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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

THOMAS LAUMANN, ROBERT SILVER, GARRETT TRAUB, and DAVID DILLON, representing themselves and all other similarly situated,

Plaintiffs,

- against -

NATIONAL HOCKEY LEAGUE, et al.,

Defendants.

MARC LERNER, DEREK RASMUSSEN, and GARRETT TRAUB, representing themselves and all other similarly situated,

Plaintiffs,

- against -

OFFICE OF THE COMMISSIONER OF BASEBALL, et al.,

Defendants.

OPINION AND ORDER

12-cv-1817 (SAS)

12-cv-3704 (SAS)

I. INTRODUCTION

These cases challenge restraints in the market for baseball and hockey broadcasting. The essence of plaintiffs' argument is that the leagues — Major

League Baseball ("MLB") and the National Hockey League ("NHL") — have conspired with regional sports networks ("RSNs"), who produce broadcasts for individual teams, as well as multichannel video programming distributors ("MVPDs"), who sell broadcasts to consumers, to maintain a system of "territorial exclusivity" that limits viewing options and inflates prices.

The details of that system are described in detail in a companion Opinion, also issued today, addressing the issue of class certification.[1] This Opinion addresses the admissibility of the damages model proffered by plaintiffs' expert, Dr. Roger Noll (the "*Daubert* Opinion"). For the purpose of that task, the important background is that RSNs are currently prohibited — by league-wide agreement —from broadcasting their content to baseball and hockey fans who live outside an RSN's home team territory. Consequently, if a fan of an out-of-market team wishes to watch that team's games, she is forced to buy an out-of-market package ("OMP") that contains broadcasts of all games in the league.

Plaintiffs believe that this arrangement reflects an unlawful restraint of trade, and that if the league-wide agreement preventing out-of-market RSN distribution were eliminated, fans of out-of-market teams would be able to subscribe to "a la carte channels," which would carry broadcasts only of the

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[1] *See* Certification Opinion.

subscriber's preferred team — at a lower price than the OMP. For example, a Yankees fan living in Iowa now has to purchase an OMP if she wants to watch a season's worth of Yankees' games — whereas in the but-for world envisioned by plaintiffs ("BFW"), the same fan would have the option of purchasing an OMP *or* getting an a la carte subscription from the Yankees' RSN.

According to plaintiffs, the absence of a la carte options in the actual world has insulated the OMPs from competition, allowing the leagues, the RSNs, and the MVPDs to command super-competitive subscription fees — leading to overcharge. The purpose of Dr. Noll's model is to model the extent of that overcharge, by comparing the price of OMPs in the actual world to the projected price of OMPs in the BFW, once the territorial restraints are lifted, and the supply chain is reconfigured accordingly.

Defendants have moved pursuant to Rule 702 of the Federal Rules of Evidence ("FRE") to exclude Dr. Noll's expert opinions, alleging that his model suffers from numerous methodological flaws that render his opinions unreliable as a matter of law. For the foregoing reasons, defendants' motion is GRANTED in part and DENIED in part.

II. LEGAL STANDARD

The proponent of expert evidence bears the initial burden of

establishing admissibility by a "preponderance of the evidence."[2] For expert testimony to be admissible under FRE 702, the witness must be "qualified as an expert by knowledge, skill, experience, training, or education[.]"[3] The court must then "compare the area in which the witness has superior knowledge, education, experience or skill with the subject matter of the proffered testimony."[4]

To be admissible, the proposed expert testimony must be based "on a reliable foundation."[5] In assessing reliability, the trial judge should consider whether:

> (1) *the testimony is based upon sufficient facts or data*, (2) the testimony is the product of reliable principles and methods, and (3) the witness has reliably applied the principles and methods to the facts of the case.[6]

Although the Supreme Court has instructed district courts to focus "on [the] principles and methodology" employed by the expert and "not on the conclusions that they generate,"[7] "nothing in either *Daubert v. Merrell Dow Pharmaceuticals*

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2 *United States v. Williams,* 506 F.3d 151, 160 (2d Cir. 2007).

3 Fed. R. Evid. 702.

4 *United States v. Tin Yat Chin,* 371 F.3d 31, 40 (2d Cir. 2004).

5 *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993). *Accord Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 147-49 (1999).

6 Fed. R. Evid. 702 (emphasis added).

7 *Daubert*, 509 U.S. at 595.

or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert."[8] Indeed, "[a] court may conclude that there is simply too great an analytical gap between the data and the opinion proffered."[9] For this reason, "even where an expert's methodology is reliable, if the analysis is not based upon relevant and reliable data, the expert's opinion will be inadmissible."[10]

District courts are charged with acting as "'gatekeeper[s] to exclude invalid and unreliable expert testimony,'"[11] and are given "broad discretion" to make such determinations.[12] However, trial courts must consider only the *admissibility* of expert evidence rather than its weight or credibility. "As the Supreme Court has explained, '[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional

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[8] *Kumho Tire,* 526 U.S. at 157 (quotation marks and citations omitted).

[9] *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

[10] *Johnson Elec. N. Am. Inc. v. Mabuchi Motor Am. Corp.*, 103 F. Supp. 2d 268, 283 (S.D.N.Y. 2000).

[11] *Baldwin v. EMI Feist Catalog, Inc.*, 989 F. Supp. 2d 344, 349 (S.D.N.Y. 2013) (quoting *Bickerstaff v. Vassar Coll.*, 196 F.3d 435, 449 (2d Cir. 1999)).

[12] *Davis v. Carroll*, 937 F. Supp. 2d 390, 413 (S.D.N.Y. 2013). *Accord Amorgianos v. National R.R. Passenger Corp.,* 303 F.3d 256, 265 (2d Cir. 2002).

and appropriate means of attacking shaky but admissible evidence.'"[13]

Finally, it is often the case that some, but not all, of an expert's opinions will meet the criteria of FRE 702. Indeed, it is routine for a party to retain a single expert to opine on a variety of issues that, while related, can be analyzed independently under the *Daubert* standard. In such cases, the court, as gatekeeper, has discretion to decide which opinions are reliable and which are not, from which it follows that a court may exclude portions of an expert report while admitting other portions.[14]

III. PLAINTIFFS' EXPERT

Dr. Noll, a nationally-recognized sports economist, has submitted an expert report explaining why the prices of baseball and hockey broadcasts would decrease in the BFW.[15] In support of this expert report, Dr. Noll designed an economic structural model to simulate how consumers and RSNs would behave if

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[13] *Amorgianos*, 303 F.3d 256 at 267 (quoting *Daubert*, 509 U.S. at 596).

[14] *See, e.g.*, *Louis Vuitton Malletier S.A. v. Sunny Merch. Corp.*, No. 13 Civ. 5242, 2015 WL 1499449, at *17 (S.D.N.Y. Mar. 31, 2015) (striking some, but not all, of a single expert's opinions); *Federal Hous. Fin. Agency v. Nomura Holding Am., Inc.*, No. 11 Civ. 6201, 2015 WL 640875, at *3 (S.D.N.Y. Feb. 16, 2015) (same).

[15] Defendants do not challenge Dr. Noll's academic or professional qualifications.

territorial restrictions were lifted.[16] Dr. Noll claims that his model is based on a similar study conducted by Drs. Gregory Crawford and Ali Yurukoglu (the "C&Y Model"), which measured how the hypothetical unbundling of cable television packages would impact consumer welfare over the short-run.[17] How closely Dr. Noll's model follows the approach of the C&Y Model is the subject of major disagreement among the parties, but at least one difference between the two models is undisputed: in Dr. Noll's model, unbundling reduces prices for the consumer; in the C&Y Model, it does not.

In broad strokes, both models are built on the interplay between consumer demand and preferences for content (the "Demand Side") and the supply chains that distribute that content (the "Supply Side"). In attempting to predict future outcomes in a hypothetical universe, the models depend both on existing data in the actual world and assumptions about how consumers and distributors

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[16] *See* 2/23/15 Corrected Reply Declaration of Roger G. Noll ("Dr. Noll Reply Decl."); 9/19/14 Supplemental Declaration of Roger G. Noll ("Dr. Noll Supp. Decl."); 2/18/14 Declaration of Roger G. Noll ("Dr. Noll Decl."). For reasons explained below, Dr. Noll twice tweaked the model he offered in his first declaration in response to criticism from defendants' experts. Yet all of these models are considered "interim" models — the Court did not require a final model at this early class certification stage of the litigation.

[17] *See* Gregory S. Crawford & Ali Yurukoglu, *The Welfare Effects of Bundling in Multichannel Television Markets*, 102 Am. Econ. Rev. 643 (2012) ("C&Y").

will behave in the BFW.

Defendants attack Dr. Noll's methodological approach to constructing both the Demand Side and the Supply Side, arguing that design flaws in each constitute independent bases for rendering his model unreliable as a matter of law under FRE 702 and *Daubert*.[18] In support of their motion, defendants retained several experts to vet both sides of Dr. Noll's model, all of whom — along with Dr. Noll — were examined and cross-examined over the course of a three-day *Daubert* hearing.[19] On the Demand Side, defendants' primary concern is that Dr. Noll did not rely on sufficient data about fan preferences in estimating what their demand would be for products in the BFW. On the Supply Side, defendants' grievance centers on Dr. Noll's conceptual assumptions; they argue that Dr. Noll has not justified all the building blocks of his structural model. In this Opinion, I separately discuss the Demand Side and the Supply Side of Dr. Noll's model.

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[18] *See generally* Memorandum of Law in Support of Defendants' Joint Motion to Exclude Opinions and Testimony of Plaintiffs' Expert, Dr. Roger Noll ("Def. Mem."); Reply Memorandum of Law in Support of Defendants' Joint Motion to Exclude Opinions and Testimony of Plaintiffs' Expert, Dr. Roger Noll ("Reply Mem.").

[19] *See* 3/17/15 Transcript of Proceedings, Dkt. 339 ("Day 1 Tr."); 3/18/15 Transcript of Proceedings, Dkt. 341 ("Day 2 Tr."); 3/19/15 Transcript of Proceedings, Dkt. 343 ("Day 3 Tr."). The hearing concluded with summations by counsel for plaintiffs and defendants addressing both the reliability, or lack thereof, of Dr. Noll's model and how the Court's decision on the *Daubert* challenge bears on class certification. *See* Day 3 Tr.

IV. DEMAND SIDE

A. Summary of Dr. Noll's Opinions[20]

The price of the league bundles and a la carte channels in the BFW is driven by consumer demand.[21] To predict those prices, Dr. Noll's model follows a two-step approach. *First*, he captures a mathematical curve of consumer demand in the actual world, with territorial restrictions, based on observed consumer and producer behavior and various corresponding assumptions, by designing mathematical equations designed to replicate the observed behavior.[22] *Second*, he simulates markets in the BFW using consumer demand as determined by the estimates in the first step.[23] The general idea, according to Dr. Noll, is to "us[e] a demand estimate [] derived from the status quo to analyze another counterfactual world that has territorial restrictions removed."[24] Determining how Dr. Noll arrives at these step-one estimates is critical to analyzing the reliability of the

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[20] As mentioned above, Dr. Noll ultimately made two adjustments to his original model in designing the Demand Side in response to criticism from the defendants' experts. The most recent version of Dr. Noll's model, outlined in his February 23, 2015 declaration, was the primary focus of the *Daubert* hearing. It is this third version I will analyze here, unless otherwise noted.

[21] *See, e.g.*, Day 1 Tr. at 64-65.

[22] *See id.* at 66.

[23] *See id.*

[24] *Id.* at 67.

Demand Side.

At bottom, these estimates are predicated on the notion that consumers derive welfare, or utility, from spending time watching the live telecasts of their preferred teams, but only to a certain point — especially in light of price considerations and the corresponding utility of doing things other than watching televised sporting events.[25] Therefore, the Demand Side "requires a large sample of consumer viewing data across the channels in a bundle . . . to calculate the means and standard deviations of time spent viewing each sports channel and engaging in other activities."[26] The viewing data on which Dr. Noll relies is drawn from subscriber information for the OMPs provided over the Internet and through DirecTV for the 2012 MLB season and for the OMPs provided over the Internet for the 2011-2012 NHL season.[27] Dr. Noll then uses this data to estimate statistical distributions of consumers' preferences for each team in the bundles.

1. The Underlying Data

Before delving into the technicalities of the statistical analysis

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[25] *See* Dr. Noll Decl. at 100.

[26] *Id.*

[27] *See* Dr. Noll Supp. Decl. at 5. Dr. Noll states that the data that the MVPD providers for the NHL OMP produced were "too fragmentary to support estimating the same model." *Id.*

underpinning the Demand Side, it is important to review the underlying consumer viewership statistics — the observed, real-world data buttressing the demand component of the model — in greater detail, as well as some corresponding assumptions Dr. Noll makes using that data. Because there is no observable data about consumer behavior in the BFW, utilizing real-world information is paramount in estimating otherwise unknown consumer preferences.[28]

For its MLB OMP ("MLB Extra Innings"), DirecTV records the time and duration of a single session of viewing a channel for each subscriber.[29] This amounts to 1,178,100 viewing records for 3,236 subscribers over the course of the season. The DirecTV data does not include the location of the subscriber or the specific package that the subscriber purchased — there is some variation in price among packages, in part due to discounts for purchasing them a certain amount of time in advance of the start of the season.[30] MLB's Internet OMP ("MLB.tv") provides substantially more data points, totaling 64,562,268 viewing records of 521,352 unique subscribers, but those records do not record the total time spent

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[28] *See* Dr. Noll Decl. at 100.

[29] *See* Dr. Noll Supp. Decl. at 25.

[30] *See id.* at 26. For the purposes of modeling, Dr. Noll assumes that all subscribers paid the price of the most popular package. *See id.*

viewing each game.[31] Accordingly, Dr. Noll estimated the mean viewing time for each team by multiplying the number of that team's games viewed by the MLB.tv subscriber by the average viewing duration for that team in the DirecTV data.[32] As with DirecTV, MLB.tv package prices vary slightly, so Dr. Noll used the price of the most popular package for estimation purposes.[33] For the NHL Internet OMP ("NHL GameCenter Live"), Dr. Noll's data set included 4,166,577 records for 99,966 subscribers for the 2011-2012 season.[34] This data includes information regarding viewing time and subscriber location for each game.[35] Finally, for both the MLB and NHL OMPs, Dr. Noll calculates relevant market shares as the number of subscribers to the services divided by the number of U.S. households that watched that sport's championship series, assuming the latter figure to be an upper bound of the potential market for the package.[36]

Dr. Noll uses this viewing data and various assumptions stemming from it to build the foundation of the Demand Side. Notably, as defendants are

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31 *See id.* at 26-27.

32 *See id.* at 27.

33 *See id.*

34 *See id.*

35 *See id.*

36 *See id.* at 27-28.

quick to point out, this foundation lacks any significant additional information regarding consumer demand and preferences. For instance, in modeling demand, Dr. Noll admits that he (1) never sought to obtain demographic data or other personal characteristics about OMP subscribers or baseball and hockey fans more generally, (2) never conducted or attempted to conduct any type of survey of subscribers or non-subscribers regarding viewing preferences or tastes for new products (to wit, a la carte offerings), (3) never sought to obtain specific information regarding price sensitivities of consumers, and (4) that he ignores information regarding package price variation.[37] Similarly, based on the observed data for baseball, only four percent of all World Series watchers — Dr. Noll's assumed upper bound of the market — actually subscribed to an OMP; lacking additional preference data, it follows that all Dr. Noll knows concretely about ninety-six percent of fans in the potential market is that they did not buy a package.[38]

2. Recovering the Demand Curve

So, how does Dr. Noll use the observed data and his assumptions to estimate demand? This is where things get complicated. According to Dr. Noll,

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[37] *See, e.g.*, Day 3 Tr. at 476-478, 512.

[38] *See* Day 1 Tr. at 130-131.

"[t]he goal of the econometric estimation is to recover the distribution of consumer preferences for live telecasts of the games of each team [] as well as consumer preferences for viewership and price sensitivity."[39] To accomplish this task, he builds a structural model which originates with sample mathematical equations that are meant to replicate the actual data reflecting the behavior of participants in a market on both the supply and demand sides. Included in those equations are unknown mathematical variables, which can be estimated by attempting to match them to existing viewership data.[40] In economic terms, these variables are referred to as "parameters."[41] The parameters the model seeks to estimate "measure the responsiveness of the consumer to price, the value they place on having access to the bundle, and the value they place on viewing time of each of the teams or RSNs that they view."[42] Put differently, the parameters gauge the relative utility a consumer derives for each out-of-market channel as compared to all other non-sports-watching activities, which can then be applied to predicting outcomes in the BFW.

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39 Dr. Noll Supp. Decl. at 31-32.

40 *See* Day 1 Tr. at 67-68.

41 *See id.* at 68.

42 *Id.*

These parameters are ultimately determined using the Generalized Method of Moments ("GMM"), an estimation procedure commonly deployed by economists to study demand in markets with differentiated products. Without going into great mathematical detail — many pages of Dr. Noll's declarations consist almost entirely of complex equations beyond the comprehension of the Court or the lawyers in this case — GMM works by using an iterative process in which experimental values are assigned to these parameters with the goal of getting the sample equations to produce results as close as possible to the actual, observed data.[43] In other words, and at the risk of oversimplifying it, the GMM component of the model essentially runs through a series of sixty-six mathematical formulas over and over again, each of which predicts "moments" (measures of the statistical distribution) of data relating mainly to viewing time, until the moments predicted by a given, experimental formula nearly replicate the actual moments of viewing data collected from MLB Extra Innings, MLB.tv, and NHL GameCenter Live, described above.[44] When the GMM process concludes, and the predicted moments

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[43] *See id.* at 68-69.

[44] *See id.* at 69. Because a perfect match between predicted moments and observed moments is impossible, the GMM procedure stops once the match is as close as possible. The moments themselves characterize the shape of the statistical distribution of a particular variable. *See id.* at 70-71. They are calculated by using the means and standard deviations of viewing data, bundle market share, and price-cost margin.

closely match the observed ones, the demand parameters of the model are established.

Dr. Noll's predicted moments come close to matching the actual moments drawn from the observed data in the existing world. Consequently, Dr. Noll concludes that "the explanatory power of the model to replicate the data from which it is estimated is high."[45] While there is some variation in match accuracy across individual teams, Dr. Noll insists that "what is actually important is the power of the model itself to explain all of the data," not just the results for specific teams.[46]

After recapturing the demand curve, Dr. Noll turns to the second step of the model — predicting prices in the BFW. To do so, Dr. Noll uses data about demand in the actual world to simulate demand in a market where out-of-market RSNs are available a la carte.[47]

3. Categorizing Fans and the Logit Error

One of the realities of the BFW, assuming bundles continue to exist, is that fans will have the choice between purchasing one or more a la carte channels

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[45] *Id.* at 80.

[46] *Id.*

[47] *See id.* at 82. For a detailed discussion of the Supply Side, see *infra* Part IV.

or a traditional OMP. To simulate this competition on the Demand Side, Dr. Noll's model sorts potential subscribers into one of three categories: (1) single-team fans, (2) two-team fans, and (3) multi-team fans.[48]

Single-team fans subscribe to a bundle for access to only one team. These are fans that "do relatively little viewing of any other team."[49] Two-team fans are those who subscribe to OMPs because they have an interest in two teams — for example, a husband and a wife who have different favorite teams.[50] Multi-team fans are interested in watching anywhere between three teams and the maximum number available to them.[51]

Dr. Noll relies on the mathematical estimation procedures driving the GMM to help him sort fans into various categories.[52] Significantly, these

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[48] *See* Day 1 Tr. at 91. His first two models did not distribute fans in this manner. The adjustment in the third model responded to critiques of defendants' Demand Side expert, who demonstrated that Dr. Noll's second model was unresponsive to drastic changes in viewership patterns, producing the same results regardless of those changes. *See* Dr. Noll Supp. Decl. at 12-13. Therefore, the fan categories of the third model attempt to account for a wider range of viewership patterns.

[49] Day 1 Tr. at 80.

[50] *See id.*

[51] *See id.*

[52] *See id.* at 137 ("[T]he proportions of people who are one, two, and many are determined by the estimation procedure to maximize the explanatory value of the three-way categorization.").

categories comprise "simulated fans" whose preferences are not directly corroborated by any actual, observable data — instead, they are driven by moments of viewing time.[53] To put this in perspective at the *Daubert* hearing, defendants' counsel and Dr. Noll addressed the process of classifying a hypothetical fan who watches one team ninety percent of the time but still derives significant value from the ability to view other games from time to time.[54] Dr. Noll would likely classify that fan as a single-team fan.[55] In essence, while a fan with a primary allegiance to a single team may in fact have a strong preference to watch other teams as well, Dr. Noll admits that those preferences are "zeroed out" in his model.[56]

Dr. Noll insists that this type of viewing utility is accounted for by a mathematical component built into his model called the "logit error." The term logit error does not connote a mistake; rather, the error is a random component of the model that seeks to capture factors bearing on the utility a fan derives from

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[53] *See id.* at 137-138.

[54] *See id.* Imagine a die-hard Yankees fan who spends ninety percent of his baseball-watching time viewing only Yankees games, but ten percent of the time, he might want to check in on games featuring the Yankees' division rivals – perhaps even more than ten percent of the time if the division is particularly competitive that season.

[55] *See id.* at 138.

[56] *Id.*

watching a specific team beyond simply the time spent viewing that team.[57] According to Dr. Noll, the logit error is a "random component value" factored into the Demand Side to account for the fact that there are forms of utility from the bundle other than pure viewing time.[58] So the logit error adds to the model a random distribution of utility to provide, per Dr. Noll, "a shock that isn't measured by what is already in there."[59] But, as Dr. Noll admits, "[t]here is no additional information about [fans'] preferences other than the logit error that measures the departure of the utility from the expected value."[60]

4. Results of the Model

Dr. Noll's model yields significantly reduced prices of bundles in the BFW. Specifically, the average monthly price of the MLB.tv package would decrease from $20.05 to $14.50.[61] The average monthly price of NHL GameCenter Live would decrease from $26.28 to 18.08.[62] The average monthly price of MLB

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57 *See id.* at 140.

58 *Id.* at 171.

59 *Id.* at 175.

60 *Id.* at 179.

61 *See* Dr. Noll Reply Decl.

62 *See id.*

Extra Innings would drop from $33.59 to $24.59.[63]

Central to evaluating the reliability of those findings are the specific results Dr. Noll's model yields for fans' preferences between a la carte channels and bundles in the BFW. For both the MLB and the NHL, the following pattern holds true. Of the three fan types in Dr. Noll's model, the fans classified as "single-team fans" — the ones primarily interested in watching one and only one team — are the *most likely* to purchase the league package, and the *least likely* to purchase an a la carte channel.[64] Further, the fans most likely to purchase an a la carte channel are those that are interested in the greatest number of teams.[65] These multi-team fans almost universally reject the opportunity to purchase a league bundle in the BFW.[66] The relevant data demonstrating this pattern is reflected for MLB.tv in the chart below.

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[63] *See id.*

[64] *See* Defendants' Demonstratives and Exhibits ("Def. Demonstratives"), Tab 8, at 13.

[65] *See id.* Of course, there is a limit to the number of a la carte channels that a fan would purchase — once the number of a la carte channels a fan is interested in purchasing exceeds the price of the bundle, or is about the same, the fan would be better off buying the bundle.

[66] *See id.*

Chart 1: Purchasing Decisions by Fan Type in the BFW - MLB.tv[67]

Fan Type	% Purchasing Standalone	% Purchasing Bundle
Single-Team Fan	68	32
Two-Team Fan	81	19
Multi-Team Fan	99	1

B. Defendants' Key Modeling Criticisms

Defendants insist that these results are absurd and counterintuitive, signaling that something is amiss about Dr. Noll's model. After all, common sense would suggest that the opposite of Dr. Noll's model should hold true — fans interested primarily in one team would buy an a la carte channel, and fans interested in several teams would buy a bundle. To that end, defendants rely on their own expert, economist Dr. Daniel McFadden, to highlight methodological flaws on the Demand Side.[68] Dr. McFadden offers a number of criticisms of Dr. Noll's model, ultimately characterizing it as "junk science."[69] All of the

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[67] *See id.*

[68] *See* Day 2 Tr. at 359-360. Dr. McFadden won the Nobel Prize for developing methods to study discrete choice — situations where consumers have to choose between one product or another. *See id.* According to Dr. McFadden, Dr. Noll "is using discrete choice models and analysis at the core of his demand analysis." *Id.* at 360. Plaintiffs do not challenge Dr. McFadden's credentials as an expert.

[69] *Id.* at 383.

independent, perceived flaws that inform Dr. McFadden's conclusion fit one common theme: the Demand Side relies too heavily on mathematical assumptions and random error, and too little on actual data about consumers and their preferences.[70]

To illustrate this problem, Dr. McFadden closely examines the process by which Dr. Noll simulates the behavior of consumers. As noted above, only four percent of all World Series watchers — Dr. Noll's assumed upper bound of the market — actually subscribed to an OMP.[71] This means that Dr. Noll has no data for ninety-six percent of consumers in the potential market, other than that they chose not to buy the package in the actual world. To design simulated consumers (or "avatars"), Dr. Noll starts with real demand data on fans that subscribed to league packages in the actual world — but these fans constitute only a very small

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[70] At the beginning of his testimony at the *Daubert* hearing, Dr. McFadden offered three guiding principles for evaluating the reliability of the demand component of structural models. *First*, when modeling demand, "you should be using data on *consumer behavior* rather than say, for example, mathematical assumptions." *Id.* at 362 (emphasis added). *Second*, the model's predictions should be "falsifiable," such that the model should not yield certain kinds of results in situations where different demand inputs are used to alter the expected predictions. *See id.* *Third*, the "model should be consistent with *observed consumer behavior*[,] particularly on dimensions that are important for that application." *Id.* (emphasis added).

[71] The same method is applied to the NHL and viewers of its championship series, the Stanley Cup.

subset of the total BFW population. To account for the overwhelming majority of BFW consumers, about which he knows very little based on the actual world, he is forced to, in Dr. McFadden's words, "assign[] a mathematical DNA to these avatars" using "assumptions to essentially fill out the DNA which will determine how these people make choices and behave."[72] Ultimately, the behavioral properties of these avatars are not based directly on "anything in the real data that [Dr. Noll] has."[73]

As a result, while Dr. Noll is able to match predicted viewing times in the BFW to observed viewing times in the actual world with some precision through the GMM procedure, his model's estimates about viewer preferences are inaccurate.[74] To prove this point, Dr. McFadden compares the actual league subscriber data to the predicted habits of Dr. Noll's avatars. The results of that comparison are reflected in the chart below.

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72 *Id.* at 366.

73 *Id.* at 369.

74 *See id.* at 373.

Chart 2: Comparison of Subscriber Behavior - NHL[75]

Subscriber Behavior	Actual %	Dr. Noll's Model %
Watches a single RSN	22.1	50.6
Watches two RSNs	12.1	19.7
Watches more than two RSNs	65.8	29.7

This simple fitting test reveals major differences between viewers' tastes as defined by the actual, observed data and those predicted by the GMM.

As another example, Dr. McFadden runs a different test to show that Dr. Noll's model underpredicts the popularity of individual RSNs within league bundles across the board. The general pattern is that bundle subscribers "watch a lot more teams," and a "higher share of them watch every team [or] any team" than Dr. Noll's model predicts.[76] In fact, for all but two teams in the NHL, Dr. Noll's model predicts that a lower percentage of subscribers watch a given team than what was observed in the actual data for package subscribers.[77] This discrepancy is particularly noteworthy, according to Dr. McFadden, because it represents a departure from the C&Y Model, which "imposed as part of [its] moments the

[75] Def. Demonstratives, Tab 8, at 9. Testimony regarding similar MLB data was stricken from the record because Dr. McFadden's MLB charts were not disclosed to plaintiffs in advance of the *Daubert* hearing. *See* Day 2 Tr. at 374.

[76] Day 2 Tr. at 377; *see also* Def. Demonstratives, Tab 8, at 12.

[77] *See* Day 2 Tr. at 377; Def. Demonstratives, Tab 8, at 12.

condition that these actual and predicted shares had to match."[78] This is not the only instance of Dr. Noll's model failing to replicate the C&Y Model on the Demand Side. At a more general level, Dr. McFadden testified that an important difference between Dr. Noll's model and that of Crawford and Yurukoglu is that the latter was built on substantially more data.[79] Dr. Noll conceded as much during the *Daubert* hearing.[80]

When asked how he would remedy this problem, Dr. McFadden testified that

> [t]he standard procedure would be to try to get data . . . from the entire population . . . certainly first to go look and see if someone else has already collected it. But if you can't find that, it would [be] common procedure [] to collect your own data, do your own survey, find out who is, for example, in this case who's a fan and who is not, and perhaps also find out more about what their tastes are, whether they would consider buying or not at various suggested prices.[81]

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[78] Day 2 Tr. at 377.

[79] *See id.* at 367.

[80] *See* Day 1 Tr. at 123-128. In their study, Crawford and Yurokoglu based their model on a variety of sources of information, including surveys of random samples of consumers about media usage, consumer behavior, and demographics. *See* C&Y at 653. The information they gleaned factored into their GMM estimates. *See id.* at 668-671.

[81] Day 2 Tr. at 367-368.

He added that collecting surveys is "almost a standard in market research where this problem of estimating demand for new product" arises — "something that firms deal with all the time, and there is now a long tradition and a long history of using survey techniques to understand what's going on and [to] make predictions."[82]

According to Dr. McFadden, the dearth of data in Dr. Noll's model culminates in nonsensical results – namely those reported in Table 1 — which are driven by the logit error. Specifically, Dr. McFadden contends that Dr. Noll's use of logit error in his model is "inappropriate" in this circumstance because of what is known as the "red bus/blue bus problem" — a function of the logit error that forces an overprediction of how many consumers will buy standalone RSNs instead of the bundle in the BFW.[83] The red bus/blue bus problem — a known characteristic of logit error models — draws from a hypothetical decision commuters face: whether to travel by car or by a red bus. In the first instance, one assumes that a commuter chooses between these options with equal probabilities. Then, add to the hypothetical a third option — a blue bus, in addition to a red one. In theory, the additional color choice should not affect the probability of whether a

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[82] *Id.* at 368.

[83] *Id.* at 380.

commuter chooses to commute by car or by bus, generally. But the potential flaw of the logit error is that introducing the third option, a different type of bus, spreads the odds evenly between car, red bus, and blue bus. As a result, the odds of choosing to commute by car drop when they really should remain the same. The more colors of buses that are added, the more likely a commuter will ultimately choose a bus.[84] In this case, the logit error flaw becomes apparent by substituting cars and buses for bundles and a la carte channels — the logit error decreases the probability of choosing the former as more types of the latter are added.[85] Dr. Noll never tested whether this problem affected his model, despite the fact that, according to Dr. McFadden, "[i]t's a limitation of the model which people are warned against" and for which "there are tests."[86]

Above all else, Dr. McFadden notes that this problem is exacerbated by Dr. Noll's heavy reliance on mathematical assumptions and equations to derive properties of avatars. Dr. McFadden concludes that, "from a scientific point of view," the red bus/blue bus problem shows that the Demand Side of Dr. Noll's model is "very badly specified."[87] Dr. Noll's results "violate[] common sense"

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84 *See id.*

85 *See id.* at 380-381.

86 *Id.* at 381.

87 *Id.* at 382.

because "he's making a mathematical inference on how choice behavior is going to look without going into any real data on it[,] and that is itself simply unreliable."[88]

C. Dr. Noll's Response

Dr. Noll claims that his model does not suffer from data deficiencies, and moreover, that the seemingly counterintuitive results of his model make economic sense in that they reflect differing price sensitivities among categories of fans. According to Dr. Noll, "the parameters [] estimate[d] produce the result that the multi-team [fans] are the most price sensitive."[89] This is because the viewing time moment in his model is a "mechanism that picks up the degree to which teams are substitutes for each other, and when you finally get to the multi-team fan, you have lots of teams that are perfect substitutes, and so you can distribute your time."[90] Expanding on this explanation, Dr. Noll offered a hypothetical during his rebuttal testimony:

> Suppose you are a Yankees fan. You couldn't care less what the price of the Houston Astros channel is. Right? You are going to buy the Yankees — you're pretty price sensitive to it. All right? Now instead suppose you're someone who just likes baseball[,] and you don't care whether it's the Houston Astros or the New York Yankees.

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88 *Id.* at 383.

89 Day 1 Tr. at 182.

90 *Id.* at 180.

> You are more likely to look at the relative price of those two to decide which channel to subscribe to.[91]

Therefore, Dr. Noll insists that his model produces the result that for multi-team fans price sensitivity outweighs preference for diversity.

During Dr. Noll's rebuttal testimony at the *Daubert* hearing I asked whether, in simply enjoying watching the game of baseball or hockey, multi-team fans would buy a package instead of one or two RSNs, which would heavily restrict the number of teams they could watch on any given day. Dr. Noll asserted that the "coefficient in the regression in the utility function" of his model — part of the logit error — accounts for that possibility.[92] In support of that contention, Dr. Noll dismissed Dr. McFadden's conclusion about the effects of the red bus/blue bus problem on the model's logit error as "inaccurate."[93] Defending his use of the logit error, Dr. Noll stated:

> The red bus/blue bus problem is not a problem of the model. The problem of the model is, in fact, in certain circumstances, the logit error is driving results or is affecting — I shouldn't say driving — it is one of the factors producing results. The right way to say it is [the logit] introduces heterogeneity in consumer behavior. And

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[91] Day 3 Tr. at 439.

[92] *Id.* at 444. Dr. Noll does not actually know the value for this parameter but assumes the lowest possible value to be conservative. *See id.*

[93] *Id.* at 493.

> . . . one of the ways to change the results that is going to make this look better, if you cared about it is, to make assumptions that reduce the effect of the logit error.[94]

Dr. Noll also attempts to rebut defendants' more pointed criticisms regarding the data on which he relied, or failed to rely, in designing the Demand Side. Mainly, he insists that it would have been impractical for him to do a survey.[95] This holds true as well for a conjoining analysis — a smaller type of survey that reduces the sample size.[96] Conjoining analyses are frequently performed by companies that seek to introduce new products into the market.[97] But Dr. Noll concludes that in this case, performing such an analysis would require too large of a sample size to be practical.[98]

Dr. Noll also attempts to show that Dr. Ariel Pakes, one of defendants' Supply Side experts, relied on similar quantities and types of data in constructing avatars for a 2004 study estimating the demand for automobiles.[99] In

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[94] *Id.* at 494.

[95] *See id.* at 480.

[96] *See id.*

[97] *See id.*

[98] *See id.*

[99] *See id.* at 430; Steven Berry, James Levinsohn, and Ariel Pakes ("BLP"), *Automobile Prices in Market Equilibrium*, 63 Econometrica 841 (1995).

that paper, Dr. Pakes constructed demand for automobiles with a potential market size of over one hundred million consumers even though the average annual sales of automobiles in his actual world sample were slightly above ten million.[100] Thus, Dr. Noll asserts that Dr. Pakes knew next to nothing about a huge percentage of the potential market other than that they did not purchase an automobile.[101] However, as Dr. Noll acknowledged on cross-examination, Dr. Pakes' model relied on demographic data from the census as well as random surveys conducted of over thirty-seven thousand actual purchasers regarding automobile preferences.[102] Further, the ultimate results of Dr. Pakes' model were that less than one percent of people in the potential market for automobiles became purchasers, as opposed to forty-three percent of the potential market in Dr. Noll's study.[103]

Finally, in response to Dr. McFadden's observation that Dr. Noll's model underpredicts the number of channels bundle subscribers view, Dr. Noll insists that the *time* spent viewing a channel is more important than the number of overall channels a subscriber watches. According to Dr. Noll, "the ability of the model to predict should be evaluated on the basis of the ability to predict viewing

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100 *See* Day 3 Tr. at 430.

101 *See id.* at 431.

102 *See id.* at 476.

103 *See id.* at 476-478.

time, not [on the basis of] whether a bunch of subscribers [] spent very little time watching that channel."[104] Thus, Dr. Noll asserts that his model's predictions for viewing time by team do match up very closely to the observed data.[105]

D. Dr. Noll's Demand Side Opinion Must Be Excluded

Calculating damages on the basis of predictions about hypothetical, counterfactual scenarios is not an easy task. Further, estimating damages in *antitrust cases* is especially challenging because "causes and effects in the realm of economics are not nearly as clear-cut as they are in other disciplines."[106] It is against this backdrop that plaintiffs bring an unusually complex and sweeping class action lawsuit, premised on the theory that access to out-of-market baseball and hockey telecasts would be cheaper in a counterfactual world without territorial restrictions. Unless plaintiffs can prove that there is a scientifically-reliable way to predict with some precision the prices of those telecasts in the future, they cannot recover damages for being overcharged in the past.

There is no question that this task is enormously challenging, even for the most seasoned and distinguished of experts. But it is not impossible — it has

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104 *Id.* at 437.

105 *See id.* at 437-438.

106 *In re Se. Milk Antitrust Litig.*, No. 08 Civ. 1000, 2010 WL 5102974, at *2 (E.D. Tenn. Dec. 8, 2010).

been done before in similar circumstances.[107] More importantly, the law is clear: expert opinions are inadmissible if they are not "based on sufficient facts or data," or on a reliable application of scientific methods to those facts or data.[108] This is true no matter how burdensome or difficult collecting relevant data or devising methods to apply to that data may be.[109]

Dr. Noll's modeling of demand in the BFW is unreliable because the Demand Side is largely untethered from the actual facts of this case.[110] Defendants offer a number of independent criticisms of the Demand Side, accusing Dr. Noll of committing methodological flaws ranging from making inaccurate assumptions about estimating market size to inappropriately using logit error in determining the value fans derive from league bundles. Some of defendants' criticisms are very technical, none of which would be independently sufficient to win a *Daubert*

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[107] *See* C&Y at 16-19 (explaining how demand for individual channels was estimated, using a combination of existing viewership data and demographic data).

[108] Fed. R. Evid. 702.

[109] *See, e.g.*, *Fishman Transducers, Inc. v. Paul*, 684 F.3d 187, 195 (1st Cir. 2012) (excluding expert who failed to undertake "difficult, time-consuming and expensive efforts" to obtain "direct testimony from customers, [or] market research surveys of [product] purchasers as to their reasons for purchases," noting that, without them, "[the expert's] report was merely a basis for jury speculation").

[110] *See* Fed. R. Evid. 702.

challenge.[111] The problem for plaintiffs is that, at bottom, all of the examples defendants and Dr. McFadden point to, and all of the tests they run on Dr. Noll's model, expose the same underlying problem, which is quite fundamental and fatal: Dr. Noll's estimates do not rely on sufficient data about consumer tastes and preferences. Instead, time and time again, Dr. Noll substitutes actual, readily-obtainable information for mathematical assumptions in determining how hockey and baseball fans will behave in the BFW.

For these reasons, I conclude that Dr. Noll's expert opinions on forecasting demand in the BFW must be excluded. And because a structural model is only as reliable as its component parts, Dr. Noll's model cannot be admitted to calculate damages on plaintiffs' theory of overcharge. As explained below, the actual data on which Dr. Noll relies to extrapolate consumer demand in the BFW is simply too sparse to survive defendants' challenge under FRE 702 and *Daubert*. In the antitrust context, economists are frequently asked to confront problems of

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[111] For instance, defendants complain that Dr. Noll's model relied on average monthly prices of the most popular league bundle subscriptions instead of inputting a variety of subscription prices into the model to account for consumers' tolerance to price variation. *See* Dr. McFadden Decl. ¶ 38. In isolation, this modeling shortcut does not bear too heavily on the reliability of the overall model. The cause for concern is that without surveys of consumers' preferences for products at various suggested price points, or additional data reflecting such preferences, it is virtually impossible to gauge reliably how price sensitivities would affect demand in the BFW, or how important it would be to build the differing package prices into the model.

extraordinary complexity. In such studies, it is standard operating procedure to rely on more data than Dr. Noll did here in attempting to measure consumer demand in a counterfactual world.[112]

1. The Foundation of the Recaptured Demand Curve Lacks Sufficient Data

It is easy to detect the symptoms of Dr. Noll's over-reliance on mathematical assumptions, and under-reliance on actual data, in the initial demand curve he derives through the GMM procedure. Dr. Noll's approach to recapturing this demand curve is casual, at best. In fact, his benchmark for estimating demand is essentially a hodgepodge of data sets — varying in their levels of completeness and detail — from MLB Extra Innings, MLB.tv, and NHL GameCenter Live, combined with an assumption about the size of the market for OMPs.[113] That is it. And, as noted above, the prices Dr. Noll assigns to these OMPs are actually average monthly prices — no price variation data is taken into account, despite the fact that prices vary significantly depending on when consumers purchased the package.[114]

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[112] *See, e.g.*, C&Y; BLP.

[113] *See* Dr. Noll Decl. at 27-28.

[114] *See* Dr. McFadden Decl. ¶ 38 (noting that 47 percent of NHL GameCenter Live subscribers, 73 percent of MLB.tv subscribers, and 34 percent of MLB Extra Innings subscribers pay a different price from the one assigned by Dr.

This perfunctory approach impugns the overall reliability of the GMM estimation, on which his entire model is built. For instance, Dr. Noll offers no principled reason, and points to no actual data regarding fan preferences, for his important assumption that the total number of viewers of a sport's championship series should constitute the upper bound of the market for that sport's OMP. He may be right, and this one assumption on its own does not necessarily sink the model, but that is besides the point. For demand to be reliably estimated, Dr. Noll needs a data-driven basis for his underlying assumptions, including those pertaining to the important issue of market shares. If a swath of baseball fans had been surveyed in some form, Dr. Noll might have gained a helpful insight into whether setting the upper bound of the market at the total number of World Series viewers was an appropriate assumption. Such survey data could have corroborated his approach, or it could have caused him to refine it. Either way, without preference data, the reliability of an important assumption driving demand in the BFW remains in question. This type of unsupported assumption is all the more problematic when the actual data sets Dr. Noll relies on are not as robust as they could be. Some of these data sets contain subscriber location; others do not. Some contain information about exactly how much time a fan spent viewing each team;

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others do not. While Dr. Noll cannot be faulted for not being provided with certain information, in constructing a reliable model, he must do his best to fill the gaps.[115]

2. The Preferences of Dr. Noll's Avatars Are Heavily Impacted by the Logit Error, Not Actual Data

Instead, Dr. Noll's lack of reliance on actual data compounds the potentially harmful impact of his unsupported assumptions. Consider Dr. Noll's sorting of consumers into single-team, two-team, and multi-team fans. Dr. Noll categorizes fans through a mathematical estimation procedure tied to viewing time. Acknowledging that fans may not distribute perfectly across these categories on the basis of viewing time alone, Dr. Noll relies on the logit error to provide "a shock that isn't measured by what is already in there."[116] By Dr. Noll's own admission, "[t]here is no additional information about [fans'] preferences other than logit error that measures the departure of the utility from the expected value."[117] This is quite problematic, especially considering that Dr. Noll has no real world data for ninety-six percent of the consumers in the potential market for OMPs.

Worse still, the logit error he relies on to compensate for his lack of

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115 *See Fishman Transducers, Inc.*, 684 F.3d at 195.

116 Day 1 Tr. at 175.

117 *Id.* at 179.

preference data is susceptible to reliability issues because of the red bus/blue bus problem. While the Court is not nearly proficient enough in econometrics to evaluate the extent to which the red bus/blue bus problem might throw off Dr. Noll's predictions, this much is clear: if Dr. Noll had leaned more heavily on actual preference data, he could have reduced his reliance on logit error and enhanced the reliability of his model. And, at minimum, he could have tested his model more thoroughly to ensure that the logit error was not muddying his results.[118] Indeed, Dr. Noll admits that the logit error has an important impact on his model, stating during the *Daubert* hearing that "[t]he problem of the model is, in fact, in certain circumstances, the logit error is driving results or is affecting — I shouldn't say driving — it is one of the factors producing results."[119]

3. The Results of Dr. Noll's Model Demonstrate Its Unreliability

Actual preference data would have enabled Dr. Noll to distribute fans into his three categories, and to evaluate the importance of viewing time as compared to other measures of potential bundle utility, in a much more reliable fashion. To prove that point, the Court need look no further than the questionable, hotly-debated results of his fan sorting experiment. For ease of reference, Chart 1,

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[118] *See* Day 2 Tr. at 379-381.

[119] Day 3 Tr. at 494.

which illustrates those results, is reprinted below.

Chart 1: Purchasing Decisions by Fan Type in the BFW - MLB.tv

Fan Type	% Purchasing Standalone	% Purchasing Bundle
Single-Team Fan	68	32
Two-Team Fan	81	19
Multi-Team Fan	99	1

The parties thoroughly disagree over the meaning of these results, and the role the logit error plays in driving them. To a layperson — even one who does not watch sports — this distribution of results makes no sense: the more teams a fan is interested in watching, the more likely he would be to buy a package of the telecasts of *all* teams instead of the telecasts of *only one* team.

Dr. Noll has an explanation for this. Assuming his model's assumptions about viewing preferences by category are correct, then the model's results are economically sensible in that they are informed by the respective price sensitivities of the categories of fans.

But, as with so many other opinions Dr. Noll offers on the Demand Side, the real world data to support his price-sensitivity conclusion is nowhere to be found in the model. As Dr. McFadden points out, if an expert modeler lacked such information, "it would [be] common procedure [] to collect your own data, do your own survey, find out . . . who's a fan and who is not, and perhaps also find

out more about what their tastes are, whether they would consider buying or not at various suggested prices."[120] Only then could consumer demand start to come into focus. That is why Crawford and Yurukoglu relied on substantial real world preference information and survey data, including demographic data, in their study.[121] And, what's more, the emphasis on collecting real world data and integrating it into the C&Y Model was hardly that model's innovative feature, just as Dr. Pakes' use of surveys in his study was perfectly ordinary. Indeed, Dr. McFadden stated that economists now follow "a long tradition and a long history of using survey techniques to understand what's going on and [to] make predictions."[122]

By contrast, Dr. Noll's Demand Side model is so far removed from actual viewer preferences and tastes that a finder of fact could only speculate as to

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[120] Day 2 Tr. at 367-368.

[121] *See* C&Y at 653.

[122] Day 2 Tr. at 368. Dr. Noll's excuses for not conducting surveys or attempting to incorporate additional information are unconvincing, especially considering that his failure to do so seems to be a stark departure from the industry norm. Additionally, throughout the course of expert discovery and the various iterations of his model, Dr. Noll and plaintiffs were on notice of defendants' concern that the Demand Side was not sufficiently tied to viewer preferences, but they stood by the sparse data in Dr. Noll's model anyway. Dr. Noll's declarations speak to the infeasibility of separating fans into 435 categories, but not to doing a survey of a relatively small group of people using a conjoining analysis. *See* Day 3 Tr. at 482.

the reasons for the model's seemingly nonsensical results. Dr. Noll claims that multi-team fans are more price-sensitive because the "model of their demand behavior . . . kicks out that result."[123] But the very model that produces that result is unreliable because Dr. Noll never conducted any surveys or collected and incorporated any additional data regarding viewers' tastes. Doing so could have enabled his model to predict more reliably the price sensitivities of various categories of fans.

For instance, with some extra legwork, Dr. Noll might have uncovered data that multi-team fans' supposed price sensitivity would actually tend to drive them out of the market altogether — after all, cable subscribers can watch a local baseball game almost every night during the season without paying extra for an out-of-market option.[124] Or maybe he would have uncovered and incorporated preference data into his model that reflected the opposite trend — that multi-team fans genuinely value diversity to a greater degree than the logit error provides, and

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[123] Day 3 Tr. at 485.

[124] Indeed, one can envision a number of ways in which a price-sensitive fan — even a non-cable-subscriber — could get his baseball or hockey fix without paying for a standalone RSN or OMP. Fans can read about every play of every game online in real time and watch extensive highlights of every game on MLB.com or NHL.com. They can also watch games at a bar or at the residence of a friend who subscribes to cable. Many baseball games each season are broadcast locally over-the-air such that a cable subscription is not even necessary. All of these options may be preferable to paying for an a la carte channel.

strongly desire the option to watch any team on any given night, not just one team.[125] It is also possible that real-world data supports his price-sensitivity claim.

4. Under FRE 702, Dr. Noll's Testimony About Consumer Demand Must Be Excluded

Whether any of these possibilities are accurate is irrelevant – what matters is that Dr. Noll's failure to obtain information about consumer tastes and preferences and failure to study baseball and hockey viewing patterns more thoroughly create "too great an analytical gap between the data and the opinion

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[125] It may be that a non-negligible percentage of "multi-team fans" are fans not of many teams, but of many players across different teams. To this end, it might have been useful to seek data regarding the impact of the rise of fantasy sports on OMP subscriptions, including the growing trend towards daily fantasy sports. In this context, fans are interested in observing the performance of a collection of players across a range of different teams each night, as opposed to the performance of only one or two teams. Participants in daily fantasy sports, who *pay* to play, consume forty percent more sports content — across all media, including television — once they begin playing. *See* Brent Schrotenboer, Leagues See Real Benefits in Daily Fantasy Sports, *USA Today* (Jan. 1, 2015), http://www.usatoday.com/story/sports/2015/01/01/daily-fantasy-sports-gambling-fanduel-draftkings-nba-nfl-mlb-nhl/21165279/ (noting that "daily fantasy sports consumption will have a steroid effect on television revenue, because nobody watches live sports on television quite as intensely as fans with money at stake"). But the teams they support — and are interested in watching — change every night; they might only view a given game for a very short window of time, just to check in on the at-bat of a single player. Fantasy sports aside, a "multi-team fan" may wish to view games of different teams each night based on intriguing pitching match-ups or other player-specific interests. Dr. Noll's model does not incorporate any real data regarding consumer tastes to account for any of these possibilities, which may or may not have a significant impact on estimating demand.

proffered."[126] FRE 702 requires expert testimony to be based on "sufficient facts or data." Dr. Noll's testimony about consumer demand is based on *insufficient* facts and data. His Demand Side opinions are even less reliable in that they are not the product of any significant, independent research or study, but have instead been developed for the sole purpose of bolstering plaintiffs' position in this litigation.[127] For all of these reasons, the model must be excluded. Without a reliable way to estimate demand in the BFW, plaintiffs cannot demonstrate with any precision the potential monetary damages class members incurred as a result of defendants' alleged overcharging for OMPs.

V. SUPPLY SIDE

A. Summary of Dr. Noll's Supply Side Analysis

Because territorial restraints would no longer exist in the BFW, RSNs

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[126] *Joiner*, 522 U.S. at 146. Because the underlying demand data is the same for the third model as it is for Dr. Noll's first two, it is unnecessary to examine the first two models more closely, to the extent that plaintiffs believe they are still viable. All versions of Dr. Noll's model suffer from the same fatal data sufficiency flaw on the Demand Side.

[127] *See Daubert v. Merrell Dow Pharms., Inc. (Daubert II)*, 43 F.3d 1311, 1317 (9th Cir. 1995) (noting that "in determining whether proposed expert testimony amounts to good science, we may not ignore the fact that a scientist's normal workplace is the lab or the field, not the courtroom or the lawyer's office"); *see also Awad v. Merck & Co.*, 99 F. Supp. 2d 301, 304 (S.D.N.Y. 1999), *aff'd sub nom. Washburn v. Merck & Co.*, 213 F.3d 627 (2d Cir. 2000) (noting that in determining reliability under *Daubert*, "a significant consideration is whether research was conducted independently or for the sole purpose of litigation").

would be able to sell their content — in a la carte form — directly to out-of-market consumers. According to Noll, this change would spark a reconfiguration of the overall market for sports broadcasting, leading to greater consumer welfare.

1. The Supply Side in the C&Y Model

The C&Y Model, as described earlier, is a framework for assessing the result of "unbundling" television distribution — *i.e.*, of moving from (1) a distribution chain in which consumers are required to purchase bundled packages (of television channels) from MVPDs to (2) a distribution chain in which consumers may either purchase bundled packages *or* purchase a la carte channels. The C&Y Model examined the effects of unbundling on *all* broadcasting, not just sports broadcasting. They were interested in determining whether consumers would be better off in a world where they could pick and choose among individual networks — The History Channel, and Arts and Entertainment Network, and so on — instead of being forced to purchase a bundled cable package.

The C&Y Model documented two effects of unbundling. *First*, greater consumer choice, resulting from the existence of a la carte options, spurred competition, and tended to push prices down in the BFW. *Second*, the Supply Side bargaining that would transpire in response to unbundling introduced new costs

into the supply chain, which tended to push prices *up* in the BFW.[128] The reason for this second finding — as Dr. Pakes explained — is that unbundling resulted in a "[smaller] amount of money [] go[ing] back to each [network]," which meant that to avoid "go[ing] out of business" networks were forced to negotiate higher fees from MVPDs, which in turn meant that MVPDs would charge consumers higher prices for each a la carte network.[129] The end result was that in the BFW, consumers ended up "slightly worse off" than they were in the actual world of exclusively bundled options.[130]

In short, the C&Y Model concluded that the unbundling of television channels had two different effects, pulling in opposite directions, on the market for television distribution. The synthesis of these two effects is to restore consumers to essentially the same position as they were in before unbundling.[131]

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[128] *See* C&Y at 4 ("There are two countervailing forces that largely determine our results. First, for fixed input costs, unbundling unlocks consumer surplus. . . . Allowing renegotiation, however, increases costs [and] [p]rices follow suit, making the average consumer indifferent [to unbundling].").

[129] Day 2 Tr. at 298.

[130] *Id.*

[131] *See id.* at 315 (where Dr. Pakes explains that the C&Y Model did not result in a "statistically significant" increase in prices). This is true, at least, with respect to *prices*. It is still possible (indeed, it seems quite likely) that some consumers would be better off in the BFW, even taking for granted the C&Y Model's assumptions about bargaining, depending on their specific preferences. For example, a consumer that *only* wanted The History Channel — a rough

2. Dr. Noll's Basic Deviation from the C&Y Model

The crude way to summarize Dr. Noll's analysis — and the essence of defendants' criticism — is that he adopted the first half of the C&Y Model while ignoring the second. Following the C&Y Model, Dr. Noll posits that the "unbundling" of sports broadcasts — *i.e.*, the availability of a la carte RSNs — would have a downward effect on prices. But from there, Dr. Noll parts ways with the C&Y Model. Dr. Noll's analysis does *not* include a Supply Side bargaining dynamic that results in MVPDs imposing mark-ups when distributing either a la carte channels or OMPs to consumers. Absent this bargaining dynamic, the second effect documented in the C&Y Model — the increased price of each particular RSN's content — does not occur in Dr. Noll's analysis. Accordingly, unlike in the C&Y Model, whose end result was neutral for consumers, Dr. Noll's analysis shows an obvious benefit to consumers — choices multiply, and prices drop.

Dr. Noll has a rationale for this deviation. According to Dr. Noll, there is no need to model bargaining between RSNs and MVPDs in the BFW, because "internet delivery [of RSN feeds] is a competitive substitute for delivery

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analogue to the single-team fan — would no doubt prefer the unbundled world, even if the price per channel was substantially higher than it was in the bundled world.

over an MVPD."[132] Assuming this premise is correct, MVPDs would have no power to mark up prices above a profit-maximizing equilibrium. If they did raise prices, consumers would migrate to Internet products. Therefore, Dr. Noll concludes that it is unnecessary to model "the agreements between [] buyer[s] and [] seller[s]" at an "intermediate" stage in the supply chain — *i.e.*, the agreements between RSNs and MVPDs — because there is no way that such agreements will "affect [the] final price."[133]

With respect to the bargaining issue, there is a notable mismatch between what Dr. Noll has done and what defendants have accused him of doing. Defendants' experts repeatedly argue that Dr. Noll's analysis ignores bargaining in the BFW.[134] This is misleading. Whether or not Dr. Noll's deviation from the C&Y Model is ultimately justified, it is important to understand the nature of his deviation. By assuming that it is unnecessary to model bargaining between RSNs and MVPDs in the BFW, Dr. Noll is *not* suggesting that no bargaining between the RSNs and MVPDs would occur. He is suggesting that to capture the *results* of

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[132] Noll Decl. at 102.

[133] Day 3 Tr. at 447.

[134] For example, Dr. Pakes testified that "[t]he MVPDs don't enter Dr. Noll's model at all. They're just not there," and likewise, that Dr. Noll "doesn't assume anything" about the MVPDs. Day 2 Tr. at 299. *Accord* Reply Mem. at 6-9.

bargaining between RSNs and MVPDs in the BFW, it is unnecessary to model the *process* of bargaining. It is appropriate to assume that *any* bargaining will result in profit-maximization for the RSNs — because the RSNs hold the power to control the distribution of their content.

3. Other Assumptions Built into Dr. Noll's Analysis

In addition to the deviation from the C&Y Model, Dr. Noll's analysis also rests on three methodological assumptions — all contested by defendants — that propel the conclusion that consumers will be better off in the BFW. *First*, Dr. Noll assumes that RSN distribution in the BFW will not be subject to (or subject only to de minimus) "double marginalization," and therefore, that it is unnecessary to account for double marginalization in the projection of BFW prices. *Second*, Dr. Noll assumes that individual RSNs will pledge their content to the OMP in exchange for one-thirtieth of the overall profit from OMP subscriptions (in baseball) — *i.e.*, Dr. Noll assumes that the RSNs will share in OMP profits equally, such that no individual RSN, regardless of its market power, will be able to negotiate for a higher share of the OMP profits vis-à-vis other RSNs. *Third*, Dr. Noll assumes that the prices of a la carte channels will be set independently from the price of the OMP, and vice versa. In other words, he assumes that the league and the teams will price their broadcasts competitively — at arm's length — not as

a joint venture.

B. Dr. Noll's Supply Side Analysis Meets the *Daubert* Test

1. The Lack of Bargaining Between RSNs and MVPDs Is Justified

Defendants attack the exclusion of a bargaining dynamic from Dr. Noll's analysis on three grounds. *First*, defendants argue that bargaining was the "central innovation" of the C&Y Model,[135] which means that when Dr. Noll decided to eschew bargaining, he "deviate[d]" from the only "peer-reviewed or otherwise reliable methodology" that his analysis conceivably relied on.[136] *Second*, defendants argue that Dr. Noll's rationale for *why* it is unnecessary to model bargaining between RSNs and MVPDs — that "[i]nternet delivery is a competitive substitute for delivery over an MVPD"[137] — is implausible. *Third*, defendants argue that Dr. Noll has not justified the assumption running through his entire analysis — that RSNs would continue to exist in the BFW.

a. Deviation from the C&Y Model Is Not *Ipso Facto* Problematic

Defendants' first argument is, in essence, an appeal to authority —

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[135] C&Y at 2. *Accord* Def. Mem. at 15 (arguing that Dr. Noll "eschewed" the core of the C&Y Model).

[136] Def. Mem. at 13.

[137] Noll Decl. at 102.

because C&Y included a bargaining model, Dr. Noll should have as well. But plaintiffs have pointed to numerous reputable papers that use structural models but *do not* include a bargaining dynamic.[138] This makes it hard to sustain the claim that by jettisoning bargaining, Dr. Noll's analysis lost its foundation in "peer-reviewed or otherwise reliable methodolog[ies]."[139] Ultimately, the implicit premise of defendants' position is that bargaining is always essential to the integrity of a structural model. Plaintiffs have offered more than sufficient evidence to question that premise. It would be more accurate to say that bargaining is *often* — but not always — essential to the integrity of a structural model, depending on the specific features of an industry.

Here, the parties disagree about whether sports broadcasting is such an industry. The details of that disagreement are not material to defendants' *Daubert* challenge. Plaintiffs argue that "modeling bargaining is not called for where

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[138] *See* Memorandum of Law in Opposition to Defendants' Joint Motion to Exclude Opinions and Testimony of Plaintiffs' Expert Dr. Roger G. Noll ("Opp. Mem."), at 11 n.7 (noting that "since C&Y was published," there has been "a significant number of papers by well-known economists in top-tier journals that employ structural models without bargaining" — and listing examples). It is also worth noting that Dr. Crawford and Dr. Yurukoglu, the creators of the C&Y Model, worked with Dr. Noll in crafting his analysis. See 10/22/14 Letter from Plaintiffs to the Court, at 2 (Dkt. No. 273).

[139] Def. Mem. at 13.

products are relatively similar."[140] And as a conceptual matter, defendants agree. As Dr. Pakes explained during the hearing,

> if there's only one good that the producer is producing and there's only one good that the [distributor] is marketing, then it makes sense . . . to devise a contract where we maximize the joint profits from the endeavor and split it somehow between the two.[141]

When products are similar, it can be assumed that actors at different levels of a vertical supply-chain (such as RSNs and MVPDs) will negotiate fee-splitting arrangements that replicate acting in concert, which means from the perspective of *consumers* — and for the purpose of assessing consumer prices — no bargaining model is required. The real issue, then, is not whether it is sometimes permissible to jettison bargaining from a structural model, but rather, whether plaintiffs were right to do so *in this case*. And that is a question that deserves "[v]igorous cross-examination" at trial.[142]

b. Dr. Noll's Assumption About Internet-TV Substitution Is Plausible

Defendants' second argument — while more promising — goes to the weight, not the reliability, of Dr. Noll's analysis of the Supply Side. For analytic

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[140] Opp. Mem. at 12.

[141] Day 2 Tr. at 304.

[142] *Amorgianos*, 303 F.3d at 267 (internal citations omitted).

purposes, Dr. Noll's rationale for jettisoning bargaining can be expressed in conditional form — *if* (1) the Internet distribution of baseball and hockey broadcasting is a competitive substitute for the television distribution of such broadcasting, *then* (2) MVPDs will lack bargaining power in the BFW.

Defendants dispute both steps of this logic. *First*, they argue that Dr. Noll has not proven his factual hypothesis — he has not shown that Internet distribution serves as a competitive substitute for television distribution. Furthermore, even if Dr. Noll has proven his hypothesis *prospectively* — that plaintiffs are correct that Internet distribution increasingly *will* serve as a competitive substitute for television distribution — it did not do so during much of the class period.[143] Defendants are correct — plaintiffs have not convincingly shown that Dr. Noll's assumptions regarding Internet distribution were true at all points during the class period. But this observation is only relevant for the purpose of *damages*, not for the purpose of injunctive and declaratory relief.[144] With respect to the latter, Dr. Noll's assumption carries its burden. In light of the way content distribution — across industries — has evolved in recent years and continues to evolve, it is plausible that Internet distribution will increasingly serve

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[143] *See* Def. Mem. at 17.

[144] *See* Certification Opinion (certifying an injunctive class under Rule 23(b)(2), but *not* a damages class under Rule 23(b)(3)).

as a competitive substitute for television distribution. This is not to say that Dr. Noll's premise is ultimately correct. But it is sturdy enough to survive a *Daubert* challenge.

Second, defendants also take issue with the conclusion of Dr. Noll's argument regarding Internet distribution. Assuming, *arguendo*, that Internet distribution and television distribution would serve as competitive substitutes from the perspective of consumers, it does not follow, in defendants' view, that MVPDs would lack bargaining power. For support, defendants point to the fact that in the actual world, "the RSNs' [] business model is premised upon negotiating for carriage [of the content they produce] on MVPDs."[145] In other words, RSNs receive most of their revenue today from "carriage fees" paid by MVPDs in exchange for the right to distribute baseball and hockey broadcasts. According to defendants, it therefore strains credulity to conclude that RSNs' negotiation for carriage on MVPDs, a key source of revenue today, would disappear entirely from the BFW.

This argument is a red herring. The observation that RSNs currently derive much of their business from carriage on MVPDs, though true, sheds no light on the contours of the BFW. In the actual world, RSNs are effectively *forced* to

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[145] Def. Mem. at 17.

derive business from carriage on MVPDs. The whole point of plaintiffs' legal theory is that in the BFW, RSNs would have another way of making profits — by selling directly to consumers via the Internet.

If RSNs made a greater share of their profits by selling directly to consumers, it follows logically that they would make a *lesser* share of their profits from carriage fees. But this observation, on its own, does not help defendants' position. They argue that "MVPDs will not pay [the same] carriage fees" they do in the actual world, if, in the BFW, "consumers can bypass the MVPDs and obtain the same programming [online]."[146] While true, all this implies is that in the BFW, RSN profits would have a different *composition* — that a greater ratio of profit would come from Internet distribution — as a result of a new equilibrium in the market for baseball and hockey broadcasting. From that, however, it does not follow that MVPDs will have bargaining power in the BFW. On the contrary, the upshot of Dr. Noll's analysis is that *whatever* equilibrium emerges in the BFW, it will be the product of Supply Side renegotiations in which RSNs have a much stronger bargaining position.

c. The Existence of RSNs in the BFW

Finally, defendants argue that Dr. Noll has not justified his threshold

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146 *Id.*

assumption that RSNs would exist in the BFW. According to defendants, this is hardly a foregone conclusion, for "it is not clear what role, if any, [RSNs] would have in the BFW given that RSNs are by definition 'regional' and fundamentally a byproduct of [territorial restraints]."[147] Indeed, "in a world with no territorial limitations" — *i.e.*, in the BFW — "popular clubs seeking national distribution could exercise leverage by threatening to negotiate deals directly with national networks or [] MVPDs."[148] If so, then RSNs, far from having *more* bargaining power in the BFW, would have virtually none.

The problem with this argument is that the issue of who produces baseball and hockey broadcasts has no bearing on how those broadcasts are priced. When Dr. Noll describes the BFW in narrative form, defendants are correct that he identifies RSNs as the producers of baseball and hockey broadcasts. But Dr. Noll's invocation of RSNs is simply a holdover from the actual world, not an essential feature of his analysis. The point is that *whoever* produces the broadcasts, Dr. Noll's prediction is that the broadcasts will end up being distributed to consumers at lower prices than in the actual world — *i.e.*, that the supply chain in the BFW, however it is precisely configured, will settle to a competitive, profit-

147 *Id.* at 18.

148 *Id.*

maximizing equilibrium. That prediction may end up being wrong. But if so, it will be wrong for reasons that have nothing to do with what entity — RSNs, other production outfits, or the clubs themselves, producing broadcasts in-house — is responsible for creating content in the BFW. Not surprisingly, defendants have made no effort to connect their observation that clubs could bypass RSNs in the BFW to a claim about *prices* in the BFW. No such connection exists.

2. Dr. Noll's Other Assumptions Go to the Weight, Not the Reliability, of His Supply Side Analysis

a. No Double Marginalization

First, defendants fault Dr. Noll for failing to account for the phenomenon of "double marginalization," which, according to defendants, stems from "the fact that independent businesses in vertical supply relationships" — here, RSNs and MVPDs — "*each* set a price to earn a profit."[149] This complaint mirrors defendants' complaint about the lack of bargaining, in that defendants are essentially taking the position that *all* supply-chains with tiered mark-ups result in double marginalization — just as they take the position that all structural models should incorporate bargaining — while plaintiffs maintain that only *some* supply-chains with tiered mark-ups result in double marginalization.

Plaintiffs have the better of this argument. Double marginalization

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[149] Reply Mem. at 9.

refers to the adverse economic consequences that flow from a supply chain in which two monopolists command super-competitive prices in vertical sequence. When this occurs, the result is that prices rise so high, and output diminishes so much, that (1) consumers lose out, but also (2) both monopolists are worse off than they would be if they acted in concert. In this sense, double marginalization is bad for all parties involved — producers as well as consumers — because prices are marked up to super-competitive levels twice over, which causes demand to plummet, curbing overall profit. Accordingly, producers *always have an incentive to avoid double marginalization whenever possible*.

This observation alone disposes of defendants' argument. Given that producers have a natural incentive to avoid double marginalization whenever possible, the question is whether it is possible, in this particular market, for producers to avoid double marginalization. That is an issue of fact, not one of methodological integrity. As such, it does not support a *Daubert* challenge. Plaintiffs argue that in the BFW, RSNs and MVPDs would not tolerate any significant amount of double marginalization, and that they would use profit-sharing mechanisms — mechanisms already established in the industry — to circumvent double marginalization.[150] To this, defendants respond that certain

[150] *See* Opp. Mem. at 14 nn.15-16 and accompanying text (explaining how, in the actual world, contracts between clubs, RSNs, and MVPDs are designed

features of the sports broadcasting industry are likely to frustrate the circumvention effort.[151]

There is room for reasonable disagreement about which side has the more compelling view of the sports broadcasting industry.[152] At this stage, suffice it to say that Dr. Noll's decision to assume the existence of an outcome that generally works to the benefit of *all* interested parties does not warrant the exclusion of his testimony under *Daubert*.

b. Feeds to the OMP

Second, defendants believe Dr. Noll has made the implausible assumption that RSNs would pledge their broadcasts to the OMPs in exchange for one-thirtieth of the OMPs' overall profits (in baseball). According to defendants,

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to avoid double marginalization). *Accord* Day 1 Tr. 152-154 (Dr. Noll discussed the mechanisms currently in use, and that would continue to be used, to avoid double marginalization in sports broadcasting — *e.g.*, setting mandatory retail prices).

[151] *See* Reply Mem. at 9-10. *Accord* Day 2 Tr. at 303-305 (explaining why, when down-stream distributors — here, MVPDs — sell different products, double marginalization can occur as a consequence of every up-stream supplier — here, every RSN — maximizing its profits).

[152] In passing, it bears note that even the authors of the C&Y Model — Crawford and Yurukoglu — appreciated this feature of the television broadcasting industry. *See* C&Y at 14 n.43 (acknowledg[ing] that their pricing assumptions are "often considered unrealistic" due to the availability of means to circumvent double-marginalization).

more popular clubs — *e.g.*, the Yankees — would have an incentive to demand more than one-thirtieth of the overall share, because their broadcasts are comparatively more valuable than other clubs' broadcasts. In short, why would clubs like the Yankees not simply withdraw from the bundle and sell their content exclusively a la carte?

To this, plaintiffs offer two responses. *First*, they point out that in the actual world, teams are prohibited — by league rules — from withdrawing from the bundle. In this sense, Dr. Noll is simply making the modest assumption that current league rules would stay intact. *Second*, plaintiffs argue that even granting defendants' premise — that the league rules *could* change in the BFW — there is no economic reason to think they *would* change.

Because plaintiffs' first response disposes of the *Daubert* question, it is unnecessary to address the second. Regardless of whether Dr. Noll was ultimately *right* to assume that league rules would stay constant in the BFW, the assumption is not an economic one. Rather, it is a factual assumption about the leagues as institutions. That this assumption has economic implications — potentially quite significant ones — does not change its nature. Assuming that current league rules will stay intact in the BFW is akin to assuming that in the BFW, the baseball season will continue to be one hundred and sixty-two games, or

that baseball playoffs will continue to consist of three rounds (rather than — as is the case in hockey — four). In principle, there is nothing stopping the league from modifying the length of the season, or changing the format of playoffs; just as, in principle, there is nothing stopping the league from reforming its rules regarding RSN feeds. To hypothesize that the status quo will persist, however, is not an unreasonable factual assumption, even if it is a factual assumption that ends up being wrong.

The thrust of defendants' argument to the contrary is that economically, there are reasons to think that current league rules will not stay intact in the BFW — because it would be in the interest of many clubs to dissolve the rules and permit deviation from the bundle. Plaintiffs disagree.[153] But

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[153] Defendants argue that if the Yankees were to withdraw from the OMP in the BFW (assuming the parameters of the BFW set by Dr. Noll's analysis), all teams would be better off — making the result economically rational. *See* Reply Mem. 10-11. In response, plaintiffs suggest that this result, though accurate, is misleading. *Every* lucrative club would have an incentive to withdraw, to the point that the OMP, having lost its most valuable content, would cease to exist. According to plaintiffs, it is well-established that, on balance, the OMP is lucrative — *i.e.*, the clubs would prefer that the OMP exist. Given this, and given the fact that allowing individual clubs to withdraw from the OMP would result in the OMP's demise, plaintiffs reason that the league would decide to preclude individual clubs from peeling off — just as it does today. As Dr. Noll put it, this "problem [] is always true of collaborations [] in a world in which there is revenue sharing," because "it's always the case that the most valuable member of the collaboration doesn't have a private incentive to participate" but "[will] still agree to [collaborate] because it's in their collective interests to do so." Day 3 Tr. at 464-465. In plaintiffs' view, in other words, the league-mandated inclusion of feeds for

regardless of which side is ultimately correct, the important point at this stage is that defendants' argument is not *only* an economic claim; it is also a claim about how the leagues operate. Specifically, defendants' argument rests on the premise that individual clubs' economic interests determine the content of league rules. This is not necessarily true. Leagues self-govern in different ways, with any number of motivations. The economic impact of league rules on individual clubs is one motivation — but hardly the only one. At trial, defendants are free to argue that the league rules would change in the BFW. But that argument will bear on the weight of Dr. Noll's testimony, not its admissibility.

In a sense, defendants' argument about league rules falls prey to the same problem as their argument about double marginalization. In each setting, Dr. Noll has made an assumption that, even if it proves unconvincing on the facts, is facially plausible — indeed, a good deal *more plausible* than the contrary assumption. *First*, Dr. Noll has assumed that RSNs and MVPDs will take steps to circumvent an outcome — double marginalization — that typically undermines the interests of all actors within the market. *Second*, Dr. Noll has assumed that current league rules will stay intact. For the reasons just discussed, this position may turn out to be wrong. But it strains credulity to suggest that this assumption is so

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the OMP solves a collective action problem. And it would continue to do so in the BFW.

unreliable as to merit discarding Dr. Noll's Supply Side analysis.

c. Joint Venture Pricing

Third, and finally, defendants argue that Dr. Noll erred in assuming that in the BFW (1) the price of the OMPs and (2) the prices of a la carte channels would be set competitively — as though the league and its clubs operate at arm's length. According to defendants, the more accurate model of the leagues and its clubs would be that of a joint venture. If so, the proper framework for predicting prices would be a "multi-product pricing" model — a framework whose economic viability is "uncontested," and whose application "would result in higher prices for the two products" at issue here, the OMPs and the a la carte channels.[154]

Plaintiffs' response is simple. If the league and the clubs were to set prices as a joint venture, according to a "multi-product pricing" model, that *itself* would be collusive. Put simply, the reason Dr. Noll assumed that prices would be set competitively in the BFW is that to assume otherwise would be, in effect, to allow "the leagues [to] replace the current anticompetitive prices (and inflated prices) with other anticompetitive prices in the BFW."[155] This is a legal argument, not an economic argument — but it is a legal argument that, in Dr. Noll's view,

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[154] Reply Mem. at 12.

[155] Opp. Mem. at 16.

sets the parameters of "legitimate" economic modeling.[156] Indeed, when defense counsel pressed Dr. Noll during the hearing about his decision to model prices competitively, the following exchange ensued:

> Dr. Noll: [Your experts] think it's perfectly fine for a standalone joint venture to act in a way that attempts to maximize the horizontal competitors' joint profits. That's fine. I don't think that's a legitimate way to model it; your experts do.
>
> Defense Counsel: Are you saying it's unlawful?
>
> Dr. Noll: I don't know whether it's unlawful. I'm simply saying I believe that it's illegitimate as [an] economist to have cooperative price-setting among horizontal competitors as the way you try to figure out damages in an antitrust case. I think that's not [correct].[157]

In response, defendants argue that Dr. Noll has overlooked the fact that in the BFW, each club would "have a *unilateral* incentive to take into account the effect on the related party" — *i.e.*, the league — "when setting price[s]."[158] In other words, multi-product pricing would occur as a natural byproduct of the fact that the clubs and the league have intertwined interests; no top-down coordination would be necessary. It is one thing to hypothesize that the clubs would "take into account the effect" of their prices on the league, and on the OMP. It is quite

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156 Day 3 Tr. at 505.

157 *Id.*

158 Reply Mem. at 12 (emphasis in original).

another to model prices in the BFW the same way that — to borrow an example from defendants' expert, Dr. Pakes — a car company ("GM") sets the prices of two different brands that it owns ("Chevy" and "Pontiac"). If Chevy and Pontiac were owned by different companies, the prices of both cars would naturally settle at a competitive equilibrium — just as Dr. Noll argues that prices of the OMP and the a la carte channels would. But "what happens if Chevy and Pontiac are [both owned by] GM?" According to Dr. Pakes:

> [N]ow GM is setting the price for both. They own both products. They get the profits from both products. So [GM would] increase the price of the Pontiac by one dollar. It gets a dollar from everybody who stays, and some people leave, but [unlike in the scenario where Chevy is owned by another company] they don't lose the mark-up on everybody who leaves. Why? Because some of the people who leave go to the Chevy because it's also a family-sized car. So they'll keep increasing the price more until that equilibrium is established again. So that's what's going on in multiproduct pricing. [And] [y]ou can . . . show [mathematically that] it has to increase pricing.[159]

Dr. Noll decided that analyzing BFW prices this way would violate "legitimate" principles of economic modeling — in essence, because he thought it would reflect collusion. Defendants respond that Dr. Noll is wrong on the law; that in fact, multi-product pricing would occur in the BFW "without []

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[159] Day 2 Tr. at 306.

collusion."[160] But this does not dispose of the legal question — it *begs* the legal question. The Supreme Court has made it quite clear that joint ventures are not immune from the antitrust laws. In this setting, they are subject to Rule of Reason analysis.[161] Whether or not the particular type of multi-product pricing hypothesized by defendants would survive Rule of Reason scrutiny is unclear. It presents a complicated legal question. What *is* clear is that Dr. Noll can hardly be faulted, at this stage, for failing to incorporate into his analysis "a collusive practice that he [] believes is illegal."[162] For now, the assumption about competitive pricing stands.

3. Dr. Noll's Testimony About the Supply Side, Extracted from the Damages Model, Is Admissible

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[160] Reply Mem. at 12.

[161] *See American Needle*, *Inc. v. National Football League*, 560 U.S. 183, 200-02 (2010) (explaining that joint ventures, insofar as they give would-be competitors cover for collusive action, trigger antitrust scrutiny). *See also Starr v. Sony BMG Music Entm't,* 592 F.3d 314, 327 (2d Cir. 2010) (noting that the activities of joint ventures are subject to the Rule of Reason). For further background on the Rule of Reason itself, see *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 885 (2007) ("The rule of reason is the accepted standard for testing whether a practice restrains trade in violation of § 1 [of the Sherman Act]. . . . 'Under this rule, the factfinder weighs all of the circumstances of a case in deciding whether a restrictive practice should be prohibited as imposing an unreasonable restraint on competition.'") (citing *Continental T. V., Inc. v. GTE Sylvania*, 433 U.S. 36, 49 (1977)).

[162] Day 3 Tr. at 524.

The final question is whether the Supply Side analysis can be analytically severed from Dr. Noll's damages model. The answer is yes. Because the damages model lacks a solid foundation in existing data, it does not reliably demonstrate whether, and how much, class members were overcharged for OMPs. But nothing about that defect spills over to Dr. Noll's Supply Side analysis. The shortcoming of Dr. Noll's Demand Side analysis — and the unreliability of his damage calculations — holds true *whether or not* the Supply Side is properly configured. The admissibility of Dr. Noll's Supply Side analysis stands (or falls) on its own.

For the reasons set forth above, I conclude that Dr. Noll's Supply Side analysis, extracted from the damages model, survives scrutiny under Rule 702. Some or all of Dr. Noll's assumptions about the Supply Side may end up being unconvincing — which would weaken plaintiffs' case on the merits. But that issue must be resolved by a fact-finder. It would be inappropriate for the Court to exclude Dr. Noll's Supply Side analysis at this stage.

VI. CONCLUSION

For the reasons set forth above, defendants' motion to exclude the opinions and testimony of Dr. Roger Noll is GRANTED in part and DENIED in part. The Clerk of the Court is directed to close this motion, Dkt. No. 277 in 12

Civ. 1817, and Dkt. No. 354 in 12 Civ. 3704.

SO ORDERED:

Shira A. Scheindlin
U.S.D.J.

Dated: May 14, 2015
New York, New York

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