## UNITED STATES DISTRICT COURT

## DISTRICT OF NEW HAMPSHIRE

In re: Dial Complete Marketing and Sales Practices Litigation

MDL Case No. 11-md-2263-SM
ALI CASES
Opinion No. 2017 DNH 051

## ORDER

This consolidated, multi-district class action litigation is brought by consumers in Arkansas, California, Florida, Illinois, Missouri, Ohio, and Wisconsin, on behalf of themselves and similarly situated consumers in those states, against defendant, The Dial Corporation ("Dial"). Plaintiffs allege that Dial continually misrepresented the antibacterial properties of its "Dial Complete" branded soap, and advance claims under their respective state consumer protection and unfair trade practices statutes, as well as statutory and common law causes of action for breach of warranty and unjust enrichment.

On November 16, 2012, pursuant to Fed. R. of Civ. P.
$23(\mathrm{~b})(3)$, plaintiffs moved to certify a class consisting of each state's purported class members, for a total of eight subclasses, defined as: "All persons residing in [the state] who purchased Dial Complete Antibacterial Foaming Hand Soap for
household use at any point in time from Dial Complete's commercial launch in 2001 through the present."

The court ruled on plaintiffs' motion on December 8, 2015, finding that several of the claims asserted by the plaintiffs were incapable of classwide proof (including all the Wisconsin claims). For those claims remaining, the court found that plaintiffs failed to provide detail sufficient to permit a full assessment of whether damages could be adequately calculated on a classwide basis. Accordingly, the court denied plaintiffs' motion for certification, but allowed plaintiffs leave to file an amended motion for class certification to address deficiencies identified in the order. ${ }^{1}$

1 The court also allowed plaintiffs leave to move to substitute a plaintiff who could adequately represent the putative Louisiana subclass. Unable to do so, plaintiffs represent that they voluntarily dismiss their Louisiana claims. See Pls.' Mem. in Supp. of Am. Mot. for Class Certification at n. 1 .

Finally, the court allowed plaintiffs leave to address whether an individual consumer may state a claim under the Ohio Deceptive Trade Practices Act ("ODTPA"). Rather than briefing the issue, plaintiffs ask the court to defer decision because "attempting to resolve the disputed issue of ODTPA consumer standing prior to trial would be of limited value to this case." Id.

The court is inclined to defer decision. As plaintiffs point out, precedent is unsettled, and the Ohio Supreme Court has not yet addressed the issue. See McKinney v. Bayer Corp., 744 F. Supp. 2d 733, 749 (N.D. Ohio 2010). When state law has been authoritatively interpreted by the state's highest court,

On June 24, 2016, plaintiffs filed an amended motion for class certification. Dial again objects. On November 16, 2016, the court held a hearing on the motion, and heard testimony from the parties' experts.

## BACKGROUND

The parties' familiarity with the relevant facts as set out in the court's December 2015 order is assumed. A brief synopsis follows.

The plaintiffs take issue with a variety of statements appearing on Dial Complete's product labels, including claims that Dial Complete "Kills 99.99\% of Germs*,"² that it is "\#1 Doctor Recommended**," and that Dial Complete "Kills more germs than any other liquid hand soap."3 Plaintiffs contend that these

[^0]statements are false and misleading. They generally assert four causes of action: (1) violation of the consumer protection laws of Arkansas, California, Florida, Illinois, Missouri, Ohio, and Wisconsin; (2) breach of express warranty; (3) breach of implied warranty; and (4) unjust enrichment. Plaintiffs' original motion sought certification for each of those claims pursuant to Fed. R. Civ. P. 23.

As referenced above, the court's December 2015 order substantially limited the claims at issue. For the claims remaining, the court determined that plaintiffs had not demonstrated that damages could be calculated on a class-wide basis, and therefore had not shown that common questions predominate over individual questions with respect to damages.

Plaintiffs' amended motion for class certification again asserts that class-wide damages can be reliably calculated in a manner that comports with their theories of liability. See Document No. 200. The amended motion is supported by the declaration and hearing testimony of a new expert, Stefan Boedeker.

Mr. Boedeker is a Managing Director of the Berkeley Research Group, where he focuses "on the application of economic, statistical, and financial models to a variety of
areas such as solutions to business issues, complex litigation cases, and economic impact studies." Pls.' Mem. in Supp. of Am. Mot. for Class Certification (hereinafter "Pls.' Br."), Exhibit A (Declaration of Stefan Boedeker (hereinafter "Boedeker

Decl.")), Appendix A-1 at p. 1. Boedeker received Bachelor of Science degrees in Statistics and Business Administration from the University of Dortmund, Germany, a Master of Science degree in Statistics from the University of Dortmund, and a Master of Arts degree in Economics from the University of California, San Diego. ${ }^{4}$ He has worked in the economic and statistical consulting field since he completed graduate school in 1991, and "has extensive experience applying economic and statistical theories and methodologies to a wide variety of cases where [b]ut-forscenarios have to be developed based on probabilistic methods and where statistical predictive modeling has to be applied to assess liability and damages." Id.

According to plaintiffs, Boedeker was retained:
to determine whether any specific economic techniques could determine whether Plaintiffs and the other Class Members had been deprived of a measurable monetary portion of the benefit-of-the-bargain they had struck with Dial by buying Dial Complete with a superior efficacy claim on the label but, in fact, receiving a

[^1]product that did not provide the promised superior efficacy.

Pls.' Br. at 2. Plaintiffs say that Boedeker completed the task by describing "a well-developed and widely-accepted conjoint analysis methodology," and then executing that methodology to calculate the aggregate damages caused by Dial Complete's challenged "Kills 99.99\% of Germs" claim. Id.

As plaintiffs explain it, Boedeker's conjoint analysis methodology consists of three steps: data collection, data analysis, and damages calculation. Pls.' Br. at 3. Boedeker first conducted preliminary background research, reviewed market research data, and conducted field research in online and retail stores, to gain an understanding of the consumer liquid hand soap market. Based on that research, Boedeker designed an "economic loss model" to quantify damages on a classwide basis, focusing on measuring the marginal consumer's "willingness-topay." Id. at 5-6. Boedeker describes that model as follows:

To make the consumers whole for the economic loss, every consumer would have to receive an additional payment sufficiently large to vertically shift the demand curve so that the demand curve for the product with the false claim plus additional compensation intersected with the supply curve in equilibrium for the product without the false claim.

In order to determine how much the demand curve would need to be shifted, we need to focus on the marginal consumer in the market for the product without the
false claim and compare the price she had paid to the price she would have paid for the product with the known-to-be-false claim at the point of purchase.

The compensation to make the marginal consumer whole after purchasing the product with the false claim is not simply the difference between the equilibrium prices on the demand curve for the product without the false claim and the demand curve for the product with the known-to-be-false claim . . . Rather, the compensation of the marginal consumer needs to be equal to the difference between the price this marginal consumer would have paid for the product with the known-to-be false claim and the product without the false claim.

Boedeker Decl. II 44-46.

Boedeker developed a "Choice Based Conjoint" consumer survey, in which survey participants were shown hand soap profiles (or "choice sets") with five different attributes, including the claims: "Kills 99.99\% of Germs," "antibacterial," "foaming," and "moisturizing." The fifth attribute was price. Boedeker set the price attribute at nine different point levels, ranging from $\$ 0.99$ to $\$ 3.99$ to reflect prices he observed in his preliminary research. Id. at 7.

Survey respondents were shown four of the 144 possible choice set combinations, as well as a fifth "none of the above" choice, and "were asked to select one of those five choices in order to reveal their preferences for various features in liquid hand soaps." Id. at 9 (citing Boedeker Decl. I 65). Each


#### Abstract

respondent was asked to repeat that exercise with nine different choice sets, each containing a combination of the four attributes plus price. See Boedeker Decl. I 64. To account for those attributes of liquid hand soaps not included in the survey (for example, scent, color, and brand), the survey instructed respondents to assume that the product combinations they were asked to choose between "had all the other features and characteristics (such as brand, scent, color, shape, etc.) that you prefer." Pls.' Br. at 7 (citing Boedeker Decl. II 65 and 67). ${ }^{5}$


Boedeker explained that he limited the number of attributes to five because:
[i]n Choice-Based Conjoint Analysis[r] there's obviously a limit as to how much information can be presented in one of those modules. . . . I mean, people would have to read for like minutes and minutes at a time, maybe more, and it's confusing and . . . the more the participants get confused[,] the higher the likelihood is to get answers . . . that are no

5 At the motion hearing, Boedeker explained:
Somebody is in a purchase situation of buying liquid hand soap. The scene is set that the scent, the color, the brand has already been decided by the purchaser. And now there's four features that are still open [99.99 percent germ killing claim, antibacterial, moisturizing and foaming], and that's where I put them in.

Document No. 223 (11/16/2016 Hearing) at 51:5-9.
longer accurate[;] . . . that's often referred to as the fatigue syndrome.

Document No. 223 (11/16/2016 Hearing) at 52:2-14.

Boedeker retained a survey company to host the survey; he directed the survey company to target a demographically diverse group of survey respondents. Survey respondents were required to be at least 18 years old, reside in the United States, and have purchased liquid hand soap in the last 12 months. In addition to the choice based conjoint exercise, the survey also asked respondents to answer a series of questions relating to liquid hand soap, including which brands they purchased and which qualities they considered important when making hand soap purchasing decisions. Boedeker Decl. II 63.

The survey company collected data from 2,000 qualifying respondents. Pls.' Br. at 8 (citing Boedeker Decl. at I 70). From those respondents, Boedeker collected a total of 18,000 data points which, he asserts, reflect consumer preferences for certain liquid hand soap attributes. Pls.' Br. at 9 (citing Boedeker Decl. I 76). Boedeker considered that data, performing the following analyses:
(1) using "econometric and statistical estimation techniques specifically based on mixed logit models and Hierarchical Bayesian Estimation techniques to quantify consumer willingness-to-
pay for a true 'Kills 99.99\% of Germs' product attribute on a liquid hand soap;"
(2) "running computer-based market simulations to convert willingness-to-pay into actual market value price premium; ${ }^{6 \prime \prime}$ and
(3) "calculating the difference in equilibrium market value price" between a hand soap featuring the claim "Kills 99.99\% of germs" and a hand soap without the challenged claim.

Pls.' Br. at 9 (citing Boedeker Decl. I 8).

By isolating that difference in equilibrium market price,
or the marginal consumer's willingness-to-pay, plaintiffs say,
Boedeker was able to reliably calculate that portion of Dial
Complete's overall purchase price attributable to the claim

6 At the hearing, Boedeker described the market simulator (in a somewhat opaque way):

The simulator now looks and tests based on the different utilities at what point reach the products in the market, an equilibrium, meaning the market share for the product is the same. And at that point that shows me the set of consumers is indifferent because every product is chosen equally likely, and the price point at which that happens, I can use those to see is there a measurable difference between the 99.99 germ killing feature versus the product that doesn't have it.

Docket No. 223 (11/16/2016 Hearing) at 59:2-11.
At deposition, Boedeker testified that the purpose of the market simulation was not to simulate the realistic competitive market for a product, but rather "the way I define and describe it here, is using the [conjoint analysis] study results to come up with an equilibrium price." Def.'s Mem. in Supp. of Opp. (hereinafter "Def.'s Br."), Exh. 1 (document no. 208-1) at 298:3-8.
"Kills 99.99\% of Germs." Boedeker ultimately concluded that the "median value of $10.89 \%$ of the distribution of all simulations for the premium percentage is a reliable estimate that can be used to derive class-wide economic losses by applying the median percentage of $10.89 \%$ to the overall revenue from the sales of liquid hand soap products that were sold with the false claims." Boedeker Decl. I 103.

Dial faults both Boedeker's analysis and his conclusions, and moves to strike his declaration as wholly unreliable. Relying on its own experts, Dr. Keith Ugone and Dr. Ran Kivetz, for support, Dial further argues that Boedeker's proposed methodology is fundamentally flawed and incapable of measuring only those damages attributable to plaintiffs' theory of liability. Therefore, Dial says, plaintiffs have not satisfied their burden to demonstrate that class certification is proper under Rule $23(\mathrm{~b})(3)$.

## Dial's Motion to Strike

Dial has moved to exclude Boedeker's report from the court's consideration on grounds that it is flawed, unreliable, and does not meet the requirements of Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993).

## LEGAL STANDARD

In determining admissibility of expert opinion evidence under Federal Rule of Evidence 702, the court acts as a "gatekeeper," ensuring that the expert is qualified to offer the opinion; that her testimony "rests on a reliable foundation"; and that it is "relevant to the task at hand." Daubert, 509 U.S. at 597. "Although the proponent of an expert witness bears the burden of proving the admissibility of his opinion, see Daubert, 509 U.S. at 592, the burden is not especially onerous, because `Rule 702 has been interpreted liberally in favor of the admission of expert testimony.'" Lacaillade v. Loignon ChampCarr, Inc., Civ. No. 10-cv-68-JD, 2011 WL 6001792, at *1 (D.N.H. Nov. 30, 2011) (quoting Levin v. Dalva Bros., 459 F.3d 68, 78 (1st Cir. 2006)).

As our court of appeals noted in Milward v. Acuity Specialty Prod. Grp., Inc.:
"Daubert does not require that a party who proffers expert testimony carry the burden of proving to the judge that the expert's assessment of the situation is correct." [Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co., 161 F.3d 77, 81 (1st Cir. 1998)]. The proponent of the evidence must show only that "the expert's conclusion has been arrived at in a scientifically sound and methodologically reliable fashion." Id.; see also United States v. Vargas, 471 F.3d 255, 265 (1st Cir. 2006). The object of Daubert is "to make certain that an expert, whether basing testimony on professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the
relevant field." Kumho Tire [Co. v. Carmichael], 526 U.S. [137,] 152 [(1999)].

639 F.3d 11, 15 (1st Cir. 2011).

## ANALYSIS

Dial's Daubert argument is neither fully developed, nor persuasive. As a preliminary matter, it is unclear whether Dial is arguing that Boedeker is unqualified to testify as an economic damages expert, as Dial made no objection to plaintiffs' proffer of Boedeker as an expert in the field of economics and statistics. See Document No. 223 (11/16/2016 Hearing) at 226:7-12. To the extent Dial is making that argument, the court rejects it. Boedeker's educational and professional background includes sufficient experience, knowledge and training to qualify him as an expert in the field of economic and statistical analysis and modeling.

Dial seemingly does not dispute that conjoint analysis is a well-accepted economic methodology. ${ }^{7}$ Instead, Dial seems to take

7 During the hearing on this matter, plaintiffs' counsel asked Boedeker to respond to Dial's expert's criticism of his market simulation. Boedeker replied:

That is just incorrect, and I actually read the same articles and books by Mr. Orme, . . . [the individual who] developed the Sawtooth Software, and I actually, [...] the R program is a much broader extension of a market simulator tha[n] the Sawtooth Software provides, so I basically took it and made it able to
issue with Boedeker's use of conjoint analysis to measure a market-determined price premium. But, "[w]hether or not [Dial's] argument has merit," that argument ultimately "`does not affect the admissibility of [Boedeker's] opinions.

Admissibility turns on whether [Boedeker's] methodology is sufficiently reliable. Whether it satisfies Comcast [Corp. v. Behrend, 133 S. Ct. 1426, 1432 (2013),] and shows that a class should be certified, is another question altogether - one which the court will address infra." " In re NJOY, Inc. Consumer Class Action Litig., 120 F. Supp. 3d 1050, 1073-74 (C.D. Cal. 2015) ("NJOY, I") (quoting In re ConAgra Foods, Inc., 90 F. Supp. 3d 919, 946 (C.D. Cal. 2015)) (emphasis in original).

Presumably, Dial's motion to strike is based on its view that Boedeker's model, while of the type generally accepted in the field, nevertheless, suffers from a number of fatal deficiencies, and, therefore, is not sufficiently reliable. The
handle a lot more price points, a lot more conditions for equilibrium prices in a competitive market.

Document No. 223 (11/16/2016 Hearing) at 222:25 - 223:11. What exactly Boedeker meant by that testimony is unclear. But, to the extent he actually modified the software generally accepted for use in the field to conduct analogous market simulations, such modifications might raise concerns regarding whether Boedeker's market simulation was, indeed, "well accepted." Neither party briefed the issue, or addressed that testimony at the hearing. Therefore, beyond noting the potential issue, the court will not consider it further now.
court is unpersuaded that any of the described deficiencies rise to the level of rendering Boedeker's model even close to "junk" science. Dial's criticisms (although not obviously invalid) generally go to the weight, not the admissibility, of Boedeker's testimony.

For example, Dial takes issue with Boedeker's "online and in-store survey of liquid hand soap products." Boedeker Decl. I 22. Dial points out that Boedeker's "in-store survey" consisted merely of personal visits to only four stores that were selected based entirely on their convenience to his drive home from work, and that he did not take any notes or record any data during those in-store visits. Def.'s Br., Exh. 1 at 138:25 - 143:19. Boedeker's "online survey" consisted of website searches conducted by his staff, but Boedeker did not recall providing specific direction regarding what to search, or whether his staff maintained records of search terms used. Id. at 137:20 - 138:24. Boedeker readily conceded that his surveys were "by no means . . . meant to be a scientific study." Document No. 223 (11/16/2016 Hearing) at 69:22-70:6. Instead, he testified, they were intended to provide "a taste of what is out there in terms of products and general prices range," def.'s br., exh. 1 at 137:12-15, and to "validate what a reasonable
input range is for the price as a feature." Document No. 223 (11/16/2016 Hearing) at 69:22-70:6.

While Dial's concerns regarding Boedeker's somewhat informal preliminary research may not be unfounded, still, as Boedeker testified, the data from his research was used only for discerning a "lower and an upper end of a price range that [he] could use as input for the conjoint study." [Document No. 223 (11/16/2016 Hearing) at 73:11-24]. Id. Boedeker "didn't do any calculations with the data." So, Dial's concerns really relate to facts upon which Boedeker relied in discerning a rational price range input for his conjoint study. If the "factual underpinnings" of an expert's opinion is weak, "that [is] a matter affecting the weight and credibility of their testimony." Payton v. Abbott Labs, 780 F.2d 147, 156 (1st Cir. 1985).

The same can be said for Dial's challenge to the reliability of Boedeker's analysis. For example, Dial makes a valid point regarding Boedeker's failure to restrict his survey to respondents from the six states remaining in the case (and/or failure to analyze the demographics of the survey respondents from the national pool to determine whether they were comparable to the demographics of the six states). See Document No. 223 (11/16/2016 Hearing) at 74:14 - 76:10. Dial also argues, plausibly, that, by limiting the attributes surveyed to four
(five, including price), Boedeker's model fails to adequately take into account and properly weight other attributes that may well be very important to liquid hand soap consumers (e.g., brand name, or scent, or shape, or color of the product). However, "[t]here is an important difference between what is unreliable support and what a trier of fact may conclude is insufficient support for an expert's conclusion." Milward, 639 F.3d at 22. As plaintiffs correctly note, those issues - and the myriad others identified by Dial - are either curable, or go to the weight, not admissibility, of Boedeker's testimony.

For the above reasons, Dial's motion to exclude Boedeker's expert testimony is denied.

## Plaintiffs' Amended Motion for Class Certification

## LEGAL STANDARD

Federal Rule of Civil Procedure 23 establishes the requirements for class certification. See Docket No. 196 at pp. 6-8. A party seeking class certification must demonstrate, through evidentiary proof, that the proposed class meets the four requirements of Rule $23(a)$, and at least one of the three requirements of Rule $23(\mathrm{~b})$. Comcast Corp. v. Behrend, 133 S. Ct. 1426, 1432 (2013); see also Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 345 (2011). Importantly, "Rule 23 does not set forth a mere pleading standard. A party seeking class
certification must affirmatively demonstrate . . . compliance with the Rule." Wal-Mart Stores, Inc., 564 U.S. at 350. And, the court must conduct a "rigorous analysis" to determine whether the movant has met the assigned burden. Id. (quoting Gen. Tel. Co. of Sw. v. Falcon, 457 U.S. 147, 160 (1982)).

Plaintiffs seek certification under Rule $23(b)(3)$, which "permits certification only if 'the court finds that the questions of law or fact common to class members predominate over any questions affecting only individual members.'" Comcast, 133 S. Ct. 1426, 1430 (quoting Fed. R. Civ. P. $23(\mathrm{~b})(3))$. To satisfy Rule $23(\mathrm{~b})(3)^{\prime}$ s predominance requirement, plaintiffs must present a reliable damages calculation model that is consistent with their theory of liability. Comcast, 133 S. Ct. at 1433. As the Supreme Court noted in Comcast, "a model purporting to serve as evidence of damages in [a] class action must measure only those damages attributable to that theory. If the model does not even attempt to do that, it cannot possibly establish that damages are susceptible of measurement across the entire class for purposes of Rule 23(b)(3)." Id.

## ANALYSIS

At bottom, plaintiffs contend that Dial Complete consumers were induced to rely upon false representations about the features of Dial Complete soaps when making decisions to
purchase those products. They were damaged, say plaintiffs, because they paid a price premium attributable to the falsely claimed product features. In other words, plaintiffs' theory of liability is as follows: consumers were "deprived of a measureable monetary portion of the benefit-of-the-bargain they had struck with Dial by buying Dial Complete with a superior efficacy claim on the label but, in fact, receiving a product that did not provide the promised superior efficacy." Pls.' Br. at 2 (emphasis added).

Accordingly, "[d]amages are measured by the difference `between what the plaintiff paid and the value of what the plaintiff received.'" In re Scotts EZ Seed Litig., 304 F.R.D. 397, 412 (S.D.N.Y. 2015) (quoting In re POM Wonderful LLC, No. ML 10-02199 DDP (RZx), 2014 WL 1225184, at *3 (C.D. Cal. Mar. 25, 2014)). Put another way, "the proper measure of damages in this case is the difference between the market price actually paid by consumers and the true market price that reflects the impact of the unlawful, unfair, or fraudulent business practices." In re NJOY, Inc. Consumer Class Action Litig., No. CV 14-428-JFW (JEMX), 2016 WL 787415, at *5 (C.D. Cal. Feb. 2, 2016) ("NJOY, II") (internal quotations omitted). Plaintiffs must therefore "propose damages models that take into account the value of the product plaintiffs received, and the amount
they paid" for Dial Complete. In re Scotts EZ Seed Litig., 304 F.R.D. at 412. And, "for plaintiffs' price premium model adequately to match their . . . theory of liability - that they were damaged when they paid a premium associated with the . . . claim - [their expert] must control for product features other than the [challenged claim] when calculating the price premium." Id. at 413.

Dial argues that Boedeker's model does not actually measure a market-determined price premium. The price of a product in a competitive market, Dial says, is determined by the intersection of market demand and market supply for a particular transaction at a particular time. Boedeker's model, however, measures only a difference in consumer "willingness to pay" for the challenged attribute, failing to take into consideration any market conditions or other factors that would affect the supply side curve and so influence product price in the market. Because Boedeker's model does not incorporate any analysis of market supply factors, Dial says, it cannot accurately describe the difference between the market price of Dial Complete with the challenged attribute and what the market price of Dial Complete would have been without the challenged attribute. Put differently, Dial contends that Boedeker has not measured any sort of change in market price, but only a change in consumer
demand. ${ }^{8}$ And, because Boedeker's model does not actually measure a market-determined price premium, it cannot satisfy Comcast's requirement.
"Conjoint analysis is a statistical technique capable of using survey data to determine how consumers value a product's individual attributes - often called the market's willingness to pay." Saavedra v. Eli Lilly \& Co., No. 12-CV-9366-SVW, 2014 WL 7338930, *4 (C.D. Cal. Dec. 18, 2014). Courts have recognized that conjoint analysis can effectively determine the value customers ascribe to a particular product attribute by measuring the "part worth" of that attribute. See, e.g., Sanchez-Knutson V. Ford Motor Co., 310 F.R.D. 529, 538-39 (S.D. Fla. 2015) ("To the extent that Defendant contends that conjoint analysis, an analytic survey method used to measure customer preferences for

8 As defendant's expert, Dr. Ugone, testified:
We're trying to figure out the change in price. We will hold the damage quantities constant, yes, if we figure out how many people have been damaged or how many bottles were damaged, that number doesn't change. We don't do something with that as long as you figure it out properly. But the key is, what would the price have been when you take away the challenged claim, and you've got to allow supply and demand to interact to come up with that new price.

There's no way to . . . just look at demand and say what the price is. You need supply and that's the problem.

Document No. 223 (11/16/2016 Hearing) at 157:16 - 158:9.
specific features of products, is an improper damages theory post-Comcast, the Court rejects that position as unfounded."); see also Khoday v. Symantec Corp., 93 F. Supp. 3d 1067, 1082 (D. Minn. 2015), as amended (Apr. 15, 2015) ("conjoint analysis is generally a permissible method for calculating damages.") (collecting cases); Guido v. L'Oreal, USA, Inc., No. 11-cv-1067, 2014 WL 6603730, at *11 (C.D. Cal. July 24, 2014) (finding that proposed conjoint analysis damages theory could be applied on a classwide basis under Comcast, and was consistent with plaintiff's theory of liability).

However, whether conjoint analysis can be used to ascertain a price premium attributable to a particular product feature is not fully resolved. At least one court has determined that, because conjoint analysis looks only to the consumer demand side of the market equation, conjoint analysis alone "does not permit the court to turn the `relative valuation ... into an absolute valuation to be awarded as damages.'" NJOY, I, 120 F. Supp. 3d at 1119 (quoting Saavedra, 2014 WL 7338930 at *4). That, says Dial, precisely describes the problem with Boedeker's analysis.

But, plaintiffs say, Boedeker's model does account for the supply side. They argue that "the supply element of the supply and demand price function is fixed" in Boedeker's model and is set, or included, in the price paid for Dial Complete. Pls.'

Reply Br. in Support of Am. Mot. for Class Certification (hereinafter "Pls.' Reply Br.") at 7. According to plaintiffs, Boedeker's proposed conjoint analysis provides a means for measuring the increase in what otherwise would have been lower consumer demand that is fairly attributable to the challenged claims. That increase is then translated through market simulations into a percentage price premium that can be multiplied by the historical sales of Dial Complete to consumers, to arrive at an aggregate classwide damages figure. Plaintiffs say that Boedeker's model, therefore, "is more than sufficient to account for supply factors." Pls.' Reply Br. at 6.

On this point, Saavedra v. Eli Lilly and Co., 2014 WL 7338930, is helpful. In Saavedra, a putative class action concerning defendant's purported misrepresentations concerning an antidepressant product, plaintiffs' expert proposed calculating classwide damages using conjoint analysis. The court observed that the expert's conjoint model looked only to the demand side of the market equation, which "converts the lost-expectation theory from an objective evaluation of relative fair market values into a seemingly subjective inquiry of what an average consumer wants." Id. at *5. But, the court observed:

In an ordinary market, price is a proxy for value. Thus, the price paid for a good that was misrepresented to have a given characteristic can serve as a proxy for the value of a product with the misstated characteristic. Therefore, applying [plaintiffs' expert's] refund ratio to the price paid by consumers in such a market would yield a valid approximation of the value lost due to the misrepresentation. Although the refund ratio determined via conjoint analysis still looks only to the demand side of the equation, applying this ratio to the market price at least tethers it to a functioning market and thus to the product's fair market value.

Id. at *5 (citations omitted). However, because "the
prescription drug market is not an efficiently functioning
market," and "numerous complicating factors in the prescription drug market sever the relationship between price and value," id. at 5, the court in Saavedra determined that the expert's proposed methodology would not "yield an accurate approximation of the difference between the consumer's subjective valuation of the drug as represented and the drug as actually received." Id. at * 6 .

The parties do not dispute that the hand soap market at issue here is relatively stable, unlike the highly regulated and often artificial pharmaceutical market in Saavedra. See Document No. 223 (11/16/2016 Hearing) at 147:18-148:9; Pls.' Br. at 18. And, nothing presented here suggests that similar complications or anomalies in the hand soap market might operate
to sever the calculated relationship between price paid and value received.

Although Boedeker's reports and testimony are generally difficult to follow, after careful consideration of his descriptions of the model he has proposed, and accepting plain inferences that arise from his explanations, the court is satisfied that the model is capable of reliably calculating class-wide damages recoverable under the plaintiffs' theories of liability.

Dial's experts' criticism of Boedeker's model perhaps rests on a misunderstanding of what it purports to do. The model does not, as Dial contends, seek to determine an "average" or a "median" expression of consumer "willingness to pay" for the Dial Complete product without the claimed feature, unconnected to supply side market forces. Rather, Boedeker's model purports to calculate the "Marginal Consumer's Willingness to Pay"9 for
${ }^{9}$ A demand curve is a visual depiction of the relationship between a product's price and the quantity demanded by consumers, e.g. the higher the price, the lower the demand, and vice versa. At a specific quantity demanded, or sold, the corresponding price depicted on the demand curve represents the willingness to pay of the "marginal consumer." The marginal consumer is the last consumer willing to pay for a product at a given price and, correspondingly, the first consumer to leave a market if the price is increased. In other words, a product's demand curve represents the willingness to pay of the "marginal consumer." So, if a total of 5 units of a product can and will be sold at $\$ 15$, one can infer that the fifth customer - the
that product in the actual market in which the products with the allegedly false claims were sold. The distinction is important, for, as explained in a brief paper co-authored by Lisa Cameron,

Michael Craig, and Nobel Laureate in Economics Daniel McFadden:

Defendants have argued that WTP ["willingness to pay"] results emerging from the conjoint analysis do not directly address the value of the patents in question. However it is important to note that different research questions require different information about WTP. For example, if the researcher seeks qualitative information about how much consumers value the infringing level(s) of the attribute at issue, he can develop a conjoint survey that provides that average or median consumer WTP . . . .

On the other hand, if the researcher wants to assess the price premium associated with the infringing feature, then he will need to develop a conjoint survey that assesses the WTP of the marginal consumer - i.e. the consumer who is indifferent between buying and not buying the infringing product. It is the WTP of the marginal consumer that is equivalent to the price premium associated with the infringing level of the attribute; this marginal consumer can be identified by offering respondents a "no buy" option.

Lisa Cameron, Michael Cragg, \& Daniel McFadden, "The Role of Conjoint Surveys in Reasonable Royalty Cases," LAW360 (Oct. 16,
2013), http://www.law360.com/articles/475390/the-role-of-

[^2]conjoint-surveys-in-reasonable-royalty-cases) (last visited Mar. 24, 2017) (emphasis supplied).

In the example given, it was appropriate for the authors to directly equate the marginal consumer's "willingness to pay" with the price premium associated with a patented feature of a product, because in such cases it is the value added to the product that is of interest. In this case, however, another step is required to determine a price premium associated with the misrepresented product feature. The marginal consumer's willingness to pay for the product without the feature is equivalent to the market price of that product in the actual market into which the set quantity of offending products was sold, which price must then be subtracted from the market price actually paid for the product with the claimed feature. That calculation will yield the price premium associated with the "Kills 99.99\% of Germs" claim.

Consistent with the McFarland et al. approach, Boedeker's proposed model asks a different question than the one Dial's experts seemingly would pose, and Boedeker's question appears to be both more appropriate and better suited to determining full and complete damages tied to the actual number of offending products sold. That is, Dial's experts seem to argue that the market price of the product absent the allegedly false claims is
best calculated by determining the demand curve, and then analyzing supply side forces to arrive at an intersection between demand and supply in a theoretical market. One apparent problem with that traditional approach (at least in this context) is that both supply and demand with respect to the product without the claimed feature can be expected to decline. Therefore, that approach can be expected to describe a price for the product at a point on the quantity sold axis below (perhaps significantly) the point that represents the actual number of offending products sold to class consumers in the actual market.

Boedeker's model is one in which quantity (the number of products with the offending claims actually sold) is held constant on the demand/supply graph in determining the likely market price of the product without the offending claim if sold in the actual market. His model seeks to calculate the highest price in the actual market at which Dial could have sold the same number of products without the challenged claim. The difference in price as calculated, then, would seem to capture the full measure of damages suffered by consumers who actually bought the allegedly misrepresented product.

The number of products Dial sold with the offending claims is known (or can easily be calculated). Those products were sold at a price determined by the intersection of demand and
supply in the actual market. Boedeker's model asks, it appears, "At what price in that actual market in which Dial sold the offending products could Dial have sold the equivalent number of products without the false claim(s)?" By determining the marginal consumer's willingness to pay for the comparative product (not an "average" or "median" willingness to pay), Boedeker's model discloses that maximum price - and that price is not only tethered to the real and stable market, but, as noted, also accounts for losses attributable to all products sold that included a price premium associated with the misrepresented feature.

So, while no doubt imperfect in some respects, weak in others, and subject to challenges on cross-examination, Boedeker's proffered means of calculating class wide damages is sufficient to demonstrate that a price premium for the allegedly falsely-claimed feature(s) exists, and that it can be reliably calculated, using means and methods generally understood and accepted in the fields of economics and statistics. As McFadden, et al. also noted, "In a conjoint survey that is aimed at determining price (as opposed to median or average WTP), results can be tested using real world evidence." Cameron, Cragg, \& McFadden, "The Role of Conjoint Surveys in Reasonable Royalty Cases," LAW360 (Oct. 16, 2013).

As this court previously noted, "at the class certification stage, it is not necessary that class damages be calculated to a mathematical certainty." Docket No. 196, at p. 102. And, while the court "must address `considerations that are enmeshed in the factual and legal issues comprising the plaintiff's cause of action,' it should not engage in a 'full blown merits analysis.'" In re Nexium (Esomeprazole) Antitrust Litig., 296 F.R.D. 47, 58 (D. Mass. 2013) (quoting Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 351 (2011), and In re Cathode Ray Tube Antitrust Litig., No. C-07-5944-SC, 2013 WL 5391159, at *5 (N.D. Cal. Sept. 24, 2013)).

Because plaintiffs' damages calculation appears capable of reliably isolating the pertinent price premium and establishing the full extent of damages on a class-wide basis, in a manner consistent with plaintiffs' theories of liability, the model satisfies the demands of Comcast and Rule 23.

## CONCLUSION

For the foregoing reasons, as well as those discussed in plaintiffs' memoranda in support of their amended motion for class certification, Plaintiffs' Amended Motion for Class Certification (document no. 200) is GRANTED. On or before April 28, 2017, the parties shall submit a proposed certification
order that defines the class consistently with the December 2015 and current orders.

SO ORDERED.


March 27, 2017
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[^0]:    this court's role is straightforward: it must apply that law according to its tenor. See Kassel v. Gannett Co., 875 F.2d 935, 950 (1st Cir. 1989). When the signposts are somewhat blurred, the federal court may assume that the state court would adopt an interpretation of state law that is consistent with logic and supported by reasoned authority. See Moores v. Greenberg, 834 F.2d 1105, 1107 n .3 (1st Cir. 1987). However, this court should be, and is, hesitant to blaze new, previously uncharted state-law trails. For that reason, the court defers decision on whether consumers have standing to pursue a ODTPA claim until the parties have, at the very least, properly briefed the issue.

    2 The asterisk following "Kills 99.99\% of Germs" leads to the statement "Encountered in household settings."

    3 The double asterisk following "\#1 Doctor Recommended" leads to the language "Antibacterial Liquid Hand Wash."

[^1]:    4 Mr. Boedeker has also met Ph.D. requirements - except dissertation - in Economics at the University of California, San Diego. See Boedeker Decl. I 1.

[^2]:    "marginal consumer" - is willing to pay $\$ 15$, but no more. If the price of the product increases, she is the first consumer to leave the market and, therefore, the total number of units sold at the higher price will decrease. At a given quantity to be sold by a willing seller, the marginal consumer's willingness to pay sets the market price.

