared in the 1992 Guidelines.

Classifying entry into these particular categories of committed and uncommitted suggests, at that time at any rate, that it was thought that such a distinction would improve the analytical framework of merger analysis, and also hopefully the practical usefulness of the Guidelines.

We now have 12 years of hindsight and experience by which to assess the efficacy of those revisions, and that revision in particular. Among other things, we might ask today, is whether classifying entry into these categories of committed and uncommitted, and indeed, placing them at somewhat in disparate parts of the Guidelines' overall

analytical framework has, in fact, helped or hindered the usefulness of the Guidelines.

More fundamentally, given actual experience over the past 12 years, we might ask whether it makes sense to continue to try to draw this distinction.

From an economic standpoint, is it an artificial distinction? Does it have a theoretical and/or practical basis that is worth sustaining and maintaining for the future? How often is uncommitted entry a key factor in merger analysis and in what industries and markets might we most expect the concept of uncommitted entry to play a significant role in merger analysis?

To address these and other issues related to the concept of uncommitted entry, I am pleased to say that we have a very distinguished panel of commentators.

Let me just take a couple of minutes briefly to introduce you to the panelists. To my far left is Doug Melamed, who is a partner at Wilmer, Cutler & Pickering, where he co-chair that law firm's antitrust practice group, and as most of you know, in between stints in private practice, Doug served as the principal Deputy Assistant Attorney General at the Justice Department in the Antitrust Division in the late 1990s, and culminated his tenure of duty there as Acting Assistant Attorney General in charge of the Antitrust Division.

L	Sitting next to Doug is Dr. Timothy Daniel, who is
2	an economist with NERA, here in Washington, D.C. Like Doug,
3	Tim also has a distinguished prior career in government
1	service, having served as an Assistant Director for
5	Antitrust here in the Bureau of Economics at the Federal
5	Trade Commission.

To my near right is Mark Whitener. Mark is currently antitrust counsel for the General Electric Company, where he has been since 1997. Like the others, he also has prior government experience, for several years serving as the Deputy Director in the Bureau of Competition here at the Federal Trade Commission. Mark is also currently an associate editor of the ABA's Antitrust Section's Antitrust Magazine.

Last, but certainly not least, Dr. Rick
Warren-Boulton, a principal with MiCRA, an economist
consulting firm here in Washington. During his career,
likewise, he spent time with the government having served as
the Deputy Assistant Attorney General for Economic Analysis
at the Antitrust Division for several years in the 1980s.

With those brief introductions, let me ask Doug to begin with some remarks on uncommitted entry.

MR. MELAMED: Thanks, Ted.

Obviously, issues of supply response and entry are an important part of merger analysis, and indeed, lots of

aspects of antitrust analysis. I take it that the topic today is not that broad one, but rather the narrower one of the usefulness and desirability of breaking that topic into two separate categories or dividing the universe of potential entrants into two categories, so-called committed and uncommitted entrants.

Under the Guidelines, which do make such a distinction, uncommitted entrants are defined as firms that are not presently selling in the market, but would enter within one year in response to a price increase and could enter without incurring significant costs.

Once found to be an uncommitted entrant, the firm is included in the relevant market, and that, of course, has implications for HHI and other calculations. Potential entrants that are not uncommitted entrants are taken into account, as Ted said, much later in the analysis as described in the Guidelines.

In my view, the distinction does not enhance merger analysis. It makes no sense for a number of reasons. First, let me touch upon some of the reasons that are easier to state.

There are practical problems with this kind of distinction. It creates an additional issue in merger analysis that some people may actually spend time on, and that is worrying about what category does this potential

supply response fall into. This is not an area that is likely to have or in my experience has had much pay off, because there are almost always some costs, especially if opportunity costs are taken into account. I guess this is another way of saying that the fact that the firm is not presently selling in the market says something. As I understand it, there have been very few cases where uncommitted entry has figured into the analysis.

Secondly, even where an uncommitted entrant is identified, in reading the Guidelines, you can determine that you haven't streamlined or shortened the analysis in any way by making the identification.

The Guidelines are explicit about a proposition that seems clearly correct. That is, even an uncommitted entrant can't be deemed to be completely in the market. That is to say that not all of its capacity should be deemed to be in the market. The Guidelines state, for example, that capacity that is "committed or profitably employed outside the market," that it would not enter in response to a SSNIP, and thus should not be included in the market.

Even if you identify an uncommitted entrant, you then have to ask the question, how much of this entrant's capacity should be in the market. And for that, you would have to make the very same inquiry you would make about it if it were a committed entrant. You have to ask, based on

the particular facts, what is the likelihood of the timing and the magnitude of entry one might predict from this entrant.

Not surprisingly, our experience doesn't suggest there is any way this category streamlines the analysis, nor does it affect the substantive analysis of the merger. It might affect the substantive analysis if HHI calculations were to be an end-all or even a hugely important part of merger analysis. But we all know that HHIs are at best a starting point.

The recent data released by the agencies suggest they are kind of like starting point, they don't tell you an awful lot about what is going to happen.

The uncommitted entry exercise is only apparently to enable refinement of the calculations of the initial HHIs and, it seems to me, that is not going to have much effect on the outcome of the merger analysis.

In addition to those practical considerations, I think there are theoretical problems with the uncommitted/committed entry dichotomy. First, there is always in my view a problem when you create categories and force lawyers and economists to focus on the categories and argue about whether something does or does not belong in a category. You then begin to get a lot of reasoning by analogy, rather than substantive analysis about what's the

competitive effects of the merger. At best, you have a kind of undue formalism here by creating two categories from what are really simply different places on a continuum.

Second, there is a real problem with calculation of shares. If an uncommitted entrant is identified, you have to figure out what does that mean. Is it going to sell one widget or many widgets next year? You have to make a judgment as to how much output should be put in the market. Since the uncommitted entrant has no historic sales, the only way you could possibly do that is by determining how much of his capacity should go into the market.

We know from the Guidelines and sound analysis that it is often the case that there are superior measures to use for calculating market shares, such as dollar sales and unit sales. If you try to put an uncommitted entry into a market in which the Guidelines would ordinarily suggest that the better way to calculate shares is by unit or dollar sales, you either are going to have apples and oranges in your calculation of market share, or you are going to be requiring all shares to be calculated on the basis of capacity, which will otherwise be regarded as the absolute way of calculating shares.

The most important problem I have with the distinction between uncommitted and committed entry is a theoretical one. It doesn't, it seems to me, correlate very

well with its purported purpose. I take it the purpose is to figure out what is in the market. I take it the purpose of figuring out what is in the market is to be able to say with more or less precision and accuracy what is the nature of the competition in the market. What are the real constraints on the competitive conduct in the pre-merger period.

The reason you do that is to determine whether this market is susceptible to anticompetitive restrictions. If it was wheat farmers, we would probably think not. Or to identify whether the merger seems to be eliminating what was under the status quo ante an important constraint on anticompetitive behavior by, for example, merging with a maverick or merging with a company with a large market share.

The uncommitted/committed entry distinction does not tell you very precisely anything about the status quo ante. The critical definition of "uncommitted entry" is there are no sunk costs. Sunk costs are not an essential condition for exerting a present competitive restraint. Entry that takes a great deal of sunk costs could under some circumstances induce enormous competitive constraints in the market.

One industry, for example, is motion picture exhibition, where a new state-of-the-art entrant in theaters could

overnight render obsolete the incumbents, because of a brand loyalty in theater exhibition. By the same token, the absence of sunk costs doesn't guarantee that there will be an effect on present competition, because if limit pricing is not required because incumbents could instantaneously respond to anticipated new entry and retain their market shares, then you are not going to have any present effect from anyone who is characterized as an uncommitted entry.

For those practical and theoretical reasons, I don't think the distinction makes any sense.

I think if we are going to have a distinction, I would suggest we go back to some old fashioned nomenclature. I would suggest that we ought to ask ourselves in assessing the status quo: In addition to the firms in the market, are there firms not in the market who are exerting a perceived potential entry effect? Then you might be actually making the state of competition in the market more competitive than the status quo ante.

The second category, the committed entrants, those who exert no present perceived entry or will predict actual entries, and you analyze their impact on the merger, in the competitive effects stage when asking the question, if there were anticompetitive effects from this merger, would the entry ameliorate them.

If you look at it in terms of a wings effect

rather than uncommitted entry notion, you might want to make
some rough judgments. How much of his capacity do people
think is likely to enter? What do they perceive to be his
likely entry? And you could calculate some HHIs in the
process calculation.

I don't know that it would become the HHI calculation, but it would be a datapoint that might give you some way of quantifying the magnitude of perceived potential entry effect.

Beyond that, I would dispense with the kind of dichotomy that the present Guidelines have.

MR. GEBHARD: Thank you, Doug. Tim?

MR. DANIEL: Good afternoon. I think my comments are going to be largely complementary to Doug's. I'd like to make a few additional points as we go. At the end, like Doug did, I will have a practical suggestion for a possible alternative to the current application of uncommitted entry concept in the merger review process.

I don't think there is any disagreement among this crowd that the Merger Guidelines provide a pretty logical approach to the merger review, defining the market according to consumer behavior, identifying participants in that market, and then computing the shares and concentration levels from the transaction, and then if you didn't clear the concentration screen that triggers a more complete

analysis, you go into the competitive effects and the entry and the efficiencies.

There is no disagreement that uncommitted entry as defined in the Guidelines and as defined by Ted at the outset of this session deserve a place at the table, and needs to be considered certainly as part of the merger review, and as a possible additive to an anticompetitive effect.

The question is where uncommitted entry should be analyzed. Ultimately, it really doesn't matter. I think economists are all pretty much on the same page with regard to that. You don't want to get hung up on where you do the analysis, but certainly you do need to do it. The analysis can be done in a confusing way and it can be done in an efficient way, where it is done at the stage of identifying market participants for purposes of calculating market shares for those participants and the HHIs that follow.

Why do I say that? For many of the same reasons that Doug just articulated, as laid out in the Guidelines. It is relatively complicated. It's not enough just to identify, as Doug would say, a firm that might be waiting in the wings or as a firm that might have capacity and serve a particular market.

I think to do the analysis correctly, you need to assess the profitability of that uncommitted entrant's

beginning sales in the market of concern. To do that, as the Guidelines point out, you need to consider the extent of the uncommitted entrant's costs. I don't think there are any cases where a firm that's not currently selling in a market that decided to move into that market without incurring any sunk costs, so the sunk costs are truly zero. You have to consider the extent to which that firm would incur those costs and the agencies have historically, and rightfully so, been very concerned about trying to quantify those and assess those.

In a differentiated products market, you need to assess whether or not the uncommitted entrant would capture sales. In other words, would its product be attractive enough to consumers to make that entry matter to the competitive equilibrium. It's not a simple analysis at all, in my view.

Lastly, what economists like to do is assess the profitability of entry to compare the margins that might be earned by this uncommitted entrant going forward against the sunk costs of entry and the ongoing costs of operations, and see whether or not that uncommitted entry makes sense. In my view, in those cases where the calculations of shares and the calculations of HHIs and the calculations of deltas from a merger are intended to be in an initial screen

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-- is it time for us to go forward or not -- these kinds of

calculations are sort of outside that process and could be an inefficient way to conduct the merger review.

This morning when I was here, I think it was Joe Kattan who said something like entry analysis is the analysis of last resort to a defendant, where they really don't have any arguments to bring to the table. I'm not quite as pessimistic as Joe about where to put that analysis into the mix. I think in many markets, entry and exit are happening all the time, and I think that analysis can shed a ray of light on a merger review's process. My point here is that I think that analysis needs to be done carefully. It needs to be done in a detailed manner, it can't be done terribly quickly. But in the end, I think the analysis is one of profitability, the kind of stuff economists like to do.

You would look at the sunk costs of entry. You would look at the likely market share or sales that the entrant could command on the marketplace, and then you would see whether or not those profits are enough to clear the sunk costs or upfront costs hurdle for that entry.

Doing that analysis requires getting the detailed information from the firms in the marketplace, That information would pertain to any firm that is not currently selling in the marketplace, whether it be two, three, or six months to the time that firm could sell so that it would

fall into the uncommitted entry box, or whether it be six,

12 or 19 months out and maybe be in the committed entry box.

It really doesn't change the importance of the analysis or

the nature of the analysis.

I don't think that distinction makes the merger process move more smoothly.

To bring home the point, the Guidelines does the analysis right in my view or directed us to do the analysis right, but that analysis is complex. As I said, economists like to do this stuff. This is not stuff that we propose not to do. Certainly, I am not saying that at all. We are supposed to do it at a different point in the merger review process.

The first point speaks to the need to check and see whether this uncommitted entrant will actually be able to make sales in the marketplace. If a firm has the technical capability to achieve such an uncommitted supply response but likely would not, because of difficulties in achieving product acceptance or distribution or production would render such a response unprofitable, that firm will not be considered to be a market participant.

I think the recent FTC investigation of the ice cream case -- where the issue, as I understood it as an outsider, was whether a new entrant, a new firm, could get distribution of its ice cream products out to consumers --

proved to be a very lengthy undertaking, a very complicated analysis in which the costs of distribution and the ability to set up the distribution network were at the center of that investigation.

Again, the kind of work economists love to do, but it seemed to me to belong in the entry analysis as opposed to the upfront analysis of assigning market shares and computing HHIs.

On the second quote, it is to the opportunity costs point that Doug mentioned, which is that in assessing whether or not a firm is an uncommitted entrant under the Guidelines, one would look toward the end of that quote, whether the firm's capacity is elsewhere committed or elsewhere so profitably employed that such capacity likely would not be available to respond to an increase in price in the market.

Again, this is an analysis that absolutely has to be done, if you are proposing that a particular firm is a potential entrant into a marketplace. You have to ask what it is doing now and if that capacity is otherwise being employed to serve another market, either another product market or another geographic market. You absolutely need to ask whether or not the profits in those markets would be so high as to make entry into this particular market less profitable and therefore not likely. This is absolutely

the analysis to do in the entry section of a merger review.

Let me leave you with just a very modest recommendation, based on these views. I think on the uncommitted entry analysis, as currently described in the Guidelines, in other words, for what purposes of figuring out who is in the market, who the market participants are, what their shares are, could still be used, but in some fairly limited circumstances.

Both of these conditions hold first if capacity is the proper measure for calculating shares. This could be in a homogeneous products market or in a market where consumers make relatively large purchase decisions and therefore capacity is only the right way to think about the ability to serve these customers.

Capacity is the proper measure, as Doug mentioned.

Secondly, the capacity for an uncommitted entrant is capacity that is controlled by a firm that is already selling in the market at issue. Suppose we are talking about glass containers generally and the specific market at issue would be glass containers used for pickle relish, and that is a defensible antitrust market on the demand side and you are asking who is in that market from a market participant perspective. Those firms that are currently supplying that market with jars for spaghetti sauce and gravy food and other products might also have capacity for

providing jars for pickle relish. If that capacity could easily be swung for the supply and sale into the pickle relish market, then I think it is absolutely appropriate to consider that capacity in the jars for pickle relish market at the outset of the analysis.

You would want to make sure that swinging that capacity into a different end use segment would make sense. That capacity is relatively easy to identify and I think the calculations one would have to do would be relatively less involved than turning to another firm that produces only glass jars for wine, and then argue that firm could, with a five percent price increase, be profitably selling into the pickle relish market. That may well be true. You would certainly want to entertain that as a hypothesis to test, but to my eyes, that would belong in the entry analysis.

Let me just close with one important caveat, which is that the remarks I make today in terms of laying out what I think is an efficient way and an appropriate way to implement uncommitted entry under the Guidelines analysis by no means should hamper any arguments on what I am going to take to a court.

There, you might very well include more than just the limited supply response that I articulate here, for purposes of calculating market shares, for purposes of identifying market participants, because in the merger

review process, it is much more a back and forth between the private parties and the government officials and the investigative staff. In a court, you really need to sort of lay out your best case at the outset, and if your best case involves including those wine producers who you really think can swing their capacity quickly into the direction of pickle relish containers, that is exactly what you ought to do, along with other supply responses that could be available.

MR. GEBHARD: Thank you, Tim. By my reckoning, the vote is now two to nothing in favor of the distinction between committed and uncommitted entry being largely artificial, with the possible exception of limited circumstances that Tim mentioned at the end of his remarks.

I am wondering if there is anyone who will defend this beast.

MR. WHITENER: Sure, why not. Let me find my weapons here. I guess it falls to me to give the agencies something to go on, if they want to keep this section in the Guidelines, which I happen to think is a pretty good idea.

Let me begin by saying I didn't particularly seek this work. I didn't have a particular ax to grind on the section. I tend to agree with the other panelists, and I think this is where Rick probably comes out, too, that it's not a part of the analysis that gets used an awful lot, at

least not in the rigorous sense that it is laid out in the Guidelines.

The question as I see it as a general matter of Guidelines writing is if you have a good economic and analytical framework, even if the analysis is a reasonable approximation of what the agencies actually do, at least in some cases, then you have a basis to pretty much leave it alone. I think in this case the answer to both of those questions is yes, and therefore the answer to the ultimate question is yes.

There are a number of other aspects of the Guidelines that I would probably have at before I would touch this one. I'm sure others have talked about unilateral effects plenty and will over the course of this very helpful workshop. A very sensible framework until you get into this enormously confusing mixing and matching of market shares and market thresholds in an analysis fundamentally not about shares and not about thresholds.

Let me see what I can do to present a fair and balanced other side of this discussion.

Many people sitting in this room in some capacity have had some role, in drafting the Guidelines. Obviously, all of us try to work with them. I think there is a first principle, which is don't mess it up. As I said, if you have a framework that is economically sound, you should look

1 very closely at whether to start tinkering with it.

Actual enforcement does not go back to the sort of stylized Guidelines analysis. Arguably now is a good time to look at the HHI presumptions and see whether they really are out of sync with what the agencies actually do.

Efficiencies were addressed in the 1990s to try to expand our cursory analysis at the time. There are issues not addressed in the current Guidelines, such as vertical mergers, the third rail of antitrust. Some day, perhaps we will see another attempt at that.

Another thing is just as a practical matter, when you start down through the language, you create new common law. You create new verbiage that has to be interpreted or there is going to be a round of enforcement actions, and only over a period of years can anyone even claim to understand what the new Guidelines actually mean.

I suspect as we sit here today and yesterday we have a lot of people who disagree about the Guidelines' language that was written over 10 years ago means. That is just a general and cautionary rule on re-opening the Guidelines can of worms.

Finally, as a general introductory matter, if the worse thing you can say about Guidelines is we don't use them very much, I'm not sure that is a basis to re-open or modify that part of the Guidelines. Let them sit there

dormant until some day somebody says, hey, I have a case where swing capacity or repositioning or imports matter, and I think it's helpful upfront to do some bit of assigning them at least a presence in the market or imagine them being in the market and see what that does for my competitive effects analysis.

The sort of threshold question is is this part of the Guidelines analytically and economically sound. I think the answer is yes. I haven't heard disagreement with that yet. We may still.

Doug and Tim raised some good points. One thing that is very interesting is whether when you look at entry and exit costs. We take account of the fact that exit costs really are a cost of entry, in essence, or they affect the entry decision. That is an interesting fact.

It has been pointed out that it may be that really the pure uncommitted entry may have very little effect on current pricing, because the incumbents may also be hit and run pricers. They may not limit price because they figure if the guy comes in, I will price accordingly, and if he exits, I will price accordingly.

There are some interesting things to ask. It's certainly not every case where entry might be quick, that you are going to necessarily assign that firm a presence and a share as if they were current market participants, for the

reason that Doug states. They may not have the current constraining effect that a current market participant has.

Is it economically sound? I think so. I think the critiques that we have heard so far focus on how often is it applied. Is the distinction between committed and uncommitted entry very often or ever a particularly useful distinction to make. Are we engaging in market drawing that is artificial.

I think there are some legitimate questions and it might be interesting to look at exit costs and ask whether hit and run entry is really what we are after in terms of the price constraining effect. My sense is these are not out of the mainstream of the fundamental Guidelines' economics, so I think they pass that first test.

Are they ever useful as a practical matter?

Again, I agree with the sentiment that they are not useful really very often. Most of us who have done a lot of mergers have not very often sat down and created a market participant and share table based in large part in anticipated supply responses that have not actually been demonstrated in the market.

There are a number of reasons why they simply don't come into play very much. I don't want to spend a lot of time on this. In coordinated interaction cases we are really looking for who are the participants, how many are

there, what is the rough idea of their shares and their significance.

As Doug points out, the shares are just a starting point, so why go and do all this sometimes complicated analysis to bring into that market those who have perhaps the potential to come in quickly.

That is a fair point. The coordinated effects analysis is in the Guidelines. It does look as a starting point at shares, at least a number of firms. While I agree you are not often going to come up with a very meaningful share calculation for that supply response, that uncommitted entry, you are at least going to sometimes get a sense of how many credible players there are likely to serve customers in the near future.

In a case where you have only two or three incumbents after the merger indicating perhaps, assuming entry barriers and all the other conditions, a very serious issue, and you have three or four pretty approximate supply responders, I don't know why you wouldn't say, that based on kind of a quick analysis under the uncommitted entry section, that you really have five, six, seven significant players likely post-merger, in the event prices were to justify a supply response, so you don't have a problem.

It might be a quick screen. Giving those approximate supply responders their due, it may not be the

basis for a problem. If you defer them to entry analysis, and I will come back to this, I think you will turn it into sort of an undifferentiated well to do what. If we wouldn't have a problem under the coordinated theory with five, six, seven pretty comparably sized or decent sized firms, I don't think we have to look much further.

Winding down point, again, fair enough. The lines are drawn throughout the Guidelines. I don't think the line drawing in this case is particularly severe. I think the introduction of some costs in to the analysis in the early 1990s was a very appropriate analytically correct useful addition to the Guidelines. What is significant in terms of sunk costs? At least the Guidelines take a crack at defining that, and talking about recovery of those costs.

You are not going to get out of line drawing if you throw everything into entry. You are talking about two years now, and indeed, I think you have somewhat less guidance about what is sufficient entry under Section 3 than you do under this section on how to evaluate the potential presence of a firm as a current market participant.

Having said that this section is analytically pretty correct and perhaps not useful very much, if it so rarely is going to come into play, and is taking up space in the document, you can make a case for saying let's keep the document short and confined to those situations that really

come up in the real world.

I think there are some examples, but not too many reported decisions that I think of really turned on an uncommitted entry analysis. By the time you have a full litigated case and looked at the entire marketplace and competitive effects, one hopes, the role of those other players has been fully evaluated. It almost doesn't matter after a fully investigated and litigated case what category you put them into.

We are talking here about enforcement decisions and an analysis that lawyers can do going in and that the agencies do in making the decisions that they make on a weekly and monthly basis on which cases to bring and why. In that context, there are some situations where I have seen this analysis come into play.

One example is imports. Again, Doug and Tim would probably agree that there are often going to be some costs in virtually any kind of entry or repositioning. That is obviously right. It doesn't mean they are significant. They often will be some sunk costs. When we think about product repositioning, that's probably the most evident, creating brand or creating new feature sets in the technology driven marketplace can be quite difficult in some cases.

If you think of it in terms of imports, products

coming in from outside the geographic market, I think it is a little easier to think of this as an useful analysis.

Importers may have relatively few costs of providing supply.

On the other hand, they may have significant costs and it

may not apply. In some instances, they may already have the

6 product. They have essentially the feature sets. They have

7 the expertise. Transportation costs may not be significant.

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Why do we need this analysis to look at that? may be it's just as well in many cases to say let's look at them as entrants and we will come to the same conclusion. Again, I go back to the examples. Suppose you have decided or you are considering a narrower geographic market. U.S. market. You think there is some basis for that, so you have to take it credibly as an agency and ask yourself if there is a problem in that market, and you only have a very small number of local producers after the merger. have the ability to approximate which firms with roughly what kind of supply capability, measured as capacity or likely sales, can be selling in that market in a reasonable amount of time, why not at least count them in the sort of estimation of current participants, and you might come to a judgment that this is not a three to two deal, this is a nine to eight deal, and therefore, we don't have to ask a whole lot more.

You could go back and look at imports

historically. You could say, well, let's look at what has happened in the past and let's look at shares over a 10-year period, and on that basis, they are in the market. I think that is just another way of doing what I just described.

The other example, and this is probably my main point, another example of when this analysis can be useful, probably less often than in the case of the imports or swing production of a homogeneous product, but I put this in to make a slightly different point.

The Guidelines do ask in unilateral effects cases, well, we have found there is closeness, competitive proximity between the merging firms for some group of customers. Now we have to look at the supply responses. If essentially somebody else who is adjacent to that differentiated segment could readily reposition and come in, and that defeats the premise of the unilateral effect.

The point here is that number one, the Guidelines relate that back to the uncommitted or committed entry analysis, depending on the nature of sunk costs. The Guidelines today interlink unilateral effects and committed and uncommitted entry in a way that I think makes perfectly good sense.

The other point is my sense is there is a tendency with the availability of transactional data to really sometimes be enamoured of that competitive proximity, to

find that proximity based on data, and to be very interested in looking at a potentially unilateral effects case based on kind of static bidding data. Then to say maybe we have an issue here, and really skip over or perhaps not give enough credence to the repositioning point.

Go back to Joe Kattan's point. If entry is the last resort, and I think, in fact, there is a lot of truth in that, the last thing I think we should do is kind of commit to uncommitted entry fringes the entry analysis, because under unilateral effects maybe in many of these cases will go away, even though the two merging firms are close in some feature set or some regard, because there are several other players today that have not chosen to sell in that niche but could fairly readily do so.

We ought to look at them as supply responders and not push them off as timely, likely, and sufficient entry. To think of them as entrants is really straining the logic, I think, at that point.

Don't mess with Guidelines if they are kind of reasonably analytically correct and if they are sometimes useful. I think they are reasonably analytically correct, and I think they are sometimes useful.

Thank you.

MR. GEBHARD: Thank you, Mark. Exit polling now tells us we have about a two to one vote. Let me turn the

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MR. WARREN-BOULTON: I'd like to do this standing
up. When we are criticizing the Guidelines, I want to see
if Werden is anywhere within range. It is easier to duck if
you are standing, if you are going to criticize them.

Since it's two to one, I'm going to change my conclusion. I like the underdog, and maybe try to defend the beast, perhaps for all the wrong reasons.

Going last means I am not supposed to repeat.

That's very difficult given that everybody else has done all the good stuff. I have a friend that explains this by saying if it's worth publishing once, it's worth publishing two or three times. If it's worth saying once, it's probably worth saying it two or three times.

I only have three points. My rule is never have three of anything because nobody can remember more than three of anything. I can't.

The first point I'd like to make is the true uncommitted entrant, not necessarily the uncommitted entrant of the Guidelines, but the true uncommitted entrant is like an unicorn. It's a thing of beauty. It's often sighted. It's hard to confirm. Everybody else seems to have seen one. It's really hard to bag.

It's very difficult to get entry without some sunk costs. The second and third points, I think, are more

interesting. Even if you find the illusive uncommitted
entrant, that's not likely to have much effect on the
analysis of a merger. Even if you bagged the unicorn, it's
not a particularly tasty thing.

The contrast, of course, is with the committed entrant. The committed entrant is a real find, because when you have a committed entrant, it is three to two, and now it is two to two. We call this a two-two. Sorry. Took me a long time to think of that.

SPEAKER: I can't wait for the third point.

11 (Laughter.)

MR. WARREN-BOULTON: If you find yourself one good committed entrant, it is worth a very large number of uncommitted entrants.

The third point is that finding a committed entrant is going to have a significant effect on the analysis. The real problem that I see that we are dealing with here is the standard in the Guidelines for committed entry is just too high. I don't want to use the word "real." The point that I am going to make is in a world with a great deal of uncertainty, even a very low probability, even a highly unlikely probability of inducing committed entry, can restrain prices and prevent what would otherwise be a price increase after the merger. The point is that the entry doesn't have to be particularly likely if

it's sufficiently dangerous.

Let's start with hunting the illusive unicorn. I thank Tim Daniel for the unicorn analogy. As I understand it, and I could be wrong, the defining characteristic of a true uncommitted entrant is that even though it doesn't actually make the product, sell the product at the moment, its mere existence or presence out there, in the words of the Guidelines, likely will influence the market pre-merger and would influence it post-merger.

There are two ways that you might identify such a creature. First, you can look for structural characteristics that would imply this would be the case. Then of course, although it is a little unfair, you could actually look at the evidence and ask if it does behave that way.

Let's look at the two of them. The first is the one that lawyers love because you don't need any math to do it, so what we are going to do is we are going to look for evidence that the presence of the uncommitted entrant actually effects prices currently, and therefore would also affect them afterwards.

In theory, what the Guidelines do, because the Guidelines are highly structural in this sense, is we say that it should affect the current pricing decisions, if that potential entrant, let's call it a potential entrant for the

moment because we don't know whether it's a committed or uncommitted entrant, if it could cover any sunk costs before the price raising of the incumbents after the merger and could lower its price back down again. What we used to call in the old days, before high tech hit, hit and run entry.

You can argue that those situations are going to be unlikely and in fact, I think we all would. My favorite example of why it is unlikely came in Staples, where one Staples manager said, well, it's perfectly true that if Office Depot came in and entered its local market, he would really have to drop his prices by a very large amount, but his best strategy was to make hay while the sun shined.

What he was saying is obviously the Office Depot manager only cared about what his Staples' prices were going to be after the Office Depot firm entered. If the Office Depot firm did enter, the Staples guy would have plenty of time to change all his prices. They could do that in 15 minutes. What the Staples' guy charged before Office Depot entered wouldn't give any indication of how he was going to price afterwards, therefore, higher prices pre-entry doesn't of course induce any higher likelihood of entry. You might as well price as high as you like because that is not going to affect the probability of entry.

I think that is overwhelmingly the usual situation. It's not always. It's possible sunk costs are

low enough and adjustment of incumbents is slow enough so that you can get something that you might call hit-and-run-after-a-little-while. That could be profitable and that could constrain current prices.

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The most likely candidates for that are in bidding markets. The nice thing about bidding markets is an entrant may be able to make sure he has enough business at an agreed price to allow him to recover his sunk costs even before he has to incur any of those costs. In that situation, he is truly an uncommitted entrant.

Those are not the only situations. There are situations in which a potential entrant could enter into long term contracts with customers in the market. Airlines are probably a good example. We all know it has been very difficult for small firms to enter into the airlines markets because of the price response of the incumbents. natural idea of the best way to do it is, that before you enter, you go and you try to contract with customers. Contract with large companies like General Motors who promise to buy tickets on your airline if you enter, you can contract with representatives of groups of customers. they will say is we will contract with you at prices that are below current prices but above post-entry prices. will make sure you will survive. In those situations what happens is the customers can make a committed entrant into

an uncommitted entrant and encourage entry.

I think the 1992 Guidelines, everyone agrees on this, makes a contribution by focusing attention on sunk costs, and I think that was presumably the purpose, but what it doesn't do very well is it doesn't answer the other half of the question. The first half of the question is how large the sunk costs, but the second half of the question is how long is it going to take the incumbent to react.

The thing that is really arbitrary in the sense of the Guidelines is this one year to recover. If you are going to ask this kind of question, what you should do is you should ask how much are the sunk costs, how long would it take to recover those sunk costs, and then compare that with how long it is going to take the incumbent to adjust his prices.

In other words, if it takes much less than one year for an incumbent to adjust his prices, and in most cases that is true, you can identify a whole bunch of people as uncommitted entrants in the sense that you think they are going to constrain current prices, when in fact they are not.

What else could you look at? You could look at actual evidence of competitive effects. When you start walking down this road, the unicorn begins to look pretty illusive. Think of the kinds of empirical tests that you

would want to run to see if a firm was an uncommitted entrant.

Remember, the goal is does he currently constrain prices, even though he is not actually producing the products. You want to find evidence that prices or margins are lower in markets where there are uncommitted entrants. You want to find evidence that those margins fell when an uncommitted entrant "entered as an uncommitted entrant," in other words, wasn't actually producing in the market.

I know it sounds kind of funny. Let's imagine we have an airline that starts flying between New York and L.A. and between New York and San Francisco. What we want to ask is what does this do to prices between San Francisco and L.A. Do they fall? Do they fall as much as the prices fell between New York and San Francisco. You are clearly now an uncommitted entrant between San Francisco and New York, once you are flying -- I'm sorry -- San Francisco and L.A., once you are flying back and forth between San Francisco and New York and New York and L.A.

A more interesting question is do you find evidence of prices increased when the uncommitted entrant entered the market, that is exited from being an uncommitted entrant. One of my favorites is do you find evidence that prices didn't fall when the uncommitted entrant began actually producing the product. Shouldn't that be the case

if he's a true uncommitted entrant.

When you look at prices and margins, do you find that HHIs that you have been calculating with assigning shares of uncommitted entrants predict better than models that don't assign shares of uncommitted entrants.

Even if you go through those exercises, you say, okay, I found myself an uncommitted entrant, what you are stuck with is the question of how large a share should you give to an uncommitted entrant. I think the answer is the only way you would give as large a share to an uncommitted entrant as you would to a current producer would be once again if you believed the actual entry of the uncommitted entrant wouldn't have any effect on the prices.

That's a pretty tough test, which is why Tim called this the unicorn story.

That was my first sort of argument. Then it gets shorter. The second is parties try extremely hard to characterize an entrant as uncommitted. Why? One of my partners, Steve Solvenance, pointed out if you find an uncommitted entrant, it isn't going to have much effect on a merger, but as I said before, if you can find a nice committed entrant, that's worth a whole bunch of uncommitted entrants.

Essentially what you are saying with uncommitted entry is you have to find a large enough number of them so

1	that you are going from a small number to that small number
2	minus 1, to from a large number to another large number.
3	That is not going to happen all that often.

I think Tim also commented, and I think correctly, that what that means is uncommitted entry is likely to play a larger role or be more useful in a Section 2 case than in a merger case.

Finally, does all that mean that uncommitted entry is just a concept, and well, it's not likely to do much harm, it's not likely to do much good, so we might as well leave it in the Guidelines.

I think the problem with uncommitted entry is it really focuses attention away from committed entry. Steve Smith in an article that came out right after the 1992 Guidelines made that point, that the really scary thing about raising prices after a merger is it might induce entry by someone who cannot easily exit. In other words, by a committed entrant, somebody you are going to be stuck with a long time and you can't get rid of.

The contrast with hit and run entry is that if those hit and run entrants have no sunk costs, they are no threat to incumbents. If you make a mistake with an uncommitted entrant, you can always go back to the status quo.

If there is a lot of uncertainty with respect to

the price that will induce entry, then if you run that experiment and you get committed entry, there is a very high price to pay.

Sort of like nuclear war here, the threat of entry can really be an effective deterrent to a price increase, even if that price increase would only slightly increase the probability of entry.

The odd thing is it is perfectly possible in a world of uncertainty, which I think is the world we live in, committed entrant influences current prices more than a uncommitted entrant.

If the Merger Guidelines makes a contribution here or if the concept makes sense, I would like to say it is because what you want to do is you want to make sure it is only an uncommitted entrant. Where it separates out the uncommitted and the committed entrants, and I think the lesson we should learn from this is not that it is the uncommitted entrants that are really very important, but it is the committed ones.

The nice thing about the Guidelines procedure is it lets you separate out the wheat from the chaff to get to the guys who are really going to affect prices if entry occurs, and those are the committed entrants.

Thanks.

MR. GEBHARD: Thank you, Rick. Now, all the votes

1	are cast, and by my reckoning, it is about 2.5 to 1.5.
2	(Laughter.)
3	MR. GEBHARD: I have just a couple of guesti

MR. GEBHARD: I have just a couple of questions I would like to throw out to the panel at large.

My sense is that much if not all of the discussion that we have had this afternoon -- behind that discussion is that we are worried about kind of an unilateral effects analysis or story behind a proposed merger. We are worried about whether the post-merger entity might be able to exercise market power unilaterally.

I am wondering if the concept of uncommitted entry introduces any particular complexities, any additional complexities, or any peculiar complexities, that need to be accounted for if we are talking about coordinated interaction type stories, particularly one, a coordinated interaction story that is not necessarily a collusion story.

What I had in mind here is if the uncommitted entrant by definition is not already producing the product, is not benefitting from any anticompetitive pricing that might be coming about from the existing coordinated interaction, if the merger is expected to perhaps increase the degree of coordinated interaction and increase the anticompetitive pricing.

What is the role of uncommitted entrants, and let's suppose we have a factual situation in which we can

1	identify at least potentially uncommitted entrants, how
2	should that enter the analysis? Does that add any
3	particular complications?
4	MR. WARREN-BOULTON: Are you asking if an
5	uncommitted entrant could be more important than the current
6	entrant? I think that is what you are implying.
7	In that case, it would be yes, unless it was a pay
8	off. Having an uncommitted entrant would be more likely
9	than even just having one more firm actually in the market.
LO	MR. GEBHARD: I take it then that doesn't add any
L1	particular complications, as opposed to telling an
L2	unilateral effects story.
L3	MR. MELAMED: To the extent that the notion of
L4	uncommitted entry had utility, I don't think there is a huge
L5	difference between its utility in a coordinated effects and
L6	its utility in a unilateral effects case.
L7	If there is a waiting-in-the-wing's effect, which
L8	is what I think might be useful in that kind of situation,
L9	it certainly could constrain any anticompetitive behavior,
20	supercompetitive pricing theory.
21	In addition to that, one could imagine an
22	uncommitted entrant is actually colluding, if you have
23	multiple markets and the collusion takes the form of market

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MR. WHITENER: It's a very good question, an

allocation.

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interesting question. Unilateral effects, where I think the importance is the greatest, the reason why Joe Kattan made the comment this morning, low entry is I think the real unicorn here, especially if we are talking about differentiated products, which is where unilateral effects usually arises. The folks who are potential suppliers are almost always in some adjacent product area. It is a question of repositioning, not a question of building a new plant or coming up with new technology or investing 10 years in intellectual property. I think it is certainly relevant in some cases in those instances.

To your question, Ted, it seems to me that identifying these in the wings or potential supply responders in a case where the potential theory is coordinated interaction, it could very well be they are particularly significant. They may be the ultimate mayerick.

How does the market participant trying to evaluate the payoffs from coordination evaluate the supply responders? They may have as much difficulty evaluating the timeliness, likelihood, degree of a potential uncommitted entrant as the panelists here are saying the agencies would have.

It seems to me it is an interesting question, and it may be, I haven't thought about this a lot, that if you

had a number of those folks in the wings with the capabilities to come in quickly, that may be a very destabilizing factor for a coordination case. You would need to look at that in as early in the analysis as you can.

MR. DANIEL: I would concur with Mark's view on that. I think I would also concur with his entry point.

Committed entry to me really is the profitability of the extension of that product line or extension of that geographic region of the product.

With regard to coordination, I think any analysis is going to learn early on, do we have a set of potential suppliers here that are going to be destabilizing after the transaction, if they are not selling now.

I haven't found much support for the argument since I have been outside the FTC, that these are really critical suppliers over the course of five years or for a period of time, and had never sold the product in the market, even though they may sell it elsewhere or something similar.

I would take Mark's point from before, that if you are looking at imports, you are really not going to get much traction unless there are imports flowing into the market in some point, in the recent past. To say there is a boat nearby that has never stopped at a U.S. shore, even in the last five years, it doesn't get me very far. I would be

hesitant to move forward very aggressively. I would think about what it would take for him to begin doing what he hasn't been doing before, which is serving U.S. customers.

MR. WARREN-BOULTON: One thing which I think is worth noting, when people are looking for who is most likely to be the entrant, and somebody who is making it somewhere else, something like that, I think in many of the really interesting cases, it's not somebody who is making the same thing or making something similar, or making something in a different area. It's a vertically related firm. If you asked who was the most likely and the most threatening entrant to Microsoft's desktop operating system, the answer is Intel. The answer is if you have a monopoly in a complementary product, that firm is not worried about price reduction that happens after it enters because that firm can pick it up. If the price of MS DOS had fallen, Intel could pick it up by increasing the price of the chip.

There are these sort of really interesting situations in which vertically related firms can and are immune from the usual problem with entry, which is post-entry price reductions.

MR. DANIEL: Moving to the third rail now, Rick. Vertical mergers.

MR. WARREN-BOULTON: Yes, long overdue.

MR. GEBHARD: Rick may have already addressed this

question, at least in part, by noting that committed entry is more important in terms of weight than uncommitted entry, if you can make that distinction, and if you know of the existence of a likely and timely committed entrant on the horizon. Implicit in the concept of sunk costs is the cost of exit. When we think of entry, often our instincts are initially to think of costs of getting in. Perhaps to the neglect of costs of getting out. By definition, are we not worried in our merger analysis of costs of exit when we are thinking in terms of committed entry. Hence, the name "committed."

In light of the fact that if both are on the horizon and we are relatively confident about a committed entry story and an uncommitted entry story, and the rule is to assign greater weight to the likelihood of committed entry where cost of exit is if not unimportant at least less important, than in the concept of uncommitted entry, is that a basis for maintaining at least some distinction in the Guidelines? Does that provide an analytical basis for maintaining some distinction in the Guidelines?

MR. MELAMED: I don't think so. Why create two separate categories? Rick says while an committed entry can be a bigger threat because you can't get rid of them. That could have a wings effect. That could have a huge post-entry, post-merger ameliorating effect. In order to

understand that, you have to get beyond the categories and you have to really ask how likely is this entry and how likely is it perceived to be, how likely will it happen, and over what time.

The category doesn't help the analysis. You have to look at all the factors in the Guidelines, of which sunk costs is one, and make an assessment.

I don't see why you go through the categorizing exercise. I think you ought to just ask the question, is there somebody that is not in the market now that might ameliorate things and if so, how and to what extent.

MR. WHITENER: As part of the probably 1.5 votes for keeping the test, I guess I would not point to the difference in treatment of exit costs as the reason to keep the analysis. I do think it is a relevant difference between the analyses. I think the fact that even low entry costs, they are likely to be low sunk costs of exit. It is going to be legitimate to look at that type of player as having a high elasticity of supply, someone you have to look at as folks that potentially exert a constraint in the marketplace.

I think probably what happens when we sort of envision -- everybody has their own factor, sort of their own way of thinking about mergers. I think in a lot of this discussion, we tend to think about supply responders, in

heavy industry. I am making widgets but I could make gidgets. That concept doesn't make a lot of sense often to think about low sunk costs of entry. There are going to be perhaps quite significant costs.

That is why I think the other examples that I pointed to are probably more often where this is really relevant, and imports is a good example to Tim's point. It is not a good commentary on merger analysis if we are automatically assuming that because the ships are sailing past the ports, we are not going to count them.

We are supposed to do a dynamic analysis. We are supposed to posit a change, either a price increase or the entry analysis now talks about a supply increase or decrease. There is an inducement for that ship to turn and go into port.

If it is really that easy to turn and go to port, analytically, we shouldn't care if it has never done that, because before the merger, we have a nice competitive market and afterwards we don't, it really ought to be what is the actual dynamic effect, and if that is relatively easy, then it seems to me we have a role for giving those folks some degree of some presence in the marketplace, in our initial cut of who the players are and what the analysis looks like.

MR. WHITENER: If there are price fluctuations that seem to be the type that should draw the response and

it hasn't occurred, I agree. Maybe that is often going to be the case. If you had a fairly stable seemingly competitive market where the equilibrium does not give them any reason to turn and go to port, and a merger arguably changes that, then I guess it would be relevant to me whether it's pretty easy to make a left turn and go hook up to the dock and start unloading.

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MR. WARREN-BOULTON: My concern is how we respond Even in this discussion, it's quite clear that to that. everybody is saying the merger is somehow less likely to have a price impact if it never turned and went into the port, if it really truly was an uncommitted entrant. never turned and went into the port, there are some sunk costs of entering and going into the port. incumbents raise their prices, this quy is going to turn into the port, and once he gets into the port, you are not going to be able to get rid of him. The merger is likely to be less of a problem if the quy never turns to go into the port than if you see him routinely coming into port, and yet the presupposition in every merger I have ever dealt with is my God, do everything you can to see if you can characterize that the guy is an uncommitted entrant.

MR. WHITENER: It is the interpretation that I think I find really problematic, and I'm not sure quite how that happened, except maybe it came earlier in the

1	Guidelines, and like all procedures, you spend all your time
2	worrying about what comes first.
3	MR. MELAMED: Analysis aside, if you are arguing
4	the world is going to hell but don't worry, there is going
5	to be a savior, you are in big trouble, and you want to
6	avoid being in that situation.
7	MR. GEBHARD: I see we have exhausted our time.
8	In fact, we have gone over for a few minutes.
9	Let me just close by noting that for a topic that
10	initially many people thought was not particularly the
11	sexiest on the workshop agenda, I think we have had very
12	interesting discussion, and some interesting comments this
13	afternoon.
14	For that, I want to thank each of the panelists
15	and thank the audience who stuck around for the late, late
16	part of the day.
17	Thank you very much.
18	(Applause.)
19	(Whereupon, at 5:20 p.m., the
20	workshop was concluded.)
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