15.838 Research Seminar in Marketing
Professor John R. Hauser
Conference Room (E62-529)

Schedule: Mondays 1:00-2:30 pm, Tuesdays 2:30 pm – 4:00 pm, H1 Only.
(February 18 is a Monday Schedule at MIT, so we will honor that.)

Goal of the Seminar

The goal of the seminar this spring is to explore topics and papers that will help you select and/or complete a research project. I am flexible. We can explore those topics and papers that you feel will help you the most. To date your suggestions have been:

- **Potential Topics**
  - Cognitive simplicity, etc.
  - Conjoint analysis
  - Machine-learning apps
  - Exposition
  - Review placed papers
  - Develop a research proposal
  - Primary data
  - Probability mixing models
  - Quasi-experiments

The seminar will proceed through the reading list more or less sequentially. We will spend as much time as necessary to explore the topics in sufficient depth. This February 2 version contains initial ideas for discussion. I realize that this is an ambitious schedule. We are unlikely to complete all of the readings and topics.

Potential Topics

**Conjoint analysis.** This is an incredibly rich area with literally hundreds of articles published. Conjoint analysis is, by far, the most-used quantitative method in marketing. Not surprisingly, the state of the art in both academia and in practice is quite sophisticated. We’ll try to explore representative topics. As a review, we’ll start with the MBA-level material to establish common ground. We will then explore how to collect data, how to analyze the data, and how to use the data. Along the way we will learn about topics that generalize beyond conjoint analysis. For example, we’ll see machine-learning methods for conjoint analysis and discuss the relative advantages of machine-learning and Bayesian methods.

**Non-compensatory models.** Behavioral science has explored with non-compensatory decision heuristics for about forty years. Until recently, most of this research has been experimental.
Recently, we’ve been able to infer consumers’ decision processes from observed choices. This is an area where machine learning has helped tremendously.

Decision heuristics. With apologies to Song and Nell who have seen this before, I want to introduce the debate between Kahneman-Tversky style behavioral decision theory (as popular in marketing) and the fast-and-frugal perspective (as popular in Europe). The debate is a means to help understand the coming revolution in behavioral science. Redefining classic interpretations is a wide-open area of research. There is a great opportunity to get in on the ground floor.

Consideration sets. This is an old topic that is regaining interest. There are a variety of new questions being addressed. For example, there is a special track at the marketing science conference on the impact of consideration sets on econometric estimation and on managerial actions. I’ve included two citations that tie consideration sets to the fast-and-frugal literature, but I may add more.

Constructed preferences. Again, some apologies to Song and Nell. I am covering this material because there is new interest in how people learn their preferences. This is a fundamentally different take on constructed preferences and a high-potential research area.

The Art of Asking Questions. Many papers in marketing are based on sophisticated methods to tease out causality from “archival” data. However, one of the easiest ways to explore causality is to control the data collection. But collecting “primary” data is not easy. Changing a single word in a question can produce effects that are larger than a behavioral induction. In fact, some “behavioral” papers are really questionnaire effects. I’ve included a few example papers, but this is really an area where you learn from experience. I learned data collection from Glen Urban. I began as a PhD student and have been collecting primary data for forty years in academia and in consulting. I hope to help you become comfortable with collecting your own data.

Goring Oxen. In many fields outside of marketing, researchers make names for themselves by “goring the ox.” Goring and ox means doing research that challenges long-held beliefs and theories. Some philosophers, e.g., Kuhn, believe that it is through such revolutions that science advances. (We won’t debate that this semester, but it is a good debate to have.) Both Marketing Science and the Journal of Marketing Research have adopted strict replication policies because they believe that many papers exploit random noise to find significant effects. (We will not debate this either.) Shane Frederick has written a number of papers challenging existing theories. We’ll sample from his corpus.

Machine-learning applications. We sit at MIT—one of the leaders in machine learning. That gives each of you a competitive advantage relative to your peers. I am currently editing a special issue of Marketing Science on “big data.” The response has been overwhelming and we are struggling to review all of the papers submitted. We don’t yet know if there are gems there, but we are hopeful. This spring I would like us to read some examples that you can build upon. I’ve listed a few that I know, but I have not sampled the field broadly. It would be great if we could find exemplars.
Job-market papers. It would be good to sample three or four of the quantitative job-market papers from the fall of 2013. I am still trying to track down job placements and get final versions of the job-market papers. This module is at the end of the seminar, so it is likely that it will be modified as we learn more. (See www.marketingphdjobs.com for many of the placements.)

Electronic copies of the papers. I have assembled initial copies of almost all of the papers in this reading list. We’ll figure out some way to get them to you.

**Tentative Reading List for 15.838 Spring 2014**
(We are unlikely to cover all of these papers)

**Conjoint Analysis: Overview (MBA Note)**


**Conjoint Analysis: Experimental Design**


**Conjoint Analysis: Hierarchical Bayes Estimation**


**Conjoint Analysis: Incentive Alignment and Self-Explicated Methods**


Conjoint Analysis: Machine Learning Methods, Adaptive Methods, Etc.


Conjoint Analysis: Using Conjoint Analysis


Inferring Non-Compensatory Decision Rules from Observed Choices


Yee, Michael, Ely Dahan, John Hauser, and James Orlin (2006), “Greedoid-Based Non-
compensatory Two-Stage Consideration-then-Choice Inference,” *Marketing Science*, 26, 4, (July-August), 532-549.

**Decision Heuristics (from two perspectives)**


**Consideration Sets and the Recognition Heuristic**


**Constructed Preferences (or are they Learned)**


The Art of Asking Questions


Payne, Stanley (1951), *The Art of Asking Questions*, Princeton University Press. If we can find a copy. There appear to be some used versions available.

http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Dstripbooks&field-keywords=stanley+payne+art+of+asking+questions&rh=n%3A283155%2Ck%3Astanley+payne+art+of+asking+questions


Goring Oxen


More oxen, less gored. References provided for interest, but we are unlikely to cover these


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**Machine Learning Examples**
(A Selected Sampling. We may do some. We may substitute others. I am open to suggestions. I included two of the morphing papers in case you want to read them.)


**Sampling the Job Market**
(We will do a subset of these candidates or others if we so decide.)

Adrian Albert, Stanford. Interviewed at MIT and Wharton. Not placed?


Ron Berman, University of California, Berkeley. Placed at Wharton


Alexander Bleier, University of Cologne, Placed at Boston College


Clarence Lee, Harvard University. Placed at Cornell.


Donald Ngwe, Columbia University. Placed at Harvard.


So-Eun Park, University of California, Berkeley, Placed at ?


Exposition

We will develop an exercise that runs the entire seminar. Part of this exercise will focus on exposition. I strongly recommend that you purchase the following book.