California Unfair Competition Defense Podcast – episode 8

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Lisa: Welcome to episode eight of the Unfair Competition Defense Podcast. Today, we have a very special guest, Dominique Hanssens, who goes by Mike and is a well respected [00:00:30] survey expert, who will be talking about surveys and unfair competition cases, specifically how to properly conduct them and report the results. Mike, can you introduce yourself and tell us about your background?

Mike: Sure, it's my pleasure. Well, I am a professor of marketing at UCLA at the Anderson School of Management and have been so for my entire career. Within marketing, I specialize in data analysis and these data in marketing come in two forms either its secondary data [00:01:00] like sales and prices or its primary data, which is interviews with consumers and consumer attitudes. And today I'm going to talk about uniquely about the second part of data collection which is the use of surveys.

Lisa: Okay. Thank you, Mike. And thank you for your time. So diving in, a number of courts have held in recent years, that surveys are not necessary at the motion to dismiss stage. When courts engage in an initial determination as to whether allegedly deceptive advertising is misleading as a matter of law. However, it still isn't easy to have claims [00:01:30] thrown out at the pleading stage. In such cases, when you proceed to discovery, one of the best ways to show that advertising is not likely to deceive a significant percentage of reasonable consumers is with a consumer survey. That's why we ask Mike to be on the show. So Greg, can you start drilling down the details?

Greg: Sure. First, I would add that there are cases holding that decisions interpreting the Lanham Act are "Substantially congruent" to cases interpreting California's unfair competition statutes that UCL and FAL and CLRA. [00:02:00] And in trademark and infringement cases under the Lanham Act surveys are a critical way of showing a likelihood of confusion, which is the multifactor test reliability under the act. Different circuits apply different factors, but the bottom line is, surveys can be critical in those cases.

And claims under unfair competition statutes often involve similar standards for liability when it comes to false advertising, such as the fraudulent prong under California's UCL. [00:02:30] The test is whether reasonable consumers are likely to be deceived. While the best evidence of false advertising is the advertising itself, surveys can also be useful in cases under the Lanham Act can also be very useful. So Mike, can you define for us what a survey is?

Mike: Well in its essence, a survey is a research method. It's a method for describing or enumerating the beliefs, the attitudes, or the behavior [00:03:00] of persons and

sometimes others social or economic issues, for example, organizations, households or companies. Now, in legal proceedings that involve allegations of deceptive advertising and by that, I mean where there is a certain at issue ad that makes one or more implied claims that are false, you can use surveys to establish or refuse whether a substantial portion of consumers perceive the at issue [00:03:30] ad to be making these implied false claims.

Now, let me provide an example of this. I take an example here, a real world case, although I was personally not involved in it, of Themis Bar Review, LLC v. Kaplan. That was a case that centered around the false advertising dispute between Themis Bar Review and Kaplan. Now, those are two companies that are in the business of preparing law students to pass the bar exam. [00:04:00] What they do is for a fee, they offer instructions and materials that are tailored to the specific jurisdiction in which the bar exam will be taking place.

And so, one of Kaplan's allegations was, that there was an ad by Themis and that ad falsely implied that the advertised pass rate applied to all of Themis's students, as opposed to just a subset of them. So Kaplan claimed that [00:04:30] the disclaimer that the pass rates applied to a subset of Themis students could only be inferred from a footnote and the fine print of the advertisement. So therefore, a critical question here is, is there a substantial portion of those preparing for the exams and considering study materials that are incorrectly perceiving the ad issue as to be making the claim that the passage rate applied to all of the students at Themis as opposed to only a subset. [00:05:00] And as it turns out in this case, both parties actually use surveys.

Greg: Thanks Mike. Can you talk for a minute also about sample versus census based surveys?

Mike: Sure. Well, look in principle, you could do a survey by measuring every member of a relevant population whose behavior or attitude or believes that you're trying to describe. So for example, you could survey all of the current law students in the United States, [00:05:30] but in practice of course, we typically count or measure only a portion of the population and that's what we call a sample or in this case, a national sample of current law students.

And then based on the observed characteristics of the sample, we make inferences about the entire underlying population. Now, these sample based surveys are much more common because surveying the full population is rarely feasible either because you can't reach all of them or [00:06:00] because that will be extremely time consuming and expensive to do so.

Greg: Let's take a minute to talk about probability versus non-probability sampling techniques. Can you explain the difference, for example, as a non-probability sample, the same as a quota sample, I've run into attacks on surveys before because the survey used a non-probability sample is one method objectively better than another?

Mike: Sure. Well, it's important to make that distinction here. And indeed you can have survey samples [00:06:30] that use either non-probability or probability samples. Now, what's a

probability sample? A probability sample is one in which all members of the population have an equal chance of being included, equal chance is key here. So hypothetically, if we had a list of all the current law students in this country, you could then select either one or more random samples from that list to include in your survey.

Every person on that list [00:07:00] has the same chance of being included in the survey. That's what a probability sample is. Now, A non-probability sample involves selecting units from the population based on a subjective method or a non-random method. And therefore, not all members of the population have the same chance of being included. So for example, let's say that we're doing a survey in a product category that we know is heavily [00:07:30] purchased for example, by females, let's say a product like baby formula.

So, you may decide as a result of that fact that you don't really want more than 75% females in your sample. Because if you had something around the 74, 75, then that would mirror the actual gender distribution in the entire population. Now let's say that you wanted to have 400 people in your sample and at some point already you [00:08:00] reach 300 and they're all females. What you would do at that particular point in time is you would stop sampling females. So any subsequent female would be excluded in other words, and you would only survey males until you hit your 400 and then you would have a distribution of gender that equals or that mirrors the population.

Now, these non-probability samples, they become increasingly more common. They do define, heavily defend of course, or [00:08:30] depend on the proper judgment on the experts. So for example, in my baby formula example, you would use the fact that we know in the population that at 75% female, that will be the driving force to have a sample of 75% female. And it also has of course, that's how you make reliable inferences, that also how you can lower your cost and the time that's needed for the analysis.

Greg: Okay. Moving on. Can we talk about the key steps [00:09:00] that one would take to conduct a proper survey?

Mike: Sure. Well, there are of course, several of those. And let me start by talking a little bit about the determination of the purpose and the design of the survey. This is important. It's important to articulate the purpose of the survey. So, why are you doing this particular survey? So for example, whether a particular claim on a product influence the relevant consumers purchasing decisions, [00:09:30] that could be the question at hand in the survey. And that will then in turn determine the nature of the key questions that are to follow.

And from a respondent perspective and this is important, in order to ensure reliable results, it's really important that both the interviewers and the responders are blind as to this survey. So, you, as the researcher know perfectly well, what your purpose is but neither the interviewers nor the respondents [00:10:00] know the purpose of the survey.

Greg: I have run into challenges before to a survey that only used a survey population in California versus other states in a nationwide class action. What steps can you take to mitigate this issue? And is it less of a problem in the internet age? And finally, can you de demonstrate lack variation in subgroups across geographic areas?

Mike: Okay. Yeah, these are of course, very important practical question. And before I address the specifics of your question, let [00:10:30] me first talk a little bit about defining target populations in general, and then I'll get to the specifics of your question. So, we have been talking about the term population of interest or relevant consumers. What that really means is that's the definition of the target population, which is all individuals whose characteristics or perceptions The survey is intended to assess. That depends critically on the purpose of the survey and the underlying [00:11:00] group of individuals whose beliefs you are intended to study.

Now, back to our example, in the example, the target population is all current law students in this country. Now, after you have defined a target population, you need to determine the source material lists set of directions that will be used to identify the target population from which the sample will be drawn. And then when it comes to the survey itself, you [00:11:30] will be using screening questions in the beginning of the survey to help ensure that the respondents are in fact members of the target population.

So, for example, in our hypothetical case, it would not make sense to include individuals who are not law students in this survey about advertisements for law school tests prep services. Now, back to your question, the way you had framed your question was a survey population in California and the use of non- [00:12:00] California people in the sample. Look, obviously that would be less than ideal because if it is a California case, you should have California response, but sometimes you run into problems with sample size and you may have expand your sample let's say to nationwide.

How you would deal with that is to run a formal statistical test of the responses by the California respondents versus the non-California respondents. And you would demonstrate through statistics that there is [00:12:30] no measurable difference in the pattern of responses between them so that you can take non-California as a good proxy for California, if you wish, but only in that case. So you would actually test the premise that you can sample nationwide, even if your target population is California.

Greg: All right. So let's talk next about the actual survey questions that you're going to include in a survey instrument. What do you do, what are the best practices for going about designing survey [00:13:00] questions?

Mike: Yeah. The most important one here is that the survey questions need to be precise and clear because if respondents don't understand the questions or they make guesses, then the validity of their answers is heavily compromised and you can't make reliable inferences. And by the same token, the survey questions need to be unbiased because if you use biased or sometimes called leading questions, then the responders are susceptible to [00:13:30] be distorted in some systematic way.

Now, I'll give you an example, so suppose you're asking the question as follows, when making their purchase decisions, consumers routinely rely on one or more information sources such as advertisements and product labels. Now, which information sources did you use or consider when you purchased the product ad issue. Now, that would be an example of a leading question for two reasons. The first reason is, [00:14:00] you have mentioned two examples of information sources and so you increase the chances that respondents are going to list those sources in their respondents and their responses.

And the second point is, that the question actually assumes that the respondent would've considered an information source, which is not at all given. So, for these two reasons, that would be an example of a leading question. And so you should avoid those and instead ask neutral questions [00:14:30] as much as possible. And then finally, on the point about guessing to keep respondents from guessing, you can include explicit reminders to avoid guessing.

So basically, tell people, please don't guess. And secondly, to make sure that each specific question has an answering category that is, I don't know or I'm not sure. So make sure that each survey question has I don't know, or I'm not sure [00:15:00] as one of the answer options.

Greg: How does a using a don't know or a no opinion option prevent guessing?

Mike: Well, it is honest. We should allow for the possibility that people just are not sure or simply don't know the answer and that's how precisely how you prevent guessing. Now, you may not like the fact that a certain percentage say that, but then that's the reality that a certain sub sample [00:15:30] of the people don't know the answer to a question that's totally fine From a survey perspective.

Greg: what's an example of a question with no filter and I wanted to add that the survey manual indicates that the consequence of this format is substantial studies show, for example, that although the relative distribution of the respondents selecting listed choices and is unlikely to change dramatically present of an explicitly don't know or no opinion alternative commonly leads to a 20 to 25% increase in the proportion of respondent [00:16:00] selecting that response.

Mike: Yes, And again that does not bother me. You have given your respondents the opportunity to state that they don't know and whatever percentage falls into that category is a good representation of that. So, if you want to call that an increase, that's fine but I would much rather work with that data rather than with data that does not have the don't know answer.

Greg: How about a full [00:16:30] filter question? Can you explain the difference in the reference manual? And when I refer to reference manual I'm referring to the reference manual and scientific evidence by Sherry Diamond, which is something that I recommend everybody who's interested in this topic and becomes involved in a case involving this topic obtained and you can get a copy online now, it's really the Bible on these issues. You can download the reference guide on survey research from the

following URL. It's [00:17:00] www.nap.edu/read/13163/chapter/nine. Or you can find it in the show notes for this episode.

But they give an example of based on the commercial you just saw, do you have an opinion about how long Clover stated or implied that its guarantee lasts? And then the interviewer then asks the substantive question only of those respondents who [00:17:30] have indicated that they have an opinion on the issue.

Mike: Yeah, and I think that's fine because and the people who don't, who say that they don't have an opinion or they don't know those have appropriately taken out of the sample, and then you only work with the subset of people who do have an opinion. So in that case, your answers are free of guessing in the sense that you've allowed the guessers to be removed by virtue of not getting that second question. So that's totally fine.

Greg: Can you talk also about open versus closed- [00:18:00] ended questions?

Mike: Yeah. It's an important distinction. An open-ended question is one in which the respondents fills to the best of his or her knowledge fills in the answer using his or her own language. And in a closed-ended question, you give certain categories of answers. Now, they both have advantages and disadvantages. The major advantage of open-ended [00:18:30] question is that it gets you information about what comes to mind first. The major advantage of closed-ended questions is that you can quantify the answers much more easily because you have these predefined categories, so you can quantify more easily. So, in other words, they both have pluses and minuses and it is very important to decide which type of question you use in each case,

Greg: I would [00:19:00] add that a good example of a closed versus open-ended question is on page 252 of the reference manual involving the commercial reporting that in shampoo test with more than 900 women, the sponsors product received higher ratings in other brands. And it's a good example of that. But I wanted to ask you, I think you've already covered the pluses and minuses, but what about limitations of open and closed end questions?

Mike: Yeah, the clear limitation is that with the open-ended question you don't necessarily [00:19:30] get in the exhaustive list of all relevant answers. And then with respect to the closed-ended questions there the disadvantage is that you actually may inadvertently or so may direct a respondent away from a particular response towards a particular response. In other words, you have to be very careful about the list that is offered in a closed-ended question.

Greg: Can you also discuss the utility of probing questions to elucidate further explanation of open-ended [00:20:00] responses and the importance of recording verbatim responses to those questions. And examples I'll give are from standard probes from the reference manual would be things like any further thoughts, anything else, can you explain that a little bit more?

Mike: Yes. That is, again, that is very good practice with open-ended questions because as I mentioned earlier, you tend to get what people think about first but it tends to be or it could be incomplete by giving people respondents a second chance and ask, do you have any other [00:20:30] comments or any other important attributes, you avoid the problem of too few answers, so to speak. And then of course, the importance of recording these answers verbatim, look, that is very important because down the line, these answers are going to be coded and we need to make sure that the coder gets the full information about what the particular respondent was trying to say.

And at the same time, you see it right there, the disadvantage of these open- [00:21:00] ended questions that they possibly lead to some ambiguity in responses.

Greg: Let's move on to pretesting. Can you talk a bit about that concept and its importance?

Mike: Sure. Pretesting is a very important step in survey research. First of all, what is it? This is a step that happens when you're done designing the survey but you haven't yet put it in the field. And at that point, it's important to check that the survey questions are indeed clear and precise [00:21:30] to the respondents as I mentioned earlier, so how do you do that? Well, it's basically running the survey with a small set of respondents but not only running the survey by them, but also observing them as they complete the survey And for that matter timing them.

And then also probing them with respect to any aspects of the survey. For example, was the question clear? Did you find the answer options sufficient and so forth. So, anything that the respondent has [00:22:00] a problem with or is confused about the respondent gets a chance to voice that in one of these pretest. Now it's all also customary in pretesting to probe the respondents about what they think the purpose of the survey was, or who do they think is conducting the survey. And I mentioned that earlier, that's important because we want to avoid demand effects.

Indeed, if a respondent is not blind to the purpose or the responses of a survey, [00:22:30] then maybe that respondent will try to get a positive assessment on their performance and they may provide the answers that they think are expected of them, as opposed to the answers that would come to them honestly, we call that demand effects or demand factors and they can systematically distort the results of a survey and render it unreliable.

Greg: What sample size do you use for pretests?

Mike: There are no particular rules for the sample size of a pretest [00:23:00] there. What you do is you start let's say by half a dozen, again, this is time intensive because you are talking to these people, you are watching or listening to them as they answer the question. So it takes much more time than the survey itself. And if you do, let's say half a dozen and you find that there's absolutely no problem whatsoever, you may decide to proceed. But if you're starting to see problems, like for example, more than one person have an issue with a question then it's [00:23:30] for probably time to stop redesign the question and start another pretest.

Greg: Cases have held that significant difference is in the pretest or pilot and full survey can be an issue. How do you take this into account and making changes to the survey instrument? For example, do you have internal limits on what you feel you can do before You need to start over with a new instrument, a new test or pilot, and I want to mention a concern that some attorneys have, and this is talked about in the reference manual, if the pilot results [00:24:00] in changes to the instrument it implies these in some people's minds that the survey was flawed. To me, this misses the point, the purpose of the pilot is to improve this study. Would you agree with that?

Mike: I totally agree with that. Look, we're all human and even the experts among us can in this case in surveys can design a survey that is imperfect and the role of the pretest is precisely to discover these imperfections. So I don't have any problem at all. If the [00:24:30] pretest results in a change in the instrument. In fact, I find that positive because that means that the survey company or the survey expert actually paid close attention to these matters.

And as to how far you push this and when do you intervene? Well, you intervene, of course, when there is a significant chance that the nature of your question will produce unreliable answers and you need to as an expert, you need to be the ultimate judge on that.

Greg: And I wanted to also just flag [00:25:00] an issue which is whether the pilot test has to be disclosed. I mean, part of it depends on what jurisdiction you're in California, any draft reports, communications with a disclosed expert or discoverable, you have a little bit more leeway in federal court after the amendments to the federal rules in 2010, I believe that's when they went into effect so that you can maintain privilege to some degree other than a final report, but it's something think about. And some people use a different survey expert [00:25:30] to run the pilot to try to get around this issue but it doesn't solve the problem of how you communicate results of the pilot to a new expert. If the pilot turned on parole and you start over.

Mike: Yes. And of course, I cannot answered this question from a legal perspective but I can certainly say from a market research perspective, that a pretest is necessary. Nobody can be sure that their instrument is perfect without pretesting. And so I would very much reveal [00:26:00] the pretest, even the details of the pretest, leave it open to scrutiny and show that you have done a very careful job in creating an instrument that is reliable.

Greg: So, let's move on to an important and often hotly contested topic in the survey realm, the use of controlled groups. Can you tell us about those?

Mike: Yes. That's another important area. Look, we use control groups in surveys, anytime that we like to test a causal proposition. So, meaning that we are not only [00:26:30] describing attitudes, beliefs or behaviors here but we're also determining the source of those attitudes, beliefs or behaviors. So if you have a causal proposition, if that's the purpose of the survey, then you want to use a test and a control.

Greg: How important is it to create a stimulus for the control group that shares as many characteristics with the experimental stimulus as possible with the key exception of course, of the characteristic whose influence is being assessed?

Mike: Yes. Well, it is important because [00:27:00] precisely by the use of a control group, you actually can do a direct test of the influence of the stimulus and draw a causal conclusion if that's what you're interested in. So for example, in the case of misleading or allegations about misleading advertisements if there's a particular phrase or a graphic or a part of the ad that is alleged to be misleading, then you can survey, excuse me, you can construct a survey where one group of respondents [00:27:30] is shown the advertisements in the original form, that's the test group.

And then you pick another group, by the way, that's randomly chosen. The other group has been shown the same advertisement, but the ad issue phrase or the ad issue graphic is either absent or modified. And then both groups get the same set of follow up questions and you isolate the impact of the ad issue phrase or graphic. You, excuse me, you isolate [00:28:00] that by virtue of comparing the answer patterns between the two groups that is back to my example, that is in fact exactly what the Kaplan expert did in the example I talked about earlier.

What they did here, they took half of the sample test group and they showed them the original ad with the relevant disclaimer in fine prints. And then the other half, again, randomly chosen, the control group, was shown the same ad but this time [00:28:30] the footnote was displayed much more prominently. So you have these two conditions. The only thing that changed was the display format of the alleged material. And then after viewing the advertisement, both groups were asked were whether the pass rates on the advertisement represented all of Themis test takers or only subgroup.

And you need to do a statistical test to determine whether any difference that you observe between the two, is that actually due [00:29:00] to chance variation or is that due to the treatment and the treatment here is either fine print or large print. And I'll talk a little bit more about these testings later.

Greg: Can you also discuss a selection and response bias and how to avoid them in designing a survey instrument?

Mike: Yeah. Also, important considerations. Look, the selection bias to some extent we have already covered by the fact of randomization. In other words, you just need to make sure that there is no strategy [00:29:30] behind the selection but that any particular sample that you choose is an adequate representation of the population that you wish to survey. So, that's point one. Non-response bias as we call it in marketing or in survey research is sometimes tricky to deal with. So here's what that means.

So, suppose you ask 500 people to participate in the survey and 300 of them are willing to do the survey [00:30:00] and 200 are not. And then you ask yourself the question, well, how about these 200 people who are not answering? We don't know anything about them. Is it possible that their answers would've been systematically different

from the 300 that did answer? If the answer is yes, then you have a case of non-response bias. The way to deal with that is actually by follow up research.

In other words, after you get the results and you call up a sub [00:30:30] sample or a representation of the non-responders and you ask them to respond anyway, you may actually have to do that by offering an incentive or some other way but you actually try to get an answer from those who did not originally answer. And then the pattern of their answers is compared to the pattern of answers in the respondent group And what you want to test then is the absence hopefully, you find an absence [00:31:00] of any significant difference between those two groups. That would be a measure of the degree to which there is non-response bias.

Greg: Let's move on to actually conducting the survey. Back in the day, the gold standard was the mall intercept survey where you'd actually go and literally intercept shoppers at the mall and hopefully get them to participate in your survey. But given that so many people shop online now are those types of surveys dead now, do they still have a place? And what are the best practices [00:31:30] in terms of the types of surveys that you can conduct and how you go about conducting them?

Mike: Sure. Well, look, we've certainly seen some evolution in that area as you suggest. Look, generally speaking, you can collect survey data either through, in person interviews, such as your mall intercepts or telephone interviews or questionnaires in the mail or online surveys. Those are generally the different media that you can use. Look, the key determining factor for your choice between these different [00:32:00] media is your ability to reach the target population.

Now, as it turns out for reasons that we all know, online surveys have become much more attractive in recent years mainly because the people who have access to online media are now very representative of the overall population, at least for the most part. So, it's no longer were true that if you go online with your survey, you by definition have selection [00:32:30] bias. That may have been through 20 years ago, but that is no longer true today.

Now, these online methods certainly have advantages. One of them being is that they allow for a visual representation or presentation of the material. For example, you can show pictures or videos and so forth and you don't have to train a set of interviewers to conduct a survey. And secondly, they generally generate answers much more quickly, so they're faster, [00:33:00] they're also cheaper and of course the results are coded automatically without human intervention and because they're entered on a computer. And so for those reasons we now see a preponderance of online surveys.

Greg: So, internet studies used to be criticized because they were hard to control in many ways. Someone else could take the survey subjects could do their own research while taking the survey. How do you control for this?

Mike: Yes, this is an important quality control issue [00:33:30] that is really in the hands of the company executing the survey. And in the case of online surveys, these are often

companies that also provide internet panels. And they have various ways of doing quality control. One of them is actually a very simple but a very effective method which is to call up the respondent the following day and to ask that respondent, let's say Mr. Jones, "Mr. Jones did [00:34:00] you answer, did you fill out a survey yesterday on the topic of such and such?" And in order was to make sure that the person remembers doing that the following day and it wasn't his or her seven-year old son who did the survey? So there are some very practical ways to ensure quality control that are in the hands of the survey research firm.

Greg: So, now that you've done your survey and you have all this data, what do you do next?

Mike: Well, I would put that in three major [00:34:30] categories. One of them is data preparation, one of them is statistical analysis, and one of them is of course, reporting the results. So let me go through these step by step. In terms of the preparation of the data and especially if the data include open-ended questions, they need to be some procedures for data entry, checks for completeness, checks for reliability and accuracy and rules for resolving inconsistencies.

[00:35:00] And in particular as I mentioned, when you have open-ended questions, you need to provide objective instructions to the coder, so that the standards for making decisions on answers and how they are categorized so that these standards are clear and that the respondents can be scored consistently and accurate. So that's an important quality control element. Then we get to the statistical analysis. It is going to be important when [00:35:30] looking at statistical analysis to consider the appropriate sample size of the respondents. And the reason is this follows, the appropriate sample size is connected to the concept of statistical power.

Now, what is power? Power is the probability that a survey will be able to detect an effect that truly exists. And so, statistical power is going to increase with sample size and increase, of course, with the size of the effect [00:36:00] that one is trying to measure. Now, if you have an appropriate sample size, now then you can actually analyze your survey data to make inferences about the underlying target population. And here there are a couple of statistical inferences that can be made. And we're going to get a little bit statistical here for a few minutes, but one of them is the analysis of formal hypothesis testing.

So for [00:36:30] example, in my test and control group, you may want to conclude that the results of this survey, that either indicates that the purchase intent is different, or is the same between control and test group. And you need to do that with a statistical significance test. So, if one group has a score 40 and the other group has a score 38, you can't say 40 is greater than 38. You have to be able to say that one is statistically significantly higher than [00:37:00] the other and you use statistical inference from that. If you don't do that, then you run the risk that your results are actually due to chance variation, as opposed to real causal effects.

So, based on your results of your hypothesis test, you either reject the hypothesis, excuse me, the hypothesis that there's no difference between the two groups or you fail

to reject it. So you never accept a hypothesis, you either fail to reject it or you reject it, [00:37:30] so that's point one. Point two is, how about confidence intervals? Well, recall that when we take samples, we are just really estimating the population values.

So, if you have your sample of your US law students, since we didn't talk to each and every US law student, we are estimating certain values that are relevant for that population. Those are not exact measures, those are estimates. And a conference interval tells you [00:38:00] the range around which you are comfortable. In other words, what do you expect usually at 95% confidence level that's typically used. What is the range that you would expect the answers to fall in given that you have a certain sample response?

And then very strongly related to that is the notion of margin of error. And the margin of error is one side of the confidence interval. So let me take my example again, you have a point estimate that [00:38:30] says the mean is 40 and the confidence interval is between 37 and 43. Then you're saying, look, we're estimating with 95% confidence. That the true number is somewhere between 37 and 43. That's the confidence interval. And then we say the margin of error is three namely 43 minus three or 40 minus 37.

So between formal hypothesis testing, [00:39:00] establishing confidence intervals and deriving margins of error, we get to the important part of doing this statistical analysis. And then finally, the results description, well, in the results description of course, you need to relay your findings back to the original matter at hand, let's say the deceptive advertising case. Now, what's very important here is that to ensure that all that survey analysis are replicable, you actually need to provide the [00:39:30] raw data. So the raw data, plus whatever statistical programs you use to analyze the data that all needs to be turned over so it can be inspected by others as needed.

Greg: So, why is recording verbatims important? I was involved in a case where the survey expert on the other side, didn't at least didn't report them, I assume they recorded them somehow, but never reported the verbatims. And probably because they're really afraid of them and that became a problem for them. But if you can explain why recording those [00:40:00] verbatims is important for open-ended questions.

Mike: That is exactly right. You need to do that for open-ended questions. As we've talked about earlier with these open-ended questions, they need to be coded very carefully and you need to show that the coding was done properly. And you show that by actually listing all of the information that the respondent provided which means the verbatims. And then you use your judgment in classifying that information so that if somebody else [00:40:30] has a problem with your interpretation, then there can be an open discussion about this but that is impossible to do unless the verbatim are actually provided.

Lisa: Okay. Mike and Greg, thank you for that very interesting discussion.

Mike: You're very welcome.

Greg: Just to repeat the information about Sherry Diamond's reference guide on survey research, which again is the Bible for this area of law. You can download that publication at [00:41:00] www.nap.edu/read/13163/chapter/nine. You can also find that URL in the show notes

Lisa: And everyone, thank you for joining us. You can email questions to ucdefense@gtlaw.com. See you next time.