2013 ACR Fellows Address

Paper #1: Choice Architecture, Public Policy and Consumer Research

Eric J. Johnson, Columbia University, USA


Itamar Simonson, Stanford University, USA

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The dictionary definition of a fellow includes: “a member of a learned society.” Well, wow, what a learned society that I am joining. It has a history dating to the first large scale models of the field, in John Howard, distinguished colleagues like Paul Green, Peter Wright, Russ Belk, Sid Levy, Joe Alba and others, and includes friends like Jim Bettman, Hal Kassarjian, John Lynch and now Itamar Simonson. I am deeply and truly honored to join this company.

I am also the fourth fellow from Columbia. This is neat, not only because we have twice as many as any other school, but also because it reflects a central merit of the school: a culture where doing research is valued above other things, something strongly advocated by my predecessors, like John Howard, and by my good friends and role models, Morris Holbrooke and Don Lehman.

I thought I would spend my time today looking backwards briefly, but as anyone who knows me well, I am more motivated by looking forward. I will divide this talk into two sections, the first I’ll call an “an unabashedly sentimental 5 minutes of thanks”, and in the remainder of the talk I will address something more forward looking, talking about how Choice Architecture can make consumer research more relevant.

For purposes of publication in the Proceedings, I’ve moved the gratitude section to an appendix, not because saying thank you is unimportant, but to let readers more interested in the future – as opposed to my idiosyncratic past – an easy entrance.

Consumer Research Should Matter More

As the economist David Laibson has observed, there is a council of economic advisors, but no Council of Psychological or Consumer Researchers. Yet if you study consumption you are obviously studying an important part of the economy:

- Consumers’ decisions about mortgages helped lead to the worldwide 2008 financial crisis, yet their decisions were only of interest to consumer researchers in retrospect.
- Every day consumers make decisions about consumption that will exacerbate or mitigate climate change, including purchasing cars, houses, and appliances which, in the aggregate, will determine the amount of greenhouse gases released. Influencing these choices could have a major impact upon the future.
- While the information technology issues surrounding the launch of the health exchange may dominate short-term headlines, there is a more lasting and important question about the ability of people to select the right policy. Explicit in using a market to facilitate choice is the idea that people will be able to choose the health insurance protection that will best fit their needs. People with interests in consumer behavior should be integral players in the design of the new marketplaces that are part of the Affordable Care Act, but so far have had very limited roles. Similar questions surround any government intervention that utilizes consumer choice, like Medicare Part D, a multi-billion dollar program providing subsidized prescription drug coverage to seniors.
- Yet these topics are not prominent in the consumer research literature, and the voice of consumer researchers is not a major part of the discussion for any of these important debates. One could say that we are at best on the sidelines, or perhaps, to use an analogy, sitting at the kid’s table at the public policy family gathering.

There are many diagnoses and potential cures. In this short talk, I will concentrate on one route to having influence on these important issues: Thinking hard and in a non-superficial way about how the options presented to people affect their choices. The phrase commonly used, and it’s a brilliant coining by Dick Thaler and Cass Sunstein, is choice architecture.

Choice architecture is ubiquitous and inevitable: Either by accident or design every choice situation is presented in such a way that can influence choice. For example, I noticed that the conference organizers knew this and preselected the vegetarian option for us during this conference. And Sunstein and Thaler make this point in Nudge, using their “Cafeteria” example: There is no neutral choice architecture. So, simply put, choice architecture is the set of decisions we make about what, how, and when options are presented to the decision-maker. It is important to realize that everyone, from a parent asking a child to go to bed, to a government presenting options to its citizens, is a choice architect. Remember, whenever you draft choice stimuli for an experiment, you are a practicing choice architect.

Let me describe some of the goals of choice architecture. These are ideas generated by a wonderful collections of colleagues at the 8th Invitational Choice Symposium published in a piece in Marketing Letters (Johnson et al., 2012). Choice architecture can:

- Make decisions easier.
- Make decisions more accurate reflections of consumers’ preferences.
- Help consumers construct preferences to make more accurate hedonic forecasts.
- Make better tradeoffs between individual and societal goals.
- By improving consumers’ decisions, make markets more competitive and efficient.

Now notice that only the fourth goal – that is making better tradeoffs between individual and societal goals – has anything to do with nudging. The simple fact of the matter is that there are no No-Choice architecture options. Just as every building has a design,
they attribute the effects of an intervention, such as a default, to cognition: Do people realize the effects of choice architecture? Do people awareness of the effects of choice architecture?

What are the dynamics of Choice Architecture?

If choice architecture can change preferences, even in directions that are desired by the decision-maker, how long do those changes last? This is fundamental both theoretically and practically. It speaks to the enduring nature of value change and the relationship between preferences and behavior. Itamar Simonson, Jonathan Levav, and On Amir have explored this question and have different perspectives on this issue and obviously more work is being done in this area. However, early work on mere-measurement with Vicki Morwitz (Morwitz, Johnson, & Schmittlein, 1993) showed that measuring intentions changed behavior over a period of 6 months. Other work by Imai, Goldstein, Gurwitz and Gollwitzer (Imai, Goldstein, & Gollwitzer, 2007) looks at changes in voting intentions and its effect on voting, and shows a wear out of a few weeks. Understanding when and why such effects decay will shed light on the fundamental nature of preferences.

Practically, if an intervention just has a short-term effect, and the decision is made often, then the intervention might wear out. Domains with this property include food consumption and saving decisions. Brian Wansink claims we make over a hundred decisions between tradeoffs between consumption and savings every time we pull out our wallet. I do worry that some interventions, like mindsets and priming, have strong effects, but are unlikely to be lasting. To the extent we want to influence reality, we need to consider these dynamics.

I think that in some cases we have been lucky: We have looked at areas where decision is made once, and tends to stick. This seems to be the case where the consideration of the decision is not particularly pleasant, for example Organ Donation, or retirement savings. But the relationship between the temporal nature of interventions, their effects on preferences and subsequent choices deserves much more theoretical consideration.

Are people aware of the effects of choice architecture?

There is a really theoretically important issue here about meta-cognition: Do people realize the effects of choice architecture? Do they attribute the effects of an intervention, such as a default, correctly, to the presence of the default, or do they attribute the choice they made to their own preferences? How much do they know about how well they have made choices in the absence of an intervention? Do they believe that the choice environment improved or worsened their choices? Theoretically, we don’t know much about this, but it is worrisome. We do know that people are likely to adapt to whatever they chose and that suggests they are unlikely to learn.

Let me give you a brief example from some work we have done looking at how well people can make choices on the health exchanges generated by the Patient Protection and Affordable Care Act.

This work (Johnson, Hassin, Baker, Baiger, & Treur, 2013) shows that people have great difficulty choosing a cost effective health plan. Figure 1 shows the results of later experiments. The first bar, labeled Ex. 5, shows the performance of a set of Columbia MBA students. They do relatively well, choosing the most cost effective plan about 75% of the time (as shown by the ascending blue bar) and making an average mistake of about a $100 dollars (as shown by the descending blue bar). However, even when we teach people the meaning of arcane terms like deductible and co-payment, ordinary people do not do well. As you can see in the next bar, they are making serious mistakes, choosing the most cost effective policy less than half the time, and making mistakes that average over $500. Now we have tried several things to help people make better choices and have succeeded in doing so: The subsequent bars correspond to treatments in the study: providing significant incentives (which help very little), providing a summary of costs (termed a calculator), preselecting the best option as the default, or combining defaults and calculators. Obviously, these help, and in the paper, we explain how these savings can amount to billions of dollars.

But how well do people appreciate the effects of these choice architecture interventions? If they understood that calculators and defaults improved their choice, this would be very good news for choice architects: People would be drawn to web sites and vendors that helped them make better choices and avoid those that used unhelpful choice architecture. Public policies that improved their decisions would be supported. We have only started examining the question, but the results are discouraging. When given an incentive, which they should have in reality as these health plan decisions have real consequences, people worked harder and were more confident of their choices than in the default condition, but the reality, as can be seen in incentive bar in the figure, is that they did not do better. Providing defaults and calculators did not improve confidence even though the combination makes them as effective decision-makers as the Columbia MBA’s, as can be seen if you compare the first and last bars in figure 1.
ing on the relationship between choice architecture and awareness of choice quality seems a conceptually interesting and practically important question for future research.

Who is helped and is anyone hurt?

The concept of nudging seems seductive, but it hides the value of the first three functions of choice architecture that we have discussed, and raises important questions. We have been lucky that most of the ‘winning’ examples of choice architecture are in cases where the intervention helps almost everyone. Most people want to increase their savings rate but don’t, most want to become organ donors, but can’t bring themselves to think about their demise.

But people differ along two important dimensions: They have differing tastes and beliefs, and different sets of cognitive skills. Not everyone wants the same health insurance policy, not everyone wants the same kind of retirement plan. One concept that Dan Goldstein and I have talked about is that of ‘smart’ defaults (Goldstein, Johnson, Herrmann, & Heitmann, 2008). Instead of assigning people into a one-size-fits-all default, with a little bit of intelligence, you can default people into what you think is the best choice for them. They are still free to choose something different, but you have gotten them closer to an answer that should be right. Yet, again, questions about awareness of these effects come to mind.

Also, how do we identify these individual differences in cognitive ability or other determinants of the way we make decisions? This is not just as simple as incorporating individual difference variables to show moderation. I’m thinking of identifying the big effects in the real world, and looking at how different people are helped or hurt by different choice designs.

I’ll illustrate with an example from our lab’s current research. We are all getting older: a depressing consequence is that this means we lose our ability to process information quickly, an effect that has been termed by Salthouse and colleagues ‘cognitive collapse’ (Salthouse, 2010). The youngsters in this room have almost a full standard deviation of advantage on fluid intelligence, commonly measured by tasks like Ravens Progressive Matrices and the like. (Don’t get too smug; this is going to happen to you. Fluid intelligence peaks at 20). The good news for older people like myself is that we are improving in what is called crystallized intelligence, knowledge about the world. 60 year olds are much better crossword puzzle solvers than 20 year olds. Ye Li, Elke Weber and colleagues (Li, Baldassi, Johnson, & Weber, 2013) have been examining these effects on financial decisions across the life span. The basic result is that older people made decisions that are often better than those made by younger people, but they make them in different ways, relying on their knowledge of the world and not their brilliantly speedy ability to process new information. This suggests something very important: That the young and old have very different needs when it comes to providing information: That providing fewer alternatives might be more beneficial to elders than to the young, because it reduces the load on their fluid intelligence. In contrast, the young might benefit more from ‘just-in-time’ education about financial facts.

This suggests a different view of the role of individual differences in research; that we should not be concerned with those variables that are ‘theoretically’ interesting, but those that account for great variance in the real world.

How to be relevant

What are the benefits of consumer research? Why should we try to share what we know? I am absolutely convinced that we have quite a bit to offer, and despite the growth of the field and its great promise, it is underappreciated in many ways, not least of which is its influence on public policy. To illustrate in an area of significant concern for me, look at consumer finance. The nascent Consumer Financial Protection Bureau has an Office of Research whose mission is to understand consumer behavior in the service of evidence-based regulation. You might ask how many consumer behavior researchers or psychologists work for the office. The answer is one, and she started last week.

I’ll modestly suggest focusing on some of the issues I have discussed, so focusing on choice architecture in general might bridge the gap between policy and our research. Finally, to increase impact, let me suggest three things:

A focus on the field

Field experiments are undervalued. A couple of years ago, at a preconference panel on having research with impact, I asked the panel about field research. The response was, to be polite, mixed, with many people saying things like: “there are always confounds in field research.” Well the simple reality is that there are always what John Lynch (Lynch, 1982) has called ‘background variables’ and that these confounds and background variables are a big part of reality.

Choice architecture research, more than others, needs to be done in the field, with the relevant population, with dependent variables that look like the actual choice, what Harrison and List (Harrison & List, 2004) call ‘framed field studies’. This may sound like an impossible task, and I can imagine junior investigators, worried about tenure, asking ‘Who is that crazy man up there?’

Consider, however, that:

- Many real decisions are made on-line, that websites are used for many important policy decisions, like deciding when to collect social security, which health plan to pick, or what funds to select for a retirement portfolio.
- On-line participants, particularly if they come from the appropriate population can lend credibility to the research that will increase its impact.
- Field experimentation doesn’t mean field, it can mean on-line environments, and the world, more generally, is starting to look a lot like the lab.
- And by the way, if you are clever, you can establish causality in the field, even without controlling the manipulation, through instrumental variable regression.

One more observation: companies are running experiments now; it is part of what might be called making business more evidence-based, much like Moneyball made baseball more evidence-based. They get it. So we should take advantage of it too. The opportunities for field experimentation are many.

Worry about the size of the effect, the importance of the effect and not the elegance of the interaction

Often, we are satisfied with the fact that our results are statistically significant, and less sensitive to the effects of sample size. These effects tend to be less replicable and less likely to have impact, since, by definition, they suggest that applying the findings is tricky business. Contrast this to results that have several mediators, all of which pull in the same direction, making the results robust. A good example of this might be no-action defaults, which have at least three causes (Dinner, Johnson, Goldstein, & Liu, 2011).

Translate the results into numbers

It’s one thing to report a difference in means, it’s quite another to talk about dollars. In our work on the health exchanges, we could, and do, present the results as a percentage increase in performance.
Appendix: The Unabashedly Sentimental 5 Minutes.

Now as I said, anyone who knows me well, knows that I don't look backwards a lot. To quote research terms invented by a friend, Appendix: The Unabashedly Sentimental 5 Minutes.

There are many people to thank who have helped create the researcher who humbly talks to you today. Current and past graduate students, a particularly wonderful set of postdoctoral fellows, and some really superb research assistants and lab managers, particularly those involved in the Preferences as Memories Laboratory, or PAM-LAB, that I have been running jointly with Elke Weber for the last 10 years. It excites me to see them move up each rung on the ladder from RA to graduate student or postdoc to faculty member.

But I want to extend my particular thanks to people who made a difference early on, as a young working class kid from New Jersey came to realize the he could, perhaps, follow his crazy interests, first in science, and then in something he vaguely knew was something more relevant and interesting, social science and consumer decision-making. Excuse me if I tell you a little about my parents' background. My father grew up on a homestead in eastern Colorado, the first generation son of Swedish immigrants, and occasionally, but not often, he would tell tales of burning corn cobs for fuel, and using the car battery to power the house's only radio, since electricity had not yet reached them. My mom was one of nine children born in Scranton, and my grandfather counted himself fortunate to be a supervisor in silk mills. While wonderfully encouraging, there were not a lot of role models for going to college or graduate school.

I'd like to focus on those most responsible for me choosing the career and research questions that I have. The tale starts with a couple of junior faculty, who were never tenured, in Human Communication at Rutgers, David ‘Louie’ Bender and David Davidson who gave a young RA something more to do than fetch coffee and who did me the great favor of giving me some things to read. Now I am sure you are thinking that Human Communication majors all were scholarship athletes or good-looking people who wanted to be news anchors, and I clearly fit neither role. I majored in this mostly because it had the least required courses, had something to do with social science and I really did not know what I wanted to do. The most important things given to me to read were work in attitude theory and Herb Simon’s Science of the Artificial, a wonderful little book laying out the human information processing perspective. I applied to the Psychology PhD program at Carnegie-Mellon, which was pretty stupid. I had taken only two advanced psychology courses, and didn't get into some other programs because of this. I remember telling one of my letter writers in psychology thank you for his letter and that I had gotten into Carnegie-Mellon, to which he responded disbelievingly, “In Psychology??”

By an astounding accident, Jay Russo spent one year at CMU, making the transition from Psychology to Marketing. During this year I took a 6-week course called Buyer Behavior that used as a text Jim Bettman’s An Information Processing Theory of Consumer Choice (a preprint in mimeo) and I was hooked. I then spent a year and a half at Chicago. There I admired and argued with Hilly Einhorn who offered great encouragement and was a great alto saxophonist. Playing bass for Hilly, Morris Holbrook and Paul Green was a ton of fun, but as they say, outside the scope of this talk.

Back to Jay who provided the right mix of encouragement and challenge. He also went way beyond what was necessary. I had written a paper and submitted to a conference in Sweden, and never heard back. When two weeks before the conference, Robin Hogarth told Jay I was on the program, he encouraged me to go, and lent me the money so I could make the trip. While I paid him back financially long ago, I really cannot pay Jay back for all the advice and encouragement he gave, but I can say thank you.

I should also mention Sarah Lichtenstein, who provided me with lots of encouragement, and was a huge role model for many people in the field.

I was then fortunate that Amos Tversky agreed to host me as a post-doctoral fellow on a National Science Foundation fellowship at Stanford. What followed was an enthralling, challenging, and intimidating intellectual experience. Oh, by the way, it was pretty productive. At this point, I was totally hooked on decision research, did two early papers on affect and risk with Amos, and was pretty schizophrenic. Enthralled by two very different styles of research: The grand and clever demonstration experiment, a technique pioneered by Kahnemann and Tversky, and the careful and narrow information processing style of research, representing my Carnegie roots. I think I’ve never really reconciled the two.

About this time, I started to talk to John Payne. It would appear that I had chased John out of some of the best universities. He was a post-doc at Carnegie who had just left when I arrived, a faculty member at Chicago, who left when I got there, and when I received a job offer from Duke, I’m sure there was a sigh of relief when I didn’t
take it: John was simply too valuable to them. Not long afterwards, John and I were developing production systems of strategies. Soon Jim Bettman joined us on this project. I felt a little like a rookie on the all-star team, but I was nonetheless amazingly comfortable: Our interaction was about the ideas, not egos. As a last bit of nostalgia, I remember that Jim and John would walk through the Fuqua School running our computer simulations on the administrator’s IBM PCs inserting floppy disks at night and retrieving them in the morning. Little did they know they were inventing clustered computing.

In German you refer to your dissertation advisor as your doctor vater or doctor father, so while Jay played that role for me, Jim and John were my uncles, or since I’m from New Jersey, and have spent a lot of time in places used to film episodes of “The Sopranos”, perhaps they were my godfathers.

Along the way, each of these folks saw something and said something that was encouraging, that made me feel that I could do something useful, that I had an interesting idea. This is in strong contrast to the kind of feedback we get so often from reviewers, or that we give each other in questions at conferences. Writing this, I come to feel that I’ve fallen short on this dimension, and hope we all realize how valuable this kind of encouragement can be. As Don Lehman said in his fellows address, it is important. Pass it on….

REFERENCES


A primary goal of “Behavioral Decision Theory” (BDT), including the significant part of BDT research published in marketing journals, has been to introduce an alternative to economic, normative decision theory. More precisely, while not offering a comprehensive alternative decision theory, much of BDT has been devoted to showing that key assumptions underlying economic theory are violated and are inconsistent with the way decisions are actually made. BDT research consisted largely of “effects,” many of which involved demonstrations of preference reversals. BDT research tended to have certain unique characteristics, including (a) avoiding “grand theories,” such as those characterized by boxes and arrows; instead, BDT research led to some general conclusions such as the notion of the construction of preferences; (b) minimal, as required use of mediation analyses; (c) a preference for choice and behavior as dependent measures as opposed to ratings; (d) the introduction of various distinct effects, which are then appropriately named. Researchers have also tried to understand what underlies these effects and their moderators/boundaries. The consumer BDT community has been particularly diverse in terms of the educational background of researchers, many of whom have also been important contributors to the broader Judgment and Decision Making (JDM) field.

Consumers’ BDT researchers have made important contributions to the consumer behavior literature and the broader JDM field. Although we have not conducted a systematic analysis, compared to other consumer research topics, it appears that BDT research published in marketing journals has had large impact on research in non-marketing fields as well as on quantitative researchers in marketing.

The primary objective of BDT has been largely accomplished – BDT research has persuasively demonstrated that the assumption of value maximization and, more broadly, assumptions underlying normative theories of decision making, are violated in systematic ways (such as various context and task effects). Accordingly, this is a good time to reevaluate possible directions for “ex-BDT” consumer researchers. Although each person will make his/her own choices, having a discussion about areas that present promising opportunities and might benefit from the skills and tendencies of consumer BDT researchers may help shape the direction of this large community.

A default option is to just let the chips fall where they may. As further demonstrations of violations of the assumptions economics are becoming less significant as contributions to the literature, various other topics have emerged. Though lacking one common purpose, they address a variety of interesting questions. In general, consumer JDM researchers have paid greater attention in recent years to topics that have particular implications for society, such as decisions concerning health, the environment, financial matters, and ethics. Consumer JDM researchers have also studied currently popular topics in psychology, such as embodiment. And long-standing topics such as intertemporal preferences and moderators of previously demonstrated effects have continued to be examined.

An important, emerging area for consumer JDM researchers is consumer decision making as a reflection and driver of the evolving information environment (Internet, etc.). The current information-rich, socially intensive environment can potentially fundamentally change many aspects of consumer behavior and marketing. Simonson and Rosen (2014) discuss the broad implications of a shift from relative evaluations to absolute evaluations of product quality. Briefly, in an age when consumers can readily obtain rather accurate
information (based on reviews, demonstrations, and other information services) that allows them to predict experience quality, they are less dependent on relative comparisons. For example, consumers’ product quality predictions are less likely to be driven by comparing the options in front of them (i.e., the local context), by prior brand evaluations, or based on prices and countries-of-origin. The current information environment might also change other aspects of consumer behavior such as basic purchase processes, adoption of innovation, and customer satisfaction.

Compared to the previous BDT field, this emerging area of research is less focused on anomalies and preference reversals. It calls for greater emphasis on external validity. Moreover, in addition to controlled experiments, studying consumer decision making in the new environment will involve greater reliance on secondary data. This may require researchers to improve their econometrics skills and/or collaborate to a greater extent with empirical quantitative researchers in marketing.

Such a shift of focus raises other challenges. Because it is more marketing-focused than the previous more general purpose BDT/JDM field, it will require a greater commitment to marketing and consumer-specific research than the consumer BDT community has been accustomed to. Moreover, the general JDM community may find consumer-focused work of less interest. Considering that many researchers in the consumer BDT have strong ties to the psychology and general JDM field, it is unclear if they will be receptive to this direction.

REFERENCE