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President's Message

Symposia and Master Classes

This coming May, we will present four Symposia and four Master Classes on topics of current interest in our field. In addition to our own staff, nine invited speakers will present on statistical issues in claims support, consumer relevance of sensory measurements, multivariate mapping, and data science. This will be a really dynamic event and I hope that you can come out to Williamsburg, Virginia to attend. More details are given on our website and on page 2 of this newsletter.

In April, we will present our annual advertising claims course at the Greenbrier in White Sulphur Springs, WV. Details are given at the end of the newsletter.

Our technical report in this issue contrasts two multivariate mapping methods, EPM and LSA.

Best regards,
Daniel M. Ennis
President, The Institute for Perception

WHAT WE DO:

Client Services: Provide full-service product and concept testing for product development, market research and legal objectives

Education: Conduct internal training, external courses, and online webinars on product testing, sensory science, and advertising claims support

IFPrograms™: License proprietary software to provide access to new modeling tools

Research: Conduct and publish basic research on human perception in the areas of methodology, measurement and modeling

WEBINAR CALENDAR:

MARCH 15, 2018 ................................................. 2:00 PM EDT, 75 minutes

Understanding the Consumer: Preference Mapping vs. LSA

JUNE 14, 2018 ..................................................... 2:00 PM EDT, 75 minutes

Multiple Ideal Points

COURSE CALENDAR:

APRIL 17-19, 2018 ............. The Greenbrier, White Sulphur Springs, WV

Advertising Claims Support: Case Histories and Principles

MAY 8-10, 2018 ............. The Williamsburg Lodge, Colonial Williamsburg, VA

Current Topics in Sensory and Consumer Science:

- May 8, Four SYMPOSIA
- May 9 - 10, Four Master Classes

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NEWS & EVENTS

WEBINAR: March 15th at 2:00 EDT
Understanding the Consumer: Preference Mapping vs. LSA

Taught by: Dr. Benoît Rousseau

In this webinar, we will review the features and assumptions of preference mapping and LSA's underlying models and describe when the techniques will, and will not, yield similar conclusions. We will use simulated as well as actual project examples to illustrate the similarities and differences in the methods' outcomes. This information will be valuable to analysts who need to ensure that the conclusions they reach are representative and relevant to the consumer needs they attempt to address.

Attendance only ($269)    Recording only ($289)    Attendance & Recording ($359)
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- Sensory Difference Tests
  - Replicated Preference Testing to Diagnose Consumer Segmentation
  - Preference without a Significant Sensory Difference? A Solution
  - An Introduction to Thurstonian Modeling - PART 1 and PART 2
  - Advances in Tetrad Testing
  - Developing Consumer Relevant Action Standards for Sensory Difference Testing
  - Precision of Measurement in Sensory Difference Testing
  - Discrimination Testing with Batch-to-Batch Variability

- Advertising Claims Support
  - Claiming Equivalence, Unsurpassed, and Superiority Simultaneously
  - Supporting Count-Based Sensory Advertising Claims
  - Issues in Supporting “Up-to” Claims
  - Drivers of Liking® and Landscape Segmentation Analysis®
  - Understanding the Consumer: Preference Mapping vs. LSA
  - Mapping Techniques to Link Consumer and Expert Data

- Combinatorial Tools
  - Hiding in Plain Sight: Finding New Opportunities using Graph Theory
  - Introduction to Graph Theoretic Tools
eTURF 2.0: A Cutting Edge TURF Solution for Datasets of All Sizes
  - Large TURF Problems: Finding Custom Solutions

- Design Issues in Product Tests and Surveys
  - The Science of Answering Questions
  - Developments in Applicability and CATA Scoring

- Innovation
  - Invention and Innovation
Background: Why do consumers of products or services like them and/or purchase them? This is a classic, complex question with numerous methods to address it and with answers that depend on the specific application. In previous publications we have emphasized the central role of providing a consumer-perceived benefit and measuring that benefit. From the viewpoint of analytic methods, we have also discussed the value of approaching this problem from a process-driven consumer perspective as opposed to a product or service perspective. Analytic methods to find variables that, for example, drive liking can be broadly classified into two groups. The first group begins with product or service descriptive information and incorporates liking or other hedonic information post hoc. The second group includes methods that begin with liking a priori and add descriptive information to attempt to explain the liking analysis. An example of the former is External Preference Mapping (EPM) and an example of the latter is Landscape Segmentation Analysis (LSA), a form of unfolding. In this technical report we discuss a particular weakness of EPM and contrast it with an analysis based on LSA.

Scenario: You work for a large manufacturer of fruit-flavored soft drinks. You conduct a category appraisal of citrus-flavored beverages to study the performance of some new category entrants and make recommendations on product improvement opportunities. You select a set of 12 products that include your main brand, two of your main competitors and 9 other products selected to span the sensory space (labeled P1 through P12). You generate the products’ sensory profiles using your trained internal descriptive panel. You also obtain hedonic information from 250 regular users of the category on a 9-point hedonic scale. EPM is used to link the two data sets and uncover the category’s drivers of liking. To that end, you first conduct a principal components analysis (PCA) to generate a space into which the 250 consumers will be regressed based on their liking ratings of the 12 products. The first two factors account for 53% of the variance contained in the descriptive analysis data. Figure 1 illustrates the first two components of the sensory space from the PCA.

When attempting to regress the 250 consumers individually onto the sensory space, you realize that many of them cannot be regressed successfully using any of the typical four regression models - vectorial, circular, elliptical, or quadratic. In your case, the poor fitters constitute 45% of your respondent population. This type of result is regularly observed by practitioners who use EPM.

You investigate the consumer liking data by conducting a cluster analysis to help explain your results. There seems to be two consumer groups of similar sizes driven by their liking patterns. The main difference between the two groups is that Group 1 likes P1 and rejects P4 while Group 2 shows the opposite trend: Positive to P4 but rejecting P1.

It is pretty clear from your PCA map in Figure 1, that P1 and P4 are located very close to each other. This means that when considering the sensory attributes that explain the most variance in the descriptive data, as summarized in the first PCA plane, P1 and P4 are similar. Consequently, many consumers cannot be regressed successfully into the space since their liking patterns are not compatible with the PCA product structure. The PCA result requires that consumers should like P1 and P4 similarly since the first two principal components as assumed to be the drivers of liking. It is apparent that you need to study the assumptions behind the EPM model to see if you can resolve this apparent discrepancy.

Two Spaces: Preference mapping techniques can be categorized based on the information they use to create the product space. EPM uses the sensory descriptive information to create the sensory space and then regresses the consumers using their liking ratings. Therefore, the assumption is that the most obvious variables, those found in the first two components of the space, are the attributes driving consumer liking. In typical EPM analyses, it is assumed that sensory characteristics present in higher dimensions are not as important to consumer hedonics. It is possible, through trial and error, to explore other combinations of principal components and accept the poorer explanation of the descriptive data that they provide when a major principal component is eliminated. This method is usually not very satisfactory.
Using Unfolding on the Lemon-Flavored Soft Drinks Data: You use LSA to analyze the category appraisal data. The map you obtain is shown in Figure 3. The resulting product space is quite different from that found with PCA on the descriptive data. The most important difference is that $P_1$ and $P_4$ are no longer located next to each other, but are found at the center of two clusters of consumers as outlined by the lighter colored areas. The main driver of liking separating the two clusters is green citrus, an attribute best explaining the fourth component of the PCA. On that fourth dimension $P_1$ and $P_4$ are well separated. However, EPM did not capture this main attribute because consumers were fit on the first two dimensions. EPM assumes that only the most obvious differences are drivers of liking. By using an unfolding model, such as LSA, the product space is built around the characteristics relevant to the consumers’ hedonic reactions.

Conclusion: Many preference mapping techniques are available to link consumer and descriptive information. These techniques all are built on specific assumptions and it is important for the practitioner to understand their underlying models. Typically, EPM assumes that the variables explaining the most variance in the descriptive analysis data are the most important and thus must drive liking. If this is not the case, a large proportion of consumers will not fit on the map. An unfolding technique such as LSA does not make this assumption and thus provides a consumer-centric solution irrespective of the underlying sensory-based product structure. Using a technique that does not offer this flexibility can result in misleading findings and conclusions.

References
ADVERTISING CLAIMS SUPPORT
Case Histories and Principles

Comparative advertising can improve sales, but how do you address false claims or challenges made by your competitors? Claims support is a critical business focus for many companies in categories with aggressive competitors. There is a scientific and legal foundation necessary to support advertising claims.

The purpose of this course is to raise awareness of issues in testing product performance and evaluating advertising to provide solid evidentiary support needed in the event of a claims dispute.

The course speakers have decades of experience as instructors, scientific experts, jurors, and litigators in addressing claims with significant survey and product testing components. National Advertising Division® (NAD®) and litigated cases will be used to examine and reinforce the information discussed.

Scientific Team:
Dr. Daniel M. Ennis, Dr. Benoît Rousseau, Dr. John M. Ennis

Legal Team:
NAD: Kat Dunnigan, Anu Gokhale, Hal Hodes
Litigators: Lauren Aronson, Chris Cole, Alex Kaplan, David Mallen
In-House Counsel: Kathryn Farrara

Course Registration

April 17 – 19, 2018 (3 days)........ $1,975*

*A 20% discount will be applied to each additional registration when registered at the same time, from the same company.

The Institute for Perception offers reduced or waived course fees to non-profit entities, students, judges, government employees, and others. Please contact us for more information.

Course fee includes:
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- break refreshments, lunches, group dinners, course manual, and a copy of our latest books:
  - Readings in Advertising Claims Substantiation
  - Tools and Applications of Sensory and Consumer Science
  - Thurstonian Models: Categorical Decision Making in the Presence of Noise

Register online at www.ifpress.com/short-courses where payment can be made by credit card. If you qualify for a fee discount, or would like information about payment by invoice, please contact Susan Longest at mail@ifpress.com or call 804-675-2980 before registering.

TUESDAY (APRIL 17, 8am – 4pm)
8:00 – 9:00 | Advertising Claims Support
- Introduction and scope of the course
- Claims support in product/brand development
- Admissibility of expert testimony
- Surveys in false advertising and trademark cases
- Efficacy, perception, and materiality

9:10 – 10:00 | Claims and False Advertising; Internal Counsel Perspective
- Three ways an ad can be false
- A typical false advertising lawsuit
- To sue, challenge, or negotiate - an internal counsel’s perspective

10:10 – 11:00 | ASTM Sensory Claims Guide
- Review of the ASTM Claims Guide: Choosing a target population, product selection, sampling and handling, selection of markets
- Claims: Superiority, unsurpassed, equivalence, non-comparative

11:10 – Noon | Sensory and Hedonic Methods
- Methods: Discrimination, descriptive, hedonic
- Data: Counts, ranking, rating scales

1:00 – 3:00 | NAD Mock Hearing; Overview of the NAD
- NAD mock hearing
- Motivating Case: 3D TV
- Advertising self-regulation and the NAD process
- Preparing for an NAD hearing

3:10 – 4:00 | Better and Greater; Attribute Interdependence
- “Better” and “Greater” hedonic, sensory and technical claims
- Attribute interdependencies

6) NAD Case #5866 (2015) Kimberly-Clark Corp. (Nasacort)
7) NAD Case #5874 (2015) and NARB Panel #207 (2016) Chattam, Inc. (Nasacort)

LODGING: Lodging is not included in the course fee and participants must make their own hotel reservations. A block of rooms is being held at The Greenbrier at a special rate of $205 (plus resort fees & taxes). To make a reservation, please call 1-877-661-0839 and mention you are attending the Institute for Perception course (note: the special rate is not available through online reservations.) To learn more about The Greenbrier, visit their website at www.greenbrier.com.

TRANSPORTATION: The Greenbrier Valley Airport (LWB) in Lewisburg is only a 15 min. shuttle ride from the hotel. Direct flights to LWB are available on United Airlines from Chicago O’Hare (ORD) and Washington Dulles (IAD). Other airports include Roanoke, VA (ROA), 1hr. 15 min.), Charleston, WV (CRW, 2 hrs.), and Charlottesville, VA (CHO, 2 hrs. 15 min.).

CANCELLATION POLICY: Registrants who have not cancelled two working days prior to the course will be charged the entire fee. Substitutions are allowed for any reason.
WEDNESDAY (APRIL 18, 8am - 4pm)
8:00 – 9:00 | Requirements for a Sound Methodology
♦ Probability and non-probability sampling
♦ The AAPOR report (American Association for Public Opinion Research)
♦ Psychometric properties of the survey items
♦ Reliability and validity:
  Ecological, external, internal, face, construct
♦ Bias: Code, position
♦ Task instructions – importance and impact
9:10 – 10:00 | Consumer Relevance
♦ Setting action standards for consumer-perceived differences
♦ Linking expert and consumer data
♦ Clinical vs. statistical significance
▶ Litigated Case: SC Johnson vs. Clorox
  – Goldfish in Bags, 241 F.3d 232 (2nd Cir. 2001)
  (Degree MotionSense and Degree Clinical Protection Antiperspirants)
  (Xfinity Internet, Television & Telephone Services)
    (PeroxiClear Contact Lens Peroxide Solution)
10:10 – 11:00 | Test Method, Design, Location, and Participants
♦ Test options: Monadic, sequential, direct comparisons
♦ Test design issues: Within-subject, matched samples, position and sequential effects, replication
♦ Choosing a testing location and defining test subjects
11) NAD Case #3506 and NARB Panel #101(1999) Visa USA, Inc.
    (Visa Credit Card-Preferred Card Advertising)
12) NAD Case #5425 (2012) Church & Dwight Co., Inc.
    (Arm & Hammer® Sensitive Skin Plus Scent)
13) NAD Case #6041 (2016) Unilever United States, Inc.
    (Suave Essentials Body Wash)
11:10 – Noon | Survey Science
♦ Answering questions
♦ Purpose of conducting surveys: Events and behaviors, attitudes and beliefs, subjective experiences
♦ How respondents answer questions: Optimizing and satisficing
♦ Filters to avoid acquiescence and no opinion responses
♦ Survey questions: Biased, open-ended vs. closed-ended
♦ Predicting primacy and recency effects
♦ Motivations to optimize
♦ Steps to improve survey questions
▶ Noon – 1:00 LUNCH
1:00 – 2:00 | Consumer Takeaway Surveys
♦ Consumer takeaway surveys: NAD perspective
14) NAD Case #5849 (2015) T-Mobile USA (More Data Capacity)
15) NAD Case #5926 (2016) Comcast Cable Communications (Xfinity Cable TV)
16) NAD Case #6009 (2016) Epson America, Inc. (Epson EcoTank Supertank Printers)
♦ Critique of cases
2:10 – 3:00 | Analysis - Interpretation and Communication
♦ Hypothesis testing
♦ Common statistical analyses
♦ Determining statistical significance and confidence bounds
♦ Statistical inference in claims support
♦ Communicating claim requirements to the business side
17) NAD Case #5569 (2013) InterHealth Nutraceuticals (Zycrinome Dietary Supplement)
18) NAD Case #5965 (2014) Sergeant’s Pet Care Products (Sentry® Fiproguard)
19) NAD Case #7575 (2014) The Procter & Gamble Co. (Olay Sensitive Body Wash)
WEDNESDAY continued...
3:10 – 4:00 | Test Power
♦ The meaning of power
♦ Planning experiments and reducing cost
♦ Sample sizes for claims support tests
♦ Managing Risks: Advertiser claim, competitor challenge
20) NAD Case #3605 (1999) Church & Dwight, Co. (Brillo Steel Wool Soap Pads)
THURSDAY (APRIL 19, 8am - 3pm)
8:00 – 9:00 | What to Do with No Difference/ No Preference Responses
♦ No preference option analysis
♦ Power comparisons: Dropping, equal and proportional distribution
♦ Statistical models and psychological models
♦ ASTM recommendation
22) NAD Case #4270 (2004) Frito-Lay, Inc. (Lay’s Stax® Original Potato Crisps)
24) NAD Case #6037 (2016) Mizkan America, Inc. (RAGU Homestyle Traditional Sauce)
9:10 – 10:00 | Testing for Equivalence and Unsurpassed Claims
♦ How the equivalence hypothesis differs from difference testing
♦ ASTM requirements for an unsurpassed claim
♦ The paradox of finding support for superiority, unsurpassed, and equivalence; the need for a minimum standard for superiority
♦ FDA method for qualifying generic drugs: The TOST
♦ Improved methods over TOST for testing equivalence
25) NAD Case #5822 (2015) Kimberly-Clark Global Sales, LLC
    (Huggies® Little Snugglers Diapers)
26) NAD Case #5829 and NARB Panel #202 (2015) Bayer HealthCare, LLC
    (Claritin and Claritin-D)
10:10 – 11:00 | Ratio, Multiplicative, and Count-Based Claims
♦ The difference between ratio and multiplicative claims; Examples
♦ Why ratio claims are often exaggerated
♦ Count-based claims (e.g., “9 out of 10 women found our product reduces wrinkles”)
27) NAD Case #5107 (2009) Ciba Vision Corp. (Dailies Aqua Comfort Plus)
28) NAD Case #5416 (2012) LG Electronics USA, Inc. (Cinema 3D TV & 3D Glasses)
29) NAD Case #5484 (2012) Reynolds Consumer Products (Hefty® Slider Bags)
30) NAD Case #5934 (2016) Rust-Oleum Corp.
    (Painter’s Touch Ultra Cover 2X Spray Paint)
11:10 – Noon | “Up To” Claims
♦ Definition and support for an “up to” claim
♦ FTC opinion on windows marketers
♦ Analysis of an “up to” claim scenario
♦ Issues in applying the FTC rule
31) NAD Case #5707 (2014) Mars Petcare US (Pedigree® Dentastix® Chews)
    (Duracell Coppertop & Duracell Quantum Alkaline Batteries)
▶ Noon – 1:00 LUNCH
1:00 – 3:00 | Applying Course Principles and Concepts
♦ Group Exercise 1: Develop support strategy for an advertising claim to include: engagement of all stakeholders, wording of the claim, design and execution of a national product test, product procurement, analysis, and report
♦ Group Exercise 2: Design a consumer takeaway survey of a fertilizer package statement
33) NAD Case #6033 (2016) Bayer CropScience US
    (Bayer Advanced 3-in-1 Weed and Feed for Southern Lawns)
♦ Course summary and conclusion
Dr. Daniel M. Ennis - President, The Institute for Perception. Danny has more than 35 years of experience working on product testing theory and applications for consumer products. He has doctorates in food science and mathematical & statistical psychology and is a Professional Statistician accredited by the American Statistical Association. He has published extensively on mathematical models for human decision-making and was the first to show that humans possess a transducer in the chemical senses. In 2001, he solved the degeneracy problem in multidimensional unfolding. Danny is a recipient of the Sensory and Consumer Sciences Achievement Award from IFT and also the ASTM David R. Peryam Award in recognition of “outstanding contributions to the field of basic and applied sensory science.” Danny consults globally and has served as an expert witness in a wide variety of advertising cases.

Dr. Benoît Rousseau - Senior Vice President, The Institute for Perception. Benoît received his food engineering degree from AgroParisTech in Paris, France and holds a PhD in sensory science and psychophysics from the University of California, Davis. He has more than 20 years of experience in managing projects in the field of sensory and consumer science, actively working with clients in the US, Asia, Latin America, and Europe. His theoretical and experimental research has led to numerous journal articles as well as several book chapters. Benoît is well known for his advanced presentation skills, where his use of sophisticated visual tools greatly contribute to the success of The Institute for Perception communications, short courses, and webinars. Dr. Rousseau has recently been appointed as a visiting professor at Chuo University in Japan.

Dr. John Ennis - Vice President of Research Operations, The Institute for Perception. John received his PhD in mathematics and also conducted post-doctoral research in cognitive neuroscience at the University of California, Santa Barbara. He is the winner of the Food Quality and Preference Award for “Contributions by a Young Researcher.” John has published in statistics, mathematics, psychology, and sensory science. He has a strong interest in the widespread adoption of best practices throughout sensory science, serves on the editorial boards of the Journal of Sensory Studies and Food Quality and Preference, and is Chair of the ASTM subgroup E18.04 - “Fundamentals of Sensory.”

Kathleen (Kat) Dunnigan - Senior Staff Attorney, the NAD. Kat has worked for the Legal Aid Society’s Juvenile Rights Division, the Center for Appellate Litigation, and Center for HIV Law and Policy. She has also litigated employment discrimination, civil rights claims, and many employment cases before the New Jersey Supreme Court.

Hal Hodes - Senior Staff Attorney, the NAD. Prior to joining the NAD, Hal worked in private practice where he represented hospitals and other health care practitioners in malpractice litigation. Hal has also served as an attorney at the New York City Human Resources Administration representing social services programs.

Anuradha (Anu) Gokhale - Staff Attorney, the NAD. Prior to joining the NAD, Anu was a litigator of intellectual property and complex commercial matters at King & Spalding LLP in NYC. She has also served as a visiting lawyer with South Africa’s largest public interest organization, Legal Resources Centre, where she handled refugee and environmental advocacy matters.

Kathryn Farrara - Senior Marketing Counsel, Unilever USA. Kathryn has handled a variety of brands in the personal care, food, and beverage categories. In addition to counseling brands, she handles overarching issues related to Digital & Social Media and Privacy at Unilever. Prior to joining Unilever, she was a Senior Attorney at the NAD.

Lauren Aronson - Counsel, Crowell & Morning in Washington, DC. Lauren advises clients regarding the development, substantiation, approval, and defense of advertising claims. She was formerly a counsel in the Advertising, Marketing & Media division at Manatt, Phelps & Phillips.

Christopher A. Cole - Partner, Crowell & Morning in Washington, DC. Chris practices complex commercial litigation and advises the development, substantiation, and approval of advertising and labeling claims. He has represented leading consumer products and services companies and appeared many times before the NAD.

Alexander Kaplan - Partner, Proskauer Rose in NYC. Alex represents and advises a range of consumer product, food and beverage, pharmaceutical, and medical device companies before the NAD and federal courts. He also frequently counsels clients concerning advertising and marketing claim substantiation and review.

David G. Mallen - Partner, Loeb & Loeb in NYC. David’s focus is in the areas of advertising and consumer protection law. He co-chairs the firm’s Advertising Disputes practice and represents clients in disputes and investigations before the FTC and state agencies. As former NAD Deputy Director, he has worked with advertisers to both defend and challenge claims.