MARKETING RESEARCH AWARDS 09

supported by Google and WPP

In 2008, Google and the WPP Group launched the Marketing Research Awards Program to improve the understanding of online marketing strategies and the relationship between online and offline media. Awards are in the form of unrestricted gifts to academic institutions, under the names of the researchers who submitted the proposals. The Marketing Research Awards Program supports creative theory development and empirical analysis with the goal of solving marketing and advertising challenges. To better facilitate the research, Google and WPP provide access to relevant and proprietary marketing data. Award recipients are encouraged to make their results available online and in professional publications, so that compelling research is transformed into actionable strategy.

Segment: Ad Effectiveness

Marketing on the Map: Visual Search and Consumer Decision Making

Although substantial research has been conducted on consumer search behavior in environments in which text information is acquired in a linear fashion, there has been little research on map-based search behavior by consumers. In a series of controlled lab experiments based on Google Maps, we compare information search and choice behavior in text versus map environments and examine how the visual perspective (i.e., interactivity and depth of field) of map-based representations interact with contextual factors, such as the location of alternative choices relative to the consumer's current location, to affect information acquisition and decision quality.

Nicholas Lurie
Assistant Professor of Marketing, College of Management, Georgia Institute of Technology, College of Management

Marketing professor Nicholas Lurie conducts research and teaches courses on how the information environment affects consumer and managerial decision making. He is a co-founder of the College of Management's BizLab, which brings together researchers from multiple business disciplines who study human behavior and is a member of Georgia Tech's Graphics, Visualization, and Usability (GVU) Center. He is particularly interested in factors that affect overload in information-rich environments such as the Internet; the interaction between the information environment and decision processes; and how new technologies – such as visualization, real-time feedback, map-based representation, and mobile devices – affect information search, decision processes, choice, and learning. His research has been published in the Journal of Consumer Research, the Journal of Marketing Research, the Journal of Marketing, the Journal of Consumer Psychology, the Journal of Retailing, the Journal of Service Research, Organizational Behavior and Human Decision Processes, and the Journal of Public Policy and Marketing. His article "Decision Making in Information Rich Environments: The Role of Information Structure," won the Ferber Award for the best article in the Journal of Consumer Research based on a doctoral dissertation. Dr. Lurie worked for several years as an international marketing consultant in Chicago advising domestic firms on export and market entry strategies with a particular focus on the Mexican market. He also was a Peace Corps volunteer in Cameroon and speaks French and Spanish.

Sam Ransbotham
Assistant Professor of Information Systems, Carroll School of Management, Boston College

Sam Ransbotham received his Ph.D. in Management (Information Technology) from the Georgia Institute of Technology. His prior education includes an MBA and a Bachelor's degree in Chemical Engineering, both from the Georgia Institute of Technology as well. Dr. Ransbotham's research interests include IT security and strategy. His recent work appeared in Information Systems Research and has been presented at conferences sponsored by the Academy of Management, INFORMS, the Strategic Management Society, and the International Conference on Information Systems. Dr. Ransbotham has also taught at the undergraduate, graduate, and executive levels. Previous courses include Introduction to Information Technology and Systems Analysis and Design. Prior to earning his doctorate, Dr. Ransbotham was the founder and principal of a software company with a globally diverse client list.

Segment: Ad Effectiveness

Targeting Ads to Match Individual Cognitive Styles: A Market Test

Ad targeting is an important and growing area for methodological development and implementation. Many criteria have been proposed for targeting: key words, context (e.g. Gmail content), behavioral (e.g. past clicks and shopping), and location (e.g. mobile phones) to name a few. In this project we propose a new targeting criterion – individual cognitive style. For example, if someone has a cognitive style that is more visual, then a banner with pictures will be effective. In contrast, if someone has a more verbal oriented cognitive style, then words will communicate better. If someone is more analytical, then ads with lots of content and detail would be best. Again, in contrast, if someone is holistic, an overall summary statement would work well. In this project we take a real set of display ads for AT&T and create alternatives that match cognitive style (analytical/holistic and visual/verbal). Based on clicks on a base site – CNET -- we estimate individual cognitive style with a Bayesian inference model and store this information on cookies for 50,000 users. Then we serve up the correct AT&T ad morph based on the individual cognitive specifications when users return to CBS Interactive sites. We use a machine learning algorithm (Gitten's) to learn the best assignment of ads to cognitive groups. Finally we measure the click and conversion results from morphing versus no morphing of ads experimental groups. Currently the partners are committed (AT&T and CNET), ads are being designed, cognitive surveys have been completed, and legal agreements finished. In December we will collect cognitive data for the Bayesian engine on CNET and in January we will run the field experiment. Top line results will be available in April. If morphing works, it could significantly increase the effectiveness of banners.

Glen Urban
Professor, MIT Sloan School of Management

Glen L. Urban is a leading educator and researcher specializing in marketing and new product development. He has been a member of the MIT Sloan School of Management faculty since 1966, was Deputy Dean at the school from 1987 to 1991, and Dean from 1993 to 1998. Urban is co-author of seven books and numerous papers. His papers have won several prestigious awards, including two O'Dells. He has received the Paul D. Converse Award and Charles Parlin Award for lifetime achievement in marketing research. Over the last 10 years Dr. Urban's research has concentrated on trust-based marketing systems and web site design to match the cognitive style of users. This work was supported by MIT sponsored research projects at Intel, GM, BT, FT/Orange, Liberty Mutual, Suruga Bank, WPP and Google. Professor Urban's recent research is on morphing banners to improve their effectiveness and on mobile advertising and apps. He has founded five companies and is now chairman of Experion Systems – a firm specializing in advice software for financial and health decisions.

Segment: Ad Effectiveness

How Do Consumers Determine What is Relevant? A Psychometric and Neuroscientific Study of Online Search and Advertising Effectiveness

This research project aims at discovering what consumers determine as being relevant when engaging in online search and when being confronted with online advertising by using psychometric and neuroscientific methodology. The results are intended to lead to a better understanding of the practices in online marketing.

Antoine Bechara
Professor of Psychology and Neuroscience, Department of Psychology/Brain & Creativity Institute, University of Southern California

Antoine Bechara is a professor of psychology and neuroscience at the University of Southern California. His research focuses on the neurology and neuropsychology of complex behaviors such as decision-making and addiction. One of the main focuses of his research is to understand the neural processes underlying how we make decisions and choices. Specifically, he concentrates on neuroeconomics—a field of study that seeks to bridge neuroscience research on human choice with economic theory—and neuromarketing, a field that addresses the neuroscience behind consumers' choices, including product branding, preference, and purchase decisions. Antoine's work has been published in Science, Nature Neuroscience, Psychological Science, and the Journal of Neuroscience, among other journal outlets.

Martin Reimann
Fellow, Department of Psychology/Brain & Creativity, University of Southern California

Martin Reimann is a research fellow of consumer psychology and neuroscience at the University of Southern California. His research focuses on the link between emotions and consumers' decision-making using psychometric, behavioral, and neural measures. His work has been published or is forthcoming in Journal of the Academy of Marketing Science, the International Journal of Research in Marketing, Journal of Service Research, and Journal of Economic Psychology, among other journals. Further, Martin has worked with organizations such as Audi, Daimler, Linde, Marriott, Porsche, and Volkswagen, among others. Martin holds a Ph.D. in marketing from Technische Universitaet Freiberg (Germany) and is currently pursuing a second Ph.D. in psychology with a focus on neuromarketing at the University of Southern California.

Segment: Multivariate Optimization

Methods for Multivariate Metric Analysis; Identifying Change Drivers

When running large advertising campaigns, it is often of interest to find the subgroups of the population (e.g. countries, browsers, user-types) where the campaign was/was not effective. However, this task becomes increasingly difficult as data sets become large and where there are multiple correlated metrics, each of which measures a different aspect of the effectiveness of the campaign. Existing statistical methods allow the analysis of each of these metrics in isolation, finding relationships between a single metric and some of the explanatory categorical variables. The results for each metric will generally be different, often in spurious ways, and will be difficult to interpret. This research will develop exploratory tools to identify the subpopulations where the metrics are jointly affected, rather than in isolation, using decision trees and multiresponse regression techniques. While there have been attempts made in this area previously, the methods we have developed are more flexible, and take into account the correlation structure in the metrics. In this way it becomes possible to isolate areas in which the advertising campaign was effective across the whole range of metrics and visualize large tranches of data in a succinct fashion.

Trevor J. Hastie
Professor, Department of Statistics, Stanford University

Trevor Hastie, formerly at AT&T Bell Laboratories, joined the Department of Statistics at Stanford University in 1994. His main research contributions have been in the field of applied nonparametric regression and classification, and he has written two books in this area: Generalized Additive Models (with R. Tibshirani, Chapman and Hall, 1991), and Elements of Statistical Learning (with R. Tibshirani and J. Friedman, Springer 2001). He has also made contributions in statistical computing, co-editing (with J. Chambers) a large software library on modeling tools in the S language (Statistical Models in S, Wadsworth, 1992), which form the basis for much of the statistical modeling in R and S-plus. His current research focuses on applied problems in biology and genomics, medicine and industry, in particular data mining, prediction and classification problems.

Donal McMahon
Engineering Analyst, Google

Donal McMahon received his Ph.D. from the Department of Statistics at Stanford in 2009, completing work in statistical genetics and meta-analysis with Professor Hastie. Prior to this he completed both his undergraduate and masters degree at University College Dublin. During this time and throughout his time at Stanford he has been involved in a variety of theoretical and applied statistics projects. His current research focuses on data mining and meta-analysis; particularly in the technology industry, where he has recently joined Google as an Engineering Analyst.

Segment: Multivariate Optimization

Unpuzzling the Synergy of Display and Search Advertising: Insights from Data Mining of Chinese Internet Users

Although the synergy of display and search advertising is widely conversed in industry, little is known about how such synergy takes place. This project explores the relationships among display advertising, brand liking and consideration, and search behavior. Findings are from mining millions of tracked records of ad exposure and search strings over three months, plus an online survey of 5,400 respondents, part of the tracking panel of 142,000 Chinese Internet users. The most interesting findings are that exposure to display ads have increased the degrees of both category search (cars, airlines, etc.) and brand search (Ford, BMW, United, etc.) for all eight categories and fourteen tracked brands and that high frequent exposure have led to more brand search over category search, indicating the increasingly precise search at the brand level. Exposure to display ads has been found to be correlated with brand liking and for certain categories, brand consideration. Further data mining is still under way for theoretical construction.

Hairong Li
Department of Advertising, Public Relations, and Retailing, Michigan State University

Dr. Hairong Li is a Professor in the Department of Advertising, Public Relations, and Retailing and Research Fellow at the Mind Lab, Michigan State University. He is a senior visiting scholar at Tsinghua University in fall 2009. His research covers strategic issues on marketing communications, primarily in the areas of interactive advertising, media management, and global branding. He has published extensively and been rated a productive scholar in advertising by three recently published citation studies in the U.S. Dr. Li is editor of the Journal of Interactive Advertising, and an editorial board member of three academic journals in the U.S. and Europe and one trade publication in China. He was co-chair of the American Academy of Advertising (AAA) 2009 Asia-Pacific Conference in Beijing, chair of the AAA Publications Committee, and Fulbright Scholar at Nanyang Technological University in Singapore.

Peking Tan
Miaozhen Consultancy Company, Beijing, China

Peking Tan is a consultant for Miaozhen Consultancy Company in Beijing, China. Miaozhen has developed an online advertising tracking system that measures the impact of Internet advertising and ROI in digital marketing in China. He leads the R&D division at Millward Brown ASCR in China. Peking joined the company in 2003 and is responsible for innovation in data collection and analysis and modeling, including SEM, ROI, segmentation and conjoint analysis. One of his many accomplishments is the development of a robust online panel in 2004, which serves as the foundation of Lightspeed Research in China. Peking contributed a “China Ascending” chapter for the book, “The Global Brand”, and also translated the book from English to Mandarin for its publication in China. Peking holds a master’s degree in psychology from Chinese Academy of Sciences and a bachelor’s degree in biology from Tsinghua University. He lectures regularly at Renmin University, Peking University, and Chinese Academy of Sciences in China.

Shuguang Zhao
Professor and Director of Media Survey Lab at Tsinghua University

Dr. Shuguang Zhao is an Associate Professor and Director of Media Survey Lab at Tsinghua University. The Lab maintains an national panel of Internet users who participate on an informed and voluntary basis, and it has completed many large-scale projects including those commissioned by Chinese government and multinationals doing business in China. Dr. Zhao has authored and coauthored five books, including Media Economics, Media Capital Market, and Internet Media Strategies.

Segment: Online Brand Building

Are Brand Attitudes Contagious? Consumer Response to Organic Search Trends

Traditional brand tracking data have been used by marketing managers for decades to understand consumer response to brands. Marketers and advertisers are highly enthusiastic about the opportunities that the new online tool Google Insights for Search (IFS) provides to monitor "rising searches" and analyze consumer search trends. IFS augments traditional brand tracking data in unprecedented ways, but is important for another reason: Google Insights for Search does not only monitor trends, it can influence them. We theorize that organic search results provide a natural measure of the attention being directed toward a brand in a social sphere, quite distinct from measures derived from brand tracking studies, and propose that consumers are influenced by observing IFS trend results, and infer brand attitudes of social groups from which these results were drawn. These inferred social attitudes then influence the consumer's own attitudes through a social contagion effect. We describe the results from several experiments that investigate under what conditions – and by what processes - consumer brand attitudes and related market response measures are influenced by observation of brand search trends. The results have implications for how marketers and advertisers can organize organic search results to enhance consumer engagement with the brand and the search process.

Donna L. Hoffman
Professor, A. Gary Anderson Graduate School of Management, University of California Riverside

Donna L. Hoffman, an internationally recognized expert in digital commerce and Internet marketing, is the Chancellor's Chair, Professor of Marketing and the Co-Director of the Sloan Center for Internet Retailing, at the A. Gary Anderson Graduate School of Management at the University of California, Riverside. The UCR Sloan Center is the world's leading university research center dedicated to improving the effectiveness of Internet marketing efforts through the behavioral and quantitative study of online consumer behavior. Hoffman is also the co-founder of eLab, an internationally recognized, award-winning research lab for fielding online experiments and surveys regarding the Internet. The New York Times calls this pioneering effort "one of the premiere research centers in the world for the study of electronic commerce" and the Wall Street Journal recognizes the effort as the "electronic commerce pioneer among business schools." Professor Hoffman's award-winning research efforts focus mainly on consumer behavior in online environments and Internet marketing strategy. She has published widely in the top academic marketing and management journals and works with major corporations on the topic of digital strategy. Professor Hoffman has been awarded the Sheth Foundation/Journal of Marketing Award for long-term contributions to the discipline of marketing, the Stellner Distinguished Scholar Award from the University of Illinois and the William O'Dell/Journal of Marketing Research Award for long-term research impact. She is a member of the National Science Foundation Global Environment for Network Innovations (GENI) End-User Opt-In Initiative. Hoffman has an A.B. degree from the University of California at Davis, and an M.A. and Ph.D. from the L.L. Thurstone Psychometric Laboratory at the University of North Carolina at Chapel Hill. She was named a Distinguished Graduate Alumnus of UNC in 2002.

Thomas P. Novak
A. Gary Anderson Graduate School of Management, University of California Riverside

Tom Novak is Albert O. Steffey Professor of Marketing and Co-Director of the Sloan Center for Internet Retailing at the University of California, Riverside, where he joined the faculty in July 2006. Novak's research since 1993 has focused exclusively on Internet and Web based commerce. His current research areas include measuring the online consumer experience (flow, consumer control and the design of compelling online environments); online advertising (Web advertising metrics and modeling online advertising exposure); Internet marketing strategy (business models, new paradigms for electronic commerce); and electronic commerce policy (the "digital divide," privacy, and trust). An internationally recognized academic researcher in Web-based commerce, Novak has published extensively on the topic in academic journals in a range of scholarly disciplines, including SCIENCE, Marketing Science, Journal of Marketing, Communications of the ACM, the Information Society, and Harvard Business Review. He has also been a contributing writer to both Wired and HotWired. Prior to joining the faculty at the University of California, Riverside, Novak served on the faculties of Vanderbilt University, New York University, Columbia University, and Southern Methodist University. From 1995 through 1999, he spent summers as a visiting scholar at Paul Allen's Interval Research Corporation, Palo Alto California, and was a visiting scholar at Stanford University in the summers of 1997 and 2000. Novak received his A.B. in Psychology from Oberlin College in 1977 and his M.A. (1980) and Ph.D. (1984, in quantitative psychology with a formal minor in Biostatistics) from the L.L. Thurstone Psychometric Laboratory at the University of North Carolina, Chapel Hill.

Segment: Online Brand Building

Does Internet Advertising Help Established Brands or Niche ("Longtail") Brands More?

This research project studied two major drivers of online advertising effectiveness: the presence of alternative advertising outlets and the relationship between optimal format and contextual targeting. Does offline advertising substitute or complement online advertising? It is not clear whether online and offline advertising campaigns substitute or complement each other. We investigate this relationship between offline and online advertising for alcoholic beverages. We exploit variation in state laws banning the display of "out of home" alcohol advertising as an exogenous shifter on whether or not there is offline advertising. Using data from a large-scale field test on the effectiveness of banner ads we find that the absence of offline advertising strengthens the effectiveness of online advertising. We show that this effect is stronger for customers who are not already aware of the product. What drives the optimal combination of intrusiveness and targeting in online advertising? We use data from a large-scale field experiment to explore what affects the effectiveness of online advertising. We find that matching an ad to website content and increasing an ad's visibility both independently increase purchase intent. However, in combination these two strategies are ineffective. Advertisements that match both website content and are highly visible do worse at increasing purchase intent than ads that do only one or the other. This failure appears to be driven by perceived intrusiveness. The negative effect of combining contextual targeting with high visibility is strongest for people who appear to care about privacy and in categories where privacy matters most. Our results suggest a possible explanation for the growing bifurcation in internet advertising between highly targeted plain text ads and more visually striking but less targeted ads.

Catherine Tucker
Assistant Professor of Marketing, MIT Sloan School of Marketing

Catherine Tucker is the Douglas Drane Career Development Professor in IT and Management and Assistant Professor of Marketing at MIT Sloan School of Management. She specializes in the influence of network effects and social interactions on technology adoption. Her empirical research helps managers overcome the "chicken-and-egg" problem hindering new product adoption. She is also interested in how privacy concerns can affect technology adoption and the effectiveness of online advertising. She has experience working in a variety of industries, including electronic payments, electronic health records, medical IT systems, behavioral targeting technologies, video-communications, B2B exchanges, B2C internet portals, online IT services, and search advertising. She received an undergraduate degree in Politics, Philosophy and Economics from Oxford University and a Ph.D. in Economics from Stanford University.

Avi Goldfarb
Associate Professor of Marketing, Joseph L. Rotman School of Management University of Toronto

Avi Goldfarb is Associate Professor of Marketing at the Rotman School of Management, University of Toronto. He received his Ph.D. from Northwestern University and his B.A.H. from Queen's University. His research explores brand value, behavioral modeling in industrial organization, and the impact of information technology on marketing, on universities, and on the economy. Professor Goldfarb has published over 25 articles in a variety of outlets, including the American Economic Review, Marketing Science, Management Science, the Journal of International Economics, the Journal of Economics and Management Strategy, and the Journal of Marketing Research. He is a co-editor at the Journal of Economics and Management Strategy and an associate editor of Information Economics and Policy.

Segment: Online Brand Building

A Comprehensive Model of the Effects of Brand-Generated and Consumer-Generated Communications on Brand Perceptions, Sales and Share

The authors extend traditional marketing mix models that link brand sales (or share) with variables describing price, product, and brand-generated communications, to also include variables that describe social media activity. Data from multiple sources are combined to study a frequently purchased non-food category. Results show that adding variables that describe social media activity lead to more accurate market response models. A structural modeling framework (which gives more realistic elasticity estimates compared to aggregate demand models) is applied to the data. Results indicate that responsiveness to brand-generated communications is approximately double that of consumer-generated communications. And, a strong asymmetric effect for sentiment in consumer-generated communications: responsiveness to negative tone exceeds that of positive tone.

Douglas Bowman
Professor of Marketing, Goizueta Business School, Emory University

Douglas Bowman is Professor of Marketing and Area Coordinator for Marketing at the Goizueta Business School of Emory University. He received his Ph.D. (1993) in Marketing from the Wharton School, University of Pennsylvania. His research focuses on empirically investigating the long-term effects of marketing strategies, the effects of competition on marketing strategy, on understanding how buyer-seller relationships evolve over time, and understanding the conditions which favor standardization versus customization of marketing programs. His research has been published in journals that include the Journal of Marketing Research, Marketing Science, and the International Journal of Research in Marketing, articles based on his research have appeared in a number of newspapers and business magazines including the Economist, and he has appeared on television such as CNN and MS-NBC to discuss topics related to marketing strategies and tactics and consumer trends, to name a few. His research into the evolution of customer preferences in a new market won the American Marketing Association's 2001 Paul E. Green Award for the paper published in the Journal of Marketing Research deemed to have the greatest potential to contribute significantly to the practice of marketing research and research in marketing. He is on the editorial boards of a number of the leading marketing journals including International Journal of Research in Marketing, Journal of Marketing, Journal of Marketing Research, and Marketing Science, and has chaired major research conferences including the 2005 INFORMS Marketing Science Conference and the 2007 American Marketing Association's Advanced Research Techniques Forum. His teaching has been recognized in a number of ways including Emory's Adler Prize for Excellence in Teaching, which honors teaching quality, course innovation and relevance to real-world problem solving in all Goizueta Business School programs over a 3 year period.

Manish Tripathi
Professor of Marketing, Goizueta Business School, Emory University

Manish Tripathi is Assistant Professor of Marketing at the Goizueta Business School of Emory University. He holds a Ph.D. (2008) in Marketing from the Kellogg School of Management, Northwestern University. He earned a BA in economics from Stanford and, prior to his doctoral studies, worked as a marketing and business development manager for a Bay Area software company. His research interests include multi-channel strategies, market structure and entry, structural models, and Bayesian statistics. His current research projects include studying order-of-entry and exit effects for multi-channel firms, studying spillovers from offline entry by e-tailers, and quality effects on e-commerce markets.

Segment: Online-Offline Confluence

Effect of Online Exposure on Offline Buying: How Online Exposure Aids or Hurts Offline Buying by Increasing the Impact of Offline Attributes

A lot of consumer decisions are comprised of two distinct stages: (a) an initial online search (to learn about the category, to learn about the available brands, and to create a shortlist of specific brands to be considered more seriously), followed by (b) a first-hand, bricks-and-mortar product experience (where the shortlisted brands are examined more seriously in a store environment and a final choice is made). Given the prevalence such two-stage decisions, it is important to have systematic predictions regarding how consumers' online information search might influence their offline, in-store buying behavior. In particular, how is the information encountered in the first, online stage weighed relative to the information encountered in the second, offline stage? Is the online product information weighed more than, equally, or less than the subsequent, offline information? This is the primary research question that we would like to answer. Normative economic and psychological theories of consumer behavior would predict no systematic differences in the importance weights across these two stages of decision making. However, inferring from past research, we predict that there will be a systematic difference in the importance weights accorded to these two sets of information. We predict that the product information from the bricks-and-mortar world is likely to be weighed more heavily than the attribute information from the online world. The key goal of this research is to (a) verify whether this assertion bears out (while we infer from past research, there has been no direct test of this), (b) identify conditions when this assertion may or may not hold, and (c) derive implications from the findings for marketing practitioners. This research has important implications for retailers who have both an online and an offline presence. Presumably, the motivation behind a firm's hosting of online information touting its superior product attributes, is to encourage the use of those very attributes in a consumer's decision making process. Our research indicates that this might be counterproductive, since these superior attributes touted in the online world, might naturally get undermined in the offline, store environment. In fact, it might be better for these retailers to hold off, and save their best for the last.

Amitav Chakravarti
New York University, Stern School of Business, Department of Marketing

Amitav Chakravarti is Associate Professor of Marketing at the Stern School of Business, New York University. He received a B.A. in Economics from the University of Bombay, an M.B.A. from the Indian Institute of Foreign Trade (New Delhi), and a Ph.D. from the University of Florida. Prior to his Ph.D. he worked with JWT and Unilever in India. His primary research areas include consumer decision making, consumer search and screening behavior, generic versus brand advertising, consumer behavior in high-uncertainty markets, consumption of products with a Corporate Social Responsibility-association, and effects of physical environments on people's thoughts and choices. In recognition of his research contributions, he was recently awarded the Young Scholar Award by the Marketing Science Institute (MSI), the inaugural Google-WPP Marketing Research Award, and the ART (Advanced Research Techniques) Forum Best Paper Award. At NYU, he teaches the Marketing Core class for the full-time MBA graduates and the Introduction to Marketing class for undergraduates.

Segment: Online-Offline Confluence

Linking Online Behavior and Advertising to Stages of Consumer Decision Making

The Internet has created a new medium for consumers to become aware of, learn about, evaluate, consider, and possibly purchase products. As manufacturers try to affect consumers at these various stages of the decision making process, it becomes critical to understand how online behavior (i.e., which sites consumers visit and in what order and what products they view) interacts with exposure to advertising (by the focal brand or by any of its competitors). The digital aspects of online browsing, which make it appealing for consumers to research products, also allow tracking the impact of online marketing interventions and the effects of browsing path. In this project, we try to shed light on the above issues through an empirical exploration of the PC category. Our research interests align with those of Lenovo, who put forward a set of questions pertaining to the link between online ad strategy and consumer browsing behavior. Our goal is to provide insights for scholars and managers on how to best formulate marketing strategies online, especially in categories where consumers tend to use the Internet prominently in their decision making.

Elie Ofek
Associate Professor Marketing, Harvard Business School

Elie Ofek is the T.J. Dermot Dunphy Professor of Business Administration at the Harvard Business School. Elie's research focuses on innovation strategies in fast-changing, technology-driven business environments. He explores relationships between R&D and marketing decisions, and is particularly interested in how firms integrate market input when formulating innovation strategy. His research also examines the implications of information technology and new media on product offerings and advertising models. His work has appeared in top management and marketing journals and he is the author of numerous HBS cases and teaching material on these topics. At HBS he teaches the required first year MBA course in marketing and an elective on the relationship between Marketing and Innovation.

Professor Ofek received his Ph.D.. in Business from Stanford University and also holds an M.A. in Economics and a B.Sc. in Electrical Engineering. Prior to entering academics, he worked as a development engineer in the audio/video multimedia division at an IBM research center. He has recently worked with companies from a range of industries including high-tech, media, pharmaceuticals, and beauty-care.

Zsolt Katona
Associate Professor of Marketing, UC Berkeley, Haas School of Business

Zsolt Katona is Assistant Professor of Marketing at the Haas School of Business, UC Berkeley. He has a Ph.D. in Management from INSEAD. Previously he earned a Ph.D. in Computer Science from Eotvos University, Budapest. His current research focuses on understanding the interaction between Web sites' on-line advertising strategies. He also studies the role that link structure of social networks plays in word-of-mouth effects and community formation. Previously, he had analyzed characteristics of different random networks and published his work in such journals as the Journal of Applied Probability, Statistics and Probability Letters and Random Structures and Algorithms.

Segment: Online-Offline Confluence

Optimal Allocation of Offline and Online Media Budget

In this project, we focus on modeling synergistic effects of advertising on marketing outcomes. Synergies can arise because firms use multiple media to advertise for a given brand and because of an umbrella branding structure in which multiple products share a common brand name. In particular, we are interested in modeling the interaction between online and offline advertising. Such interaction can be positive when advertising in these media reinforces each other, or can be negative because of interference. We are also interested in uncovering how master-brand and sub-brand advertising interacts to affect the sales of all products within the brand umbrella. We have developed a hierarchical Bayesian state space approach for modeling sales as a function of advertising spend or GRP's across different media and brand variants. The model captures both short and long-run dynamics and incorporates underlying primitives such as copy and repetition wearout and the role of forgetting. We use national-level weekly sales and advertising data and Markov chain Monte Carlo methods to estimate model parameters. Our interest is in using these model parameters to eventually make recommendations of managerial interest.

Sunil Gupta
Professor of Business Administration, Harvard Business School

Sunil Gupta is the Edward W. Carter Professor of Business and Head of the Marketing Department at the Harvard Business School. Before joining Harvard, he taught at Columbia and UCLA. Sunil's research interests include choice models, customer management, pricing, social networks and new media. His articles in these areas have won several awards including the O'Dell (1993, 2002, and 2009) and the Paul Green (1998, 2005) awards for the Journal of Marketing Research, and the best paper awards for the International Journal of Research in Marketing (1999) and Marketing Science Institute (1999, 2000 and 2003). Sunil is a co-author of two books. His recent book, Managing Customers as Investments, won the 2006 annual Berry-AMA book prize for the best book in marketing. In September 1999, Sunil was selected as the best core course teacher at Columbia Business School. He is an Area Editor for the Journal of Marketing Research and serves on the editorial boards of International Journal of Research in Marketing, Journal of Marketing, Marketing Letters, and Marketing Science. He is a member of the analytical advisory board of Information Resources, Inc., member of the science council of M-Factor and member of the international advisory board of SRM University, India.

Asim Ansari
Professor of Marketing, Columbia University

Asim Ansari is the William T. Dillard Professor of Marketing at Columbia University. He received his Ph.D. in Marketing from New York University. His current research focuses on customer relationship management, the use of the Internet for targeted product recommendation and customization, and on the analysis of social network data. He is an expert on the Bayesian modeling of marketing phenomena. His research has appeared in several marketing and psychometric journals. He is an associate editor of Management Science and Quantitative Marketing and Economics and is on the Editorial board of Marketing Science. He has received the Paul Green award from the American Marketing Association for his work on e-customization and his other work has been nominated for several awards.

Martin Schleicher
Ph.D. Candidate, Columbia University

Martin Schleicher is a Ph.D. candidate at the Columbia Business School, Columbia University. His research interests are in modeling Internet based product recommendation systems and in the use of social networks for making such recommendations. He is also interested in the econometric modeling of marketing mix decisions. Before joining the Ph.D. program, he worked at the IAE Business School in Argentina as a part-time Professor. He holds an MBA from IAE Business School and a degree in Actuarial Science from Universidad de Buenos Aires.

Notes: