Culture and Choice: Toward Integrating Cultural Sociology with the Judgment and Decision-Making Sciences

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ABSTRACT: Cultural sociologists frequently theorize about choices and decisions, although we tend to shy away from this language, and from concepts that are used by the judgment and decision-making (JDM) sciences. We show that cultural sociology and JDM are compatible and complementary fields by dispelling some common misunderstandings about JDM. We advocate for a strategic assimilation approach in which cultural sociologists are able to translate their work into key JDM terms like beliefs, preferences, and endowments. Learning to speak the JDM language will allow cultural sociologists to make important, and uniquely sociological, contributions to social scientific explanations of choices and decisions.

KEYWORDS: theory; cognition; interdisciplinarity

HIGHLIGHTS:

- Cultural sociologists theorize about choices and decisions
- Integrating with other fields who study these phenomena can prove fruitful
- Learning the terminology used in these fields will facilitate this intergration

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1. Introduction

James Duesenberry famously quipped that “economics is all about how people make choices [and] sociology is about why they don’t have any choices to make” (1960:233). Though sociologists have emphasized constraint over choice and overdetermination over options, the idea that sociologists don’t think about choice is not wholly accurate. In the American Sociological Association’s 2016 annual meeting program, for example, the words *choice*, *choose*, *decide*, and *decision* appear dozens of times. For instance, one paper investigates “How Black Middle-Class Men Make Decisions about Casual Sexual Relationships” and another explores “How Work, Family, and Lifestyle Factors Shape Medical Trainees’ Career Decisions.” Beyond these explicit uses of decision terms, many more sociological studies could easily be framed in such terms. For example, we hear little about the *choice* to volunteer, attend church, or go to college, although sociologists could conceivably discuss these topics in this way.

Equally revealing is the language that sociologists use to explain *each other's* behavior. “Did you hear that sociologist X moved to university Y?” “It was because they offered her more money, or because she thought she would be more likely to get tenure there, or because it was a higher status place, or because her husband was unhappy in his job.” These sorts of explanations generally evoke beliefs, preferences, and opportunities, and seem to require very little of the apparatus of cultural sociology. We rarely hear our colleagues invoke concepts like *habitus*, *script*, *narrative*, or *logic* while gossiping. And given that cultural sociologists rarely use these concepts to explain their own behavior, perhaps it is no surprise that outsiders find little use for them. Those in government and industry rely much more heavily on concepts borrowed from the judgment and decision-making sciences¹ (hereafter JDM) to understand how people make choices.

We therefore find ourselves in the following situation:

1. Many sociologists are theorizing about choices even if they sometimes shy away from choice or decision words. Though they are perhaps uncomfortable using such language professionally, they have no problem using it to explain their own (and their colleagues’) behavior.
2. JDM scientists explicitly work on choices using a different set of concepts than sociologists.
3. The JDM community has a larger and far more appreciative external audience.

Of course, the fact that outsiders are listening to judgment and decision people does not necessarily imply that their ideas are better. Perhaps outsiders appreciate these ideas for non-

¹ We borrow the term “judgment and decision-making sciences” from Bruch and Feinberg’s (2017) recent review of the field.

scientific reasons. Nor does the fact that sociologists ignore their own concepts to gossip mean they don't have value. Perhaps sociological analyses of behavior are much more powerful than folk cost-benefit analysis but the concepts are just really hard to work with. Or perhaps even sociologists revert back to the cost-benefit language that permeates our culture when they forget to switch "on."

We argue, however, that there is actually enormous complementarity between work in cultural sociology and work in the judgment and decision-making sciences, and that the apparent incompatibilities are the result of an unnecessary language barrier. Consider an analogy:

Once upon a time, scholars from around the world spoke many languages. Over time, one language--English--became the lingua franca and scholars around the world found it more useful to communicate with each other in this language. But one's country's scholars--let's say the Finnish²--refuse to speak or write in English. They believe that only Finnish can capture the true nuances of their research. Over time, they become isolated and communicate only with each other. Few people on the outside can read their work nor can the Finnish scholars really follow the discussion in English anymore. But in their conferences and seminars they continually reassure each other about the barbarity of English and of the nuance and sophistication of their own language. They await the day that the world's scholars will realize that Finnish is superior and embrace it. In the meantime, they maintain a smug self-satisfaction that they at least are speaking the best language.

We think contemporary sociology (and particularly contemporary *cultural* sociology) is a lot like this. Most scholars outside of sociology who are working to understand patterns of behavior rely on the *lingua franca* of JDM, using terms like beliefs, preferences, costs, payoffs, and so on. This language is grounded in economic ideas and has been strongly influenced by the behavioral scientists who criticized economics *in its own language* (e.g. Kahneman and Tversky 1979; Simon 1959; Edwards 1954). This process has resulted in an interdisciplinary network of JDM researchers who speak the same language even though the content of that language has changed over time to include new concepts (e.g., bias, heuristic, satisficing). Scholars in this area disagree with each other about many things but they are at least communicating in a common language.

Sociologists tend to be wary of this decision-theoretic language because it smacks of economics and psychology, two disciplines that are supposedly individualist and reductionist and thus incompatible with sociology. We think this is a misconception and will explain why below. But for now we want to outline some possibilities for making sense of this situation:

² No offense intended to non-metaphorical Finns.

1. The language of cultural sociology and the language of JDM are incompatible. In this case, translation and integration are neither desirable nor possible. Sociologists should simply attempt to persuade scholars in other fields to do what we do and to persuade policy experts and decision makers to listen only to explanations that are sufficiently “sociological.”³
2. The languages of cultural sociology and JDM are compatible. Therefore, cultural sociologists should do one of the following:
 - a. Acknowledge rhetorically that the fields are compatible but continue doing cultural sociology without paying attention to JDM; or
 - b. Borrow concepts from JDM to improve cultural sociology; or
 - c. Try to integrate the fields by encouraging judgment and decision scientists to adopt a sociological vocabulary; or
 - d. Try to integrate the fields by adopting JDM language wherever possible.

We begin by considering whether cultural sociology is, in fact, compatible with JDM.

2. Is Cultural Sociology Incompatible with Judgment and Decision-Making Sciences?

The first question is whether there is an inherent incompatibility between the theoretical vocabularies of JDM and cultural sociology. Addressing this question means having a grasp of the vocabularies themselves. To do this fully, one would need to fully outline “judgment and decision science” and “cultural sociology,” which is far beyond the scope of this paper. Let us instead begin with a simplified sketch of a basic approach to judgment and decision theory and see if it fits with cultural sociology.

The fundamental building blocks of JDM are *beliefs* and *preferences*, along with a situation in which these come into play. In some simple situations, beliefs or preferences are not even really necessary. Imagine a situation where someone has a choice to bet \$1 each on 10 flips of a fair coin where she will win \$3 each time it comes up heads. This sort of toy situation is simple to work with because correct beliefs are encoded in the question (the actual payoffs and probabilities are known) and it is safe to assume that people prefer \$3 to \$1.⁴ In situations where explicit probabilities are not stated, one must construct a belief about the likely outcomes. For example, in the Prisoner’s Dilemma, one must try and come up with an estimate of how likely one’s partner is to cooperate or defect. The preferences over payoffs here are fixed (e.g., it’s better to serve less jail time than more) but beliefs matter. Then there are games (see, for example, Willer 2009) where people have to both generate beliefs about what other people will

³ We will here ignore the possibility that they are incompatible and sociology has nothing to offer, though that is logically possible.

⁴ There are situations, however, where people prefer \$0 and fairness to some amount of money alone.

do (cooperate or not) and where they can try to get two different types of things (money or status). Here both beliefs and preferences are variable and affect choice behavior. In more complex situations (like repeated games), actors also have time to learn (i.e., to try to form better beliefs) about the structure of the situation and the likely behavior of interaction partners.

Are these simple situations compatible with the ways a cultural sociologist might approach choice behavior? Consider the following possible objections (among others):

1. But JDM assumes people have complete information!
2. But JDM assumes people have unlimited computational ability!
3. But JDM assumes people only care about money!
4. But JDM is individualistic and lacks social context!

These are the sort of objections one often hears to JDM among sociologists but even a cursory look at the JDM literature would dispel them. Indeed the whole thrust of developments in JDM over the past several decades is that specific assumptions of the simple “maximize expected utility” model (MES) should be relaxed. Modern JDM takes issues of cognitive limitations, preferences for non-monetary rewards, and social influence very seriously, even if some of the ways they have of dealing with these issues are admittedly incomplete (see e.g., Newell et. al 2015). In the remainder of this section, we consider each of these potential objections in turn.

2.1 Does JDM Assume People have Complete Information?

JDM research testing and correcting the assumptions of the MES model has taken two major approaches: correspondence theory and coherence theory (Hammond 2000). Correspondence theory seeks to pinpoint the ways in which people’s information fails to correspond to information in the “real world.” These correspondence failures are known in the JDM world as heuristics and biases. Since the publication of Tversky and Kahneman’s (1974) article in *Science*, a cross-disciplinary cottage industry has flourished to study these heuristics and biases.

A central focus of JDM -- some would argue, *the* central focus -- is to document these heuristics and biases. The goal here is to understand the underlying psychological processes, and ultimately, to learn how to intervene in order to “nudge” people toward less biased, more conscious behavior (Thaler and Sunstein 2009).

The sociologist may not necessarily care to understand the largely universal, biophysiological drivers of these heuristics and biases, nor be interested in individual-level interventions to resolve these shortcomings (see Zerubavel 1997). But the sociologist should care about the social processes by which people come to have (in)complete information about their world. In

particular, social dynamics mean that people are exposed to biased samples from which to draw their inferences about their world, such as racially segregated schools or neighborhoods (Moody 2001; Sigelman and Welch 1993), or media representations that tend to reinforce cultural stereotypes (Koivula 1999; Foy and Ray forthcoming). Social dynamics mean that people are exposed to biased search strategies when seeking out new information, such as homophilous social networks (McPherson, Smith-Lovin, and Cook 2001). Social dynamics mean that people encode information in a biased way, such as the deflection and relabeling of pieces of information that do not fit their current understanding of the world (Hunzaker 2016). Correspondence theories in JDM dismantle the notion of the rational actor's "perfect" or "complete" information, and sociologists have important contributions to make about the origins and process of this information distortion.

2.2 Does JDM Assume People have Unlimited Computational Ability?

Coherence theory tackles the assumption of unlimited computational ability head-on. This approach arose from the observation that there is often internal inconsistency among people's beliefs. Such work maps how people tend to make repeated mistakes when estimating probabilities, such as base-rate neglect (Pennycook and Thompson 2017), the conjunction fallacy (Tversky and Kahneman 1983), and the disjunction fallacy (Bar-Hillel and Nater 1993). We commit these systematic errors in judgment precisely because our brains do *not* have unlimited computational ability.

More generally, JDM scholars recognize that heuristics are a feature of our limited computational abilities. Yet it is important to understand that heuristics are not necessarily detrimental. These heuristics result in cognitive strategies like satisficing or "take the best," which allow us to minimize search costs while still obtaining an acceptable result. These strategies are rather efficient algorithms that often work quite well for maximizing expected utility. JDM recognizes that heuristics are "fast and frugal" mental shortcuts that have evolved in the human brain to help us get by so that we are not overwhelmed with constant calculations in our everyday lives (Gigerenzer and Goldstein 1996:650).

Two points are worth bearing in mind about the mind's computational ability. First, the brain is an extremely powerful and complex computational processor. Neuroscientists estimate that the adult brain has an astonishing 80 billion neurons, with 100 trillion connections between those neurons (Zimmer 2011). Sociologists should avoid the temptation to think of the brain as a simplistic, error-prone device. Cognition is, of course, an imperfect process, but that imperfection is largely a feature of the "wicked" learning environment from which the brain gathers and updates information (Hogarth, Lejarraga, and Soyer 2015:379). And that environment is, of course, thoroughly social.

Second, just because we cannot intuitively comprehend *how* the brain processes doesn't mean that its workings are simple (see Martin 2010 on this point). The issue here is the extent to which we are *aware* of our brain's functions. The brain has both conscious and subconscious systems which concurrently filter information -- meaning that much of our brain's functions are operating outside of conscious awareness. Otherwise we would easily become overwhelmed by the sheer amount of information being constantly taken in, processed, and stored. The classic "cocktail party" illustration of being able to engage in conversation with one person while many other nearby conversations are going on serves to remind us how much our brain is doing without our conscious awareness. Dual-process models of cognition recognize that we may be engaged in deliberative (slow), automatic (fast), and even other levels of thinking at one time (Evans 2007).

2.3 Does JDM Assume People Only Care About Money?

This view that JDM assumes that people care only about money or other material outcomes is perhaps attributable to the typical methods used by JDM researchers. Many studies in JDM involve subjects (usually undergraduate students) playing some computer-based game (like the dictator game) in which they must make a series of decisions in order to win some money. These studies are especially common among the 'incentive compatibility' game theory experiments in the field of economics. These experimental designs may give the illusion that the theories only apply to money as the utility being maximized. In reality, even the basic MES model is highly flexible and applicable to any utility, whether it be monetary or otherwise. This is an important area in which sociologists can make contributions to JDM: by extending the utilities in question to social ones, like "dignity" or "legitimacy." Indeed, Robb Willer (2009) is one sociologist who has argued that the willingness to trade social status for material resources is one seemingly successful solution to the classic free-rider problem identified by Mancur Olson (1965).

2.4 Is JDM Individualistic and Lacking in Social Context?

JDM has strong roots in social psychology, with some of the earliest work in the field of judgment and decision-making being done by Kurt Lewin -- who originated the concept of "group dynamics" and studied the way individuals work together to make choices -- and Solomon Asch -- who famously demonstrated the impact of group conformity on individual decision-making. Modern work in JDM accounts for social context in three ways: in the decision-making process, in the learning environment, and in the origins of beliefs, preferences, and endowments.

Work in JDM on the social nature of the decision-making process takes into consideration the idea that many choices in life are made by more than one single decision-maker. This line of work seeks to understand whether groups are more or less efficient when making decisions,

leading to theories about the “wisdom of the crowd” and “groupthink” models (for reviews, see Surowiecki 2005; Esser 1998).

The social features of the environment inevitably structure how people learn about their worlds and move within them. These are known more generally as “context effects” in JDM. One of the most well established heuristics is the “anchoring effect.” This heuristic states that a person’s choice is influenced by the other options around it, so we pay more for an item in a negotiation if the first offer for the item is set at a high price. Similarly, the framing effect reflects the fact that the way options are presented (i.e. as gains rather than losses) can influence a person’s choice. Social institutions (like the education or health care system) profoundly shape available choice sets in ways that affect decision making. Recent work in JDM also indicates that our very perception of the choice-set is limited by social phenomena, such as what is morally acceptable (Phillips and Cushman 2017).

More generally, the availability and representativeness heuristics explain how people make guesses about likelihood of events based on their prior knowledge. In the case of the availability heuristic, they draw on the most readily available piece of information -- which may be the most vivid or recent item they can call to mind, whereas in the representativeness heuristic, they are assessing the extent to which an occurrence resembles a broader class of phenomena (Kahneman and Frederick 2002). This pair of heuristics demonstrates that people understand the probability of an event based on how much they are exposed to other similar occurrences. Of course, the experience one has of the world is greatly determined by one’s social location. For instance, whether someone perceives an African American boy walking down the street as threatening or not will depend, among other things, on the number of African Americans that person has met, as well as the way African American men are portrayed in the media she consumes. These effects and heuristics -- and many more -- which are central to JDM are profoundly intertwined with the social environment.

JDM recognizes that our beliefs, preferences, and endowments originate in social processes. The theory of “availability cascade,” for instance, explains how collective beliefs arise and are reinforced (Kuran and Sunstein 1998). JDM even recognizes collective memory as an important source of beliefs and subsequent preferences (Pennebaker, Paez, and Rim 1997). Moreover, JDM does not presume that actors are inherently selfish; people can have preferences for altruism or selflessness. More generally, people can have preferences about specific or general others that may or may not yield direct benefits to the preference-holder herself (e.g., “I want my children to attend college”).

2.5 A Final Objection to JDM

Perhaps beyond any specific issue sociologists might have is the objection that JDM is about *decision* (a term that sounds very conscious and deliberate) whereas cultural sociology (following Bourdieu) has focused almost entirely on *habit*. In “A Pragmatist Theory of Social Mechanisms,” for example, Neil Gross contrasts his cultural theory of action with “rational choice theory” (which is effectively the antecedent theory to modern-day JDM) primarily by distinguishing the two perspectives on this issue. As an example, he considers Schelling’s work on residential segregation and argues for a pragmatist/cultural modification of his model along habitual lines:

“What would be the value of such a respecification? [... A] pragmatist approach would allow preferences for varying levels of racial homophily in one’s neighborhood and the tendency to move if those preferences are violated -- the decision-rule in question -- to be profitably reconceptualized as individual behavioral habits. This would permit such preferences to remain latent without losing their causal power; relax information and calculability assumptions and replace them with a focus on interactionally and culturally mediated experiences of comfort within socially defined neighborhood boundaries.”
(Gross 2009: 373).

There is more to the argument than this, but a main premise here seems to be that people don’t sit down with a piece of paper, precisely calculate the percentage of minority residents in their neighborhoods, and evaluate whether their consciously held threshold has been violated. Despite the usefulness of such a view as a foil, we’re not sure this is what Schelling had in mind.

What Gross is arguing is that the beliefs (e.g., “what proportion of my neighborhood is not of my group?”) and preferences (e.g., “what is the maximum value I am OK with?”) rarely appear consciously in working memory but instead manifest in feelings of comfort or discomfort. We think he’s absolutely right. But this line of argument confuses the *mode* of storage and retrieval with the *content* of what is being stored and retrieved. If one allows for implicit beliefs and implicit preferences in a decision-theoretic framework, then the contrast Gross is drawing disappears. We all certainly have the habit of acting as if the sun will rise each morning but that doesn’t mean it’s not also a *belief* that the sun will rise. And if someone consistently chooses representational art over abstract art when decorating their home or office, then it is perfectly fine to state that that person has a *preference* for representational art, whether they are able to state that explicitly or not. This is the whole thrust of the implicit attitudes literature (see Petty, Fazio, and Brino 2009).

In this way, one can read Bourdieu’s *Distinction* as being about the formation of implicit beliefs (e.g., “my sort of people don’t do X”) and implicit preferences (e.g., “I don’t like X”) through

processes of social learning in environments that differ by conditions of social class. The idea that preferences and beliefs have to be fully conscious and articulable in order to be counted as preferences and beliefs is not consistent with how decision theorists think about “rational choice,” who, for their part, explicitly differentiate between “stated preferences” and “revealed preferences” (see Varian 2006).

These comparisons bring us to consider an interesting parallel between the development of rational choice theory and cultural sociology. Influenced by behaviorism, both postwar rational choice theorists and early “cultural turn” theorists were skeptical about our ability to measure what was going on inside actors’ heads. The groups responded to this problem in two different ways. Rational choice theorists assumed that there was a one-to-one correspondence between the environment and an actor’s perception of the environment. If one simply assumes that actors understand the situation perfectly and have perfect calculative abilities, then we don’t need to measure beliefs or preferences. People simply respond to incentives and we can infer their preferences from their actions (hence the term “revealed preference”). In cultural sociology, this skepticism manifested in a rejection of “subjectivism” and an emphasis on “discourse” (see Wuthnow 1989). The idea here was similar -- we can’t see what people think, so don’t even try. Focus only on what they do.

Given developments in the cognitive sciences over the intervening several decades, however, scholars in both of these fields are much more sanguine about our ability to measure beliefs and preferences even when actors have a hard time articulating them (see DiMaggio 1997 on this very point). This convergence means that JDM and cultural sociology could intersect on the issue of the formation and representation of beliefs by theorizing with simple approximations to Bayesian reasoning or using networks of associations built up through experience.

Despite these potential complementarities, one of the reasons for the perceived incompatibility of JDM and cultural sociology is the former’s emphasis on general processes and the latter’s emphasis on group or subgroup differences. Gross (2009:374) contrasts an economic perspective where a single decision rule applies (e.g., lowered interest rates lead to increased borrowing) to a cultural sociological approach in which the same conditions might lead to different behaviors because of different cultural interpretations (e.g., how household resource availability affects fertility among “recent immigrants from Mexico, poor African Americans in the inner city, and upper-middle-class suburban white professionals.”) These are real differences, but they do not necessarily imply incompatibility. It might be the case, for instance, that pretty much *everyone* engages in probability weighting by giving too much weight to extremely low probabilities but that different groups have different beliefs about the probabilities of (say) having an adverse reaction to a vaccine. Consistent biases in risk perception can coherently be combined with different ideas about *which* particular risks are salient (see for instance Kahan and Braman 2006; Kahan et al. 2007; Kahan et al. 2009; Kahan, Jenkins-Smith and Braman 2011).

Let us now summarize our key points about the compatibility of JDM and cultural sociology:

1. JDM no longer maintains objectionable assumptions about perfect information and unlimited calculative ability that it did in its earlier incarnations (such as rational choice theory).
2. Sociologists have confused ideas about *storage method* (habit vs. declarative memory) with ideas about *storage content* (beliefs and preferences).
3. JDM emphasizes general processes and tendencies whereas cultural sociology emphasizes group differences, but these emphases are not incompatible.

Taken together, these three premises lead to the conclusion that cultural sociology and JDM are not, as some sociologists would argue, fundamentally incompatible.

3. Cultural Sociology and the Judgment and Decision-Making Sciences are Compatible. So What?

Let's assume that the argument above is persuasive. What should cultural sociologists do about it? In this section we consider four possibilities: status quo, importation, exportation, and strategic assimilation.

3.1 Maintain the Status Quo

One potential reaction to the above is, "well that's nice." In the short run, at least, there is no instrumental reason for cultural sociologists to proceed any differently. People doing what their colleagues see as good research by internal (sub)disciplinary standards will still yield jobs and promotions. Unfortunately this work is unlikely to be taken seriously by outsiders. And it still leaves us in the position of not speaking the same language as scholars in other fields who study social behavior (e.g., policy, education, epidemiology).

3.2 Import JDM Concepts

In recent years, cultural sociologists have gained traction on some interesting sociological problems through the importation of concepts from work in cognitive science (a close cousin of JDM; see, e.g. Johnson-Hanks et al. 2011; Srivastava and Banaji 2011; Lizardo and Strand 2010; Martin and Desmond 2010; Ignatow 2009; Vaisey 2009; Cerulo 1998). Though this approach has been useful, it generally results in a one way "flow of trade," with outside

disciplines influencing us, but little or no influence traveling the other way. These importation efforts also generally suffer from one or two specific problems.

First, effective importation usually requires translation into the “native” language. For instance, System 1 and System 2 processing gets translated into Giddens’ “practical consciousness” and “discursive consciousness” in the sociological literature (e.g. Vaisey 2009).

Second, much of the importation remains solely at the level of theory and argument, and has a very weak connection to the actual measures we use in our research. For example, both authors have used the “schema” concept from cognitive science in our own work (e.g. Homan, Valentino, and Weed 2007; Beyerlain and Vaisey 2013; Vaisey 2009), but this is primarily an act of interpretation. What we often have when we want to talk about a “schema” is a conventional survey item or set of items that we choose to interpret in a specific way, rather than a concept that is precisely defined or adequately measured (see Hunzaker 2016).

Overall then, although importation has been a useful early step in creating bridges between cultural sociology and JDM (and related fields), it will likely not be a successful long run strategy.

3.3 Export the Language of Cultural Sociology

Another possibility is that we attempt to persuade outsiders to speak our language. We put this possibility here for logical completeness but we know of no one who takes this idea seriously. There are two reasons that this is a bad idea. First, native speakers of the cultural sociology language are a much smaller minority than native speakers of the JDM language. Second, our concepts are generally ill defined and provoke disagreement even among ourselves. Even basic definitions of key terms like habitus, field, and logic (not to mention “culture” itself!) have proved elusive.

This does not mean that the *ideas* or *findings* of cultural sociology are not likely to be of great interest to outside scholars or policymakers. It would be easy to misread our argument as suggesting that there is nothing of value in cultural sociology. That is not our claim. Instead, as we will outline in the next section, our contention is that we need to find ways of translating our very important findings -- and ultimately our original work -- into the *lingua franca* of the other social and behavioral sciences.

3.4 Strategic Assimilation

The final option -- and the one we advocate here -- is what we will call “strategic assimilation.” The idea is simply that wherever and whenever sociologists can use the language of JDM, they should do so. The key terms we see are *beliefs*, *preferences*, and *endowments*. Arguably, these terms are so simple and self-evident that they need little explanation -- indeed, this is one of the appeals of adopting JDM language. But we will define them anyway for the sake of absolute clarity, and to ensure that the cultural sociologists and JDM community are on the same page.

Beliefs are (or could be rendered as) propositional statements about the self, others, and the world. They may or may not be accurate, true, or logically coherent or consistent with one another. They can be held with varying degrees of certainty. They are subject to updating depending on one’s experiences.

Preferences are sometimes represented by “utility functions” in the JDM world. A preference is simply the degree to which someone wants a particular outcome or thing. Not all people have the same preferences, nor do people who have similar preferences necessarily hold them to the same degree.

Endowments are things that a person has. This may be money, stuff, or even non-tangible things, like skills or knowledge. The value of an endowment depends on the social context.

Perhaps there is some parallel universe in which the language of cultural sociology has become dominant and everyone in the behavioral sciences speaks in terms of the habitus, toolkits, and logics. Despite the vagueness of some of our key terms, we do not want to rule out that logical possibility. For better or worse, however, we do not live in that universe and our insistence on using our native terms is preventing us from joining the conversation with the other social and behavioral sciences.

It is worth emphasizing the value of cultural sociology here once again. Our recommendation that cultural sociologists engage in a process of strategic assimilation does not mean that people in other fields are doing better work than we are. It doesn’t mean that we should do the work they are doing. We think sociology is a great discipline, but its language often holds it back. Imagine a world, for example, where Bourdieu’s *Distinction* is known by all behavioral scientists as the *magnum opus* on how class environments shape people’s utility functions and consumer preferences. Imagine a world where Ann Swidler’s work is about how the endowment effect functions not only for goods but for skills -- people like to do what they already know how to do. This is a world where sociological research is at the heart of the social and behavioral sciences.

The key point is that the *work* would not have to be different. But by using the language of JDM we would be making it that much easier for sociological ideas to gain influence and add insight to a common conversation.

4. A JDM Dictionary for Cultural Sociologists

To begin a process of strategic assimilation between the worlds of cultural sociology and JDM, we must first speak a common language. As we have argued, cultural sociologists and judgment and decision scientists are often theorizing and studying the same concepts, albeit with different emphases. Although cultural sociologists need not drop all reference to habitus, fields, scripts, and logics, they should at the very least understand how a judgment and decision scientist would refer to these concepts. Much like an English-Finnish dictionary, a cultural sociology-JDM dictionary is an important first step for enabling communication and understanding among both cultural sociologists and judgment and decision scientists.

Small, Harding, and Lamont (2010)⁵ provided cultural sociologists with a set of seven key concepts of “culture.” We will use these seven concepts as potential sites of assimilation where we may begin building bridges between cultural sociology and JDM. Although these seven concepts inevitably do not cover all of the ways cultural sociologists think about culture, they provide an important starting point. Small et al.’s 2010 article has been cited more than 400 times at the writing of this paper, on topics ranging from criminology to race to gender to poverty to the family. Their article has clearly become a “dictionary” of sorts for sociologists who wish to make “cultural” arguments or who think about the role of culture in their topic of interest. We will use the concepts from this article as the “source” language, and the three simple ideas of “beliefs,” “preferences,” and “endowments” to translate their concepts into the “target” language of JDM.

4.1 Values

Small and colleagues (2010) define values as “the ends toward which behavior is directed (as opposed to the means to achieve them, or the lens through which to interpret action)” (14). Values are most closely related to the JDM term *preferences*, though they are not synonyms.

Preferences, in the broadest use of the term, simply refers to the fact that a person likes one imagined outcome more than another. This could encompass anything from preferring that a server bring me chocolate ice cream rather than vanilla, to preferring that gay people be allowed

⁵ Their article is a modified version of an earlier chapter written by Lamont and Small (2008). That chapter outlined six concepts of culture, whereas the 2010 version includes the original six, plus “values” as the seventh. We therefore rely on the newer version authored by Small, Harding, and Lamont, since it includes more concepts that may be of use for cultural sociologists.

to marry as opposed to not being allowed to marry. These are clearly associated with the “ends” to which Small and his colleagues refer.

All preferences are not created equal, however. There are at least two ways in which we think it’s useful to think about preferences becoming more value-like. The first is that some preferences are not substitutable. For example, although I might prefer chocolate ice cream for dessert, I’d happily accept vanilla and \$10 instead. A marriage equality activist, by contrast, may prefer marriage equality to such an extent that she would be extraordinarily reluctant to trade it off for marriage inequality and any other good. As a preference becomes less and less “tradeoffable,” it becomes more and more like what we would call a value.

A second way that preferences become value-like is when they are about other people’s preferences. A value here is a kind of meta-preference -- a preference I strongly prefer others to have. In this way, values take on a public-facing orientation that “regular” preferences do not have. For example, even though I prefer chocolate to vanilla, I don’t care that lots of people out there have different preferences (unless we’re trying to buy ice cream to eat together). On the other hand, many people object strongly to others’ preferences in certain domains. For example, many of us would strongly object to a white person who prefers not to have a black neighbor or to a man who prefers that his female partner do all the household labor.

Contemporary cultural sociology already acknowledges the important distinction between public and personal culture (Lizardo 2016; Patterson 2014). Meta-preferences can explain public action, such as that taken by politicians to win popular support, as well as the effort people expend to falsify their own public preferences (see Kuran 1995).

Despite occasional claims to the contrary by sociologists, there is a well-established relationship between preferences and action (see the related discussion in Vaisey 2014). Aside from the overwhelming preponderance of evidence in other JDM fields (economics, psychology, cognitive science), much work in sociology has also demonstrated the relationship between preferences and action, even if it does not use the term “preference” to make this claim. For instance, Armstrong and Hamilton (2015) argue that different “orientations” toward college (wanting to party versus wanting to succeed academically) lead to different class mobility trajectories -- though these are of course influenced and moderated by the organizational features of the university.

4.2 Frames

Frames are defined by Small and coauthors as the way people “cognitively perceive themselves, the world, or their surroundings” (14). Frames are easily understood in JDM terms as beliefs. Beliefs are of special interest to sociologists for a few reasons.

First, as Small et al. point out, “different individuals perceive the same events differently based on their prior experiences and understandings. They encode expectations about consequences of behavior and the relationships between various aspects of our social worlds” (15). This highlights two important contributions sociology is making in this area of belief studies. Sociologists study the social patterning of these beliefs. For instance, Smith and Powell (1990) examine gender and SES differences in expected income payoffs to educational investments, finding that lower-SES men expect much greater (and likely inflated) income payoffs to a college degree as compared to their middle class counterparts. Sociologists also study the learning process (what sociologists have called “socialization”) for these beliefs. For example, Tyson’s (2011) ethnographic work shows how the racial composition of schools influences the extent to which students learn to associate whiteness with academic achievement.

Second, cultural sociologists recognize that beliefs “structure how we interpret events and therefore how we react to them” (Small et al. 2010:15). Beliefs, then, are an important condition for action. Sociologists have long understood that we often act on our *beliefs about reality*, rather than reality itself. The century-old Thomas theorem – the power of a self-fulfilling prophecy -- encapsulates this notion. Merton (1968) famously recounts the story of a run on a bank in 1932 as a classic example of this theorem -- merely believing that the banks would fail was enough to cause them to fail. Beliefs are certainly not the only condition for action, but they play a critical role.

JDM recognizes that beliefs are not produced in a vacuum. In fact, much of JDM has worked to show how our beliefs are subject to systematic biases and revisions, many of which have social implications. A key finding of JDM is that people develop beliefs based on the most accessible information available to them, known as the “availability heuristic.” Sociologists can investigate the social process by which certain information becomes “available” for belief formation -- such as media coverage, network exposure, and participation in certain institutional settings.

Another key finding of JDM regarding beliefs is how belief formation (and revision) can be self-serving. Confirmation bias -- our tendency to seek out and absorb information that confirms our already-held beliefs -- is one of the most robust and long-standing findings in JDM (Nickerson 1998). Several social psychological theories in sociology take this principle as their orienting assumption, namely the “control” theories, such as Affect Control and Identity Theory (Burke and Stets 2009; Robinson, Smith-Lovin, and Wisecup 2006).

4.3 Repertoires

Small and colleagues define repertoires as “a list of strategies and actions in [a person’s] mind” (16). They note the similarity to Swidler’s (1986, 2001) notion of “toolkit,” which we will treat

as conceptually identical, since a “toolkit” can also be defined using JDM terms in the same way as a “repertoire”: as an endowment of skills. Small et al. further note -- echoing Swidler (1986) -- that “people are unlikely to engage in an action unless the strategy to perpetuate it is part of their repertoire” (16).

JDM scholars have already documented an “endowment effect” for tangible goods: studies show that people are especially averse to losing items that they already own, rather than those that they could, in theory, own (for reviews, see Morewedge and Giblin 2015; Ericson Marzilli and Fuster 2014). The Lamontian “repertoire” or Swidlerian “toolkit” corollary to this endowment effect would extend this theory beyond tangible goods to skills. Thus, people are more likely to do what they already know how to do. Indeed, this is a key insight in cultural sociology: recent work by Calarco (2014) and Jack (2015) uses this proposition to convincingly explain why capable students with low SES underperform in school and college. Yet the JDM work on the endowment effect has yet to acknowledge the repertoire/toolkit corollary.

4.4 Narratives

Narratives are a “causally linked sequence of events” in people’s minds (Small et al. 2010:16). These take the form of “stories people tell about themselves and others” (17).⁶ Using JDM, we can simply define narratives as beliefs about one thing causing another. JDM researchers have long investigated mental causal models (Sloman 2005), causal attributions (Hewstone 1991), and mental simulations (Kahneman and Tversky 1982) to examine how people understand causation. Much of this work on causal beliefs in JDM has focused on how people incorrectly estimate the probability of one thing causing another.

A cultural sociologist is interested in causal beliefs about things which are simply social in nature -- such as what causes some people (e.g., me) to be poor. Small and coauthors provide the example of Young’s (2004) findings on poor black men in inner city Chicago regarding their beliefs about what caused their socioeconomic circumstance. The men who are more isolated from mainstream institutions believe that their poverty is caused by a lack of hard work, whereas the men who are less isolated believe their poverty is a function of their lack of hard work *and* the prejudice or discrimination to which they have been subjected.

In another corner of sociology, the “stratification beliefs” tradition examines why people think *other people* are poor (or rich). This scholarship has led to the development of an important

⁶ One also finds the term “scripts” in cultural sociology, which we argue is conceptually identical to “narratives” from a JDM perspective. Narratives and scripts are both beliefs about something causing something else. We would argue that the key differentiation between these terms for cultural sociology scholars seems to be whether or not the events are in the past or future. Thus, “narrative” is often used to refer to beliefs about things that have already occurred (cf Gross 2002; Bearman and Stovel 2000), whereas “script” is often used to refer to beliefs about things that have not yet occurred (cf Harding 2007).

trichotomy (individualist causes, interactionist causes, structuralist causes) that is useful for understanding why people support or oppose government redistribution policies (Homan et al. 2017; Hunt 2007, 2004, 2000, 1996; Kluegel and Smith 1981).

More generally, cultural sociologists often claim that what unites cultural sociology is the study of the processes of “meaning-making” or “sense-making”.⁷ This “meaning-making” or “sense-making” is, in JDM terms, people believing that a certain (set of) thing(s) caused the world to be the way it is. The cultural sociologist presumably has a lot of useful things to say about the social process by which these causal beliefs come to be formed and what their effects are.

4.5 Symbolic Boundaries

Small and coauthors define symbolic boundaries as “conceptual distinctions that we make between objects, people, and practices” (17). We can thus think of symbolic boundaries as beliefs about the reality of social groups, their relation to other groups, and about the practices that define these relations. JDM researchers have engaged in this work through studies about how we develop reference groups and how we use categorical thinking when judging other people (McCrae and Bodenhausen 2000).

An important implication cultural sociology scholars often make when invoking “symbolic boundaries” is the idea that these are used to create or reinforce hierarchies between groups. Thus, the cultural sociology corollary for beliefs about people or the things they do is that people are motivated to create or maintain their identity by constructing an in-group and an out-group (Tajfel and Turner 1979).

4.6 Cultural Capital

Cultural capital is defined by Small and coauthors as “knowledge or information acquired through social experience... styles or tastes associated with upper-class membership... widely shared, high status cultural signals” (18). The concept of “cultural capital” has been notoriously misused -- or, at the very least -- used in varied and contradictory ways that serve to further complicate, rather than clarify, social processes (Lizardo 2005; Lareau and Weininger 2003; Holt 1997; Lamont and Lareau 1988).

Using JDM terminology, we can easily define “cultural capital” as a specific kind of non-material, non-monetary endowment. Recall that we earlier defined endowments as simply “things someone has.” Sociologists often call these “resources.” Of course, economics already uses the idea of “human capital,” which is both non-material and nonmonetary. The relevant

⁷ In fact, Spillman (2001) opens her canonical reader, *Cultural Sociology*, with this very proclamation as its first sentence: “Cultural sociology is about meaning making.”

distinction between human capital and cultural capital is that human capital is task-relevant (e.g., knowledge of anatomy for a doctor) whereas cultural capital is not task-relevant (e.g., knowledge of classical music for a doctor).

Sociologists know that different kinds of cultural capital are differentially rewarded depending on the environment. Endowments, like any currency, take their value from the social context. Thus, a preference for opera is useless for a manager seeking to relate to his subordinates in the workplace (Erickson 1996; see also Halle 1993), but may be useful for cementing strong ties between board members of a company (Lizardo 2006).

4.7 Institutions

Small et al. define institutions in three ways: as “formal rules of behavior that are codified as laws or regulations,” as “norms of appropriate behavior that are enforced through informal sanctions,” and as “taken-for-granted understandings that simply structure or frame... how actors perceive their circumstances” (19). We will define each of these in turn using JDM terminology.

Institutions as “rules” can be understood as beliefs about counterfactual future states. “What must I do to avoid sanctioning, or to get what I want?” “How will it affect my grade if I don’t turn in this paper?” “How many credits do I need to graduate?”

Institutions as “norms” can be understood as beliefs about what other people generally do and will likely do again. “What kinds of things do people wear to graduation?” “How many times do students meet with their advisors?” “How many questions can I ask in class before I am seen as annoying?”

Institutions as “taken-for-granted-understandings” can be understood as beliefs about what others believe -- what JDM calls “second-order beliefs.” If I believe that others hold my belief, then I can, quite literally, take it for granted. Lizardo and Strand (2010) call this “scaffolded cognition” (see also Clark 1997), by which we rely on what others know (or, more accurately, what we *think* others know). Second-order beliefs can then be used to solve coordination problems such as instilling authority in a government leader, navigating friendships, or even purchasing goods (Chwe 2001).

Importantly, second-order beliefs can be held *without* necessarily adhering to the corresponding first-order belief. For example, merely believing that others believe blacks are less intelligent is enough to impede a black student’s performance on an academic exam, regardless of whether that student herself believes this to be true (Steele and Aronson 1995, see also Ridgeway and Kricheli-Katz 2013).

Two additional considerations are relevant for all three of these versions of institutions. First, consistent with the Thomas theorem, these beliefs need not be accurate (either at the individual or collective level) to influence behavior and judgment. Second, although scholars can often render these beliefs in propositional format, there is no requirement that these beliefs operate consciously or logically. Many beliefs -- especially norms and taken-for-granted understandings -- operate implicitly as a “feel for the game.”

5. Where Cultural Sociology Fits

Since our proposal is about language and not about content, we outline some connections between judgment and decision science and cultural sociology that we believe will be especially fruitful for future research.

1. Sociologists study the environments in which people learn their beliefs and preferences. Class, race, religion, social networks, social interaction, etc., would all be useful ways of thinking about how environments vary and how they shape what people *believe*, *prefer*, and *know how to do*.
2. Sociologists study how different early environments lead people to develop different levels of knowledge and skill (i.e., endowments) for acting in schools, workplaces, and other reward-allocating environments, along the lines of the kind of work done by central cultural sociologists such as Bourdieu, Lareau, and Swidler.
3. Sociologists study how different beliefs and preferences affect action. How do *specific* religious beliefs and preferences, for example, influence fertility behavior? How do beliefs about the origins of race or sexual orientation differences affect policy preferences?
4. At the macro level, sociologists study the consequences of our beliefs about *other people's* beliefs and preferences. What do we believe other people expect (believe will happen)? What do we believe other people want from us?⁸ Where do these ideas come from (e.g., in the media)? Questions like these are vital not only for understanding microinteractions but for explaining large-scale social change (for exemplars in other disciplines, see Kuran 1995; Chwe 2001).

These are just a few broad strokes aimed to show the compatibility between cultural sociology and JDM. Nothing in the terms *beliefs*, *preferences*, or *endowments* implies a commitment to individualism. Consider what may be the best known finding in sociology--that a parent's education is a great predictor of a child's education. Two interval variables, measured from 0-20 at the individual level, are our gateway into a deeply complex set of social institutions (e.g., education, family, the labor force). In cultural sociology, an individual's music tastes, measured

⁸ These types of things used to be called norms and still are in some circles.

using individual surveys, have played the same role. There's nothing "individualistic" about relying on concepts defined and measured at the individual level. We can have endogenous, social accounts of belief and preference formation just like we have endogenous, social accounts of taste. (In fact, we would argue that tastes *are* preferences!)

6. Conclusion

The particular political and institutional histories of academia, government, and industry have led to the current state of affairs in which cultural sociology is not the *lingua franca* of the social and behavioral sciences. Cultural sociologists often remain isolated within the broader landscape of the study of choices and decisions, even though they have important contributions to make to theories about judgment and decision-making. This isolation, we have argued, is largely self-imposed. Cultural sociologists shied away from the now-robust interdisciplinary conversation about judgment and decision-making because cultural sociologists tend to have a few key misconceptions about JDM: that it assumes people have complete information, that it assumes people have unlimited computational ability, that it assumes people only care about money, that it assumes JDM is fundamentally individualistic and lacks an accounting of social context, and that it assumes JDM sees judgment and decision-making cognition as always conscious and deliberative, rather than nonconscious and automatic.

Many of these critiques are long outdated and do not reflect the significant empirical and theoretical development of JDM since its earliest incarnation as "rational choice theory" in the mid-20th century. Moreover, sociologists have important contributions to make in further correcting some of these shortcomings (i.e. the kinds of nonpecuniary preferences people have, the influences of social context on the judgment and decision-making process). However, their absence from the JDM conversation has prevented the integration of important cultural sociological insights into the development and refinement of theories of judgment and decision-making.

Cultural sociologists can strategically assimilate their work into JDM by translating some of our key terms into the *lingua franca*. We have shown that the concepts of "beliefs," "preferences," and "endowments" can convey to the JDM community much of what cultural sociologists mean when they use terms like "values," "frames," "repertoires," "narratives," "symbolic boundaries," "cultural capital," and "institutions." Moreover, this translation process revealed some key areas in which cultural sociologists have important – and uniquely sociological – contributions to make to JDM. For instance, cultural sociology has convincingly and repeatedly established the existence of an endowment effect for skills (what we refer to as the "repertoire/toolkit corollary").

Perhaps not every phenomenon in cultural sociology could be recast solely into beliefs, preferences, and endowments. Our overall recommendation does not stand or fall on all of cultural sociology needing to fit into just those three terms. (In fact, JDM has a lot more terms, including, among others, heuristics, biases, and satisficing.) We have emphasized these three because they are the simplest terms and they can do a lot more than we sociologists typically give them credit for.

Adopting a more broadly understood language would allow cultural sociology to plug directly into discussions in the interdisciplinary literature on learning environments, preference formation, naturalistic decision making, and many other topics. Instead of criticizing economics, psychology, and other disciplines in our own private language behind the closed doors of our colloquia and seminars, we could take our objections and put them right out in public and see if we can do better. We believe that cultural sociology has a lot to offer to the other social and behavioral sciences. But to get our point across we first need to learn to speak the lingua franca.

References

- Armstrong, Elizabeth A. and Laura T. Hamilton. *Paying for the Party: How College Maintains Inequality*. Cambridge, MA: Harvard University Press.
- Bar-Hillel, Maya and Efrat Neter. 1993. "How Alike Is It Versus How Likely It Is: A Disjunction Fallacy in Probability Judgments." *Journal of Personality and Social Psychology* 65(6):1119-1131.
- Bearman, Peter S. and Katherine Stovel. 2000. "Becoming a Nazi: A Model for Narrative Networks." *Poetics* 27(2):69-90.
- Beyerlein, Kraig, and Stephen Vaisey. 2013. "Individualism Revisited: Moral Worldviews and Civic Engagement." *Poetics* 41(4):384-406.
- Bruch, Elizabeth and Fred Feinberg. 2017. "Decision-Making Processes in Social Contexts." *Annual Review of Sociology* 43:14.1-14.21
- Burke, Peter J. and Jan E. Stets. 2009. *Identity Theory*. New York, NY: Oxford University Press.
- Calarco, Jessica. M. 2014. "The Inconsistent Curriculum: Cultural Tool Kits and Student Interpretations of Ambiguous Expectations." *Social Psychology Quarterly* 77(2):185-209.
- Cerulo, Karen A. 1998. *Deciphering Violence: The Cognitive Structure of Right and Wrong*. New York, NY: Routledge.
- Chwe, Michael Suk-Young. 2001. *Rational Ritual: Culture, Coordination, and Common Knowledge*. Princeton, NJ: Princeton University Press.
- Clark, Andy. 1997. *Being There: Putting Brain, Body, and World Together Again*. Cambridge, MA: MIT Press.
- DiMaggio, Paul. 1997. "Culture and Cognition." *Annual Review of Sociology* 23:263-287.
- Duesenberry, James. 1960. "Comment on 'An Economic Analysis of Fertility.'" In *Demographic and Economic Change in Developed Countries*, edited by the Universities National Bureau Committee for Economic Research. Princeton, NJ: Princeton University Press.
- Edwards, Ward. 1954. "The Theory of Decision Making." *Psychological Bulletin* 51(4):380-417.

- Erickson, Bonnie H. 1996. "Culture, Class, and Connections." *American Journal of Sociology* 102(1):217-51.
- Ericson Marzilli, Keith M. and Andreas Fuster. 2014. "The Endowment Effect." *Annual Review of Economics* 6:555-579.
- Esser, James K. 1998. "Alive and Well After 25 Years: A Review of Groupthink Research." *Organizational Behavior and Human Decision Processes* 73(2):116-141.
- Evans, Jonathan St. B. T. 2007. "Dual-Processing Accounts of Reasoning, Judgment, and Social Cognition." *Annual Review of Psychology* 59:268-269.
- Foy, Steven L. and Rashawn Ray. Forthcoming. "Skin in the Game: Colorism and the Subtle Operation of Stereotypes in Men's College Basketball." *American Journal of Sociology*.
- Gigerenzer, Gerd and Daniel G. Goldstein. 1996. "Reasoning the Fast and Frugal Way: Models of Bounded Rationality." *Psychological Review* 103(4):650-669.
- Gross, Neil. 2002. "Becoming a Pragmatist Philosopher: Status, Self-Concept, and Intellectual Choice." *American Sociological Review* 67(1):52-76.
- , 2009. "A Pragmatist Theory of Social Mechanisms." *American Sociological Review* 74(4):358-379.
- Halle, David. 1993. *Inside Culture: Art and Class in the American Home*. Chicago: University of Chicago Press.
- Hammond, Kenneth R. 2000. "Coherence and Correspondence Theories in Judgment and Decision-Making." Pp. 53-65 in *Judgment and Decision Making: An Interdisciplinary Reader*. Edited by Terry Connolly, Hal R. Arkes, and Kenneth R. Hammond. Cambridge, UK: Cambridge University Press.
- Harding, David J. 2007. "Cultural Context, Sexual Behavior, and Romantic Relationships in Disadvantaged Neighborhoods." *American Sociological Review* 72(3):341-364.
- Hewstone, Miles. 1991. *Causal Attribution: From Cognitive Processes to Collective Beliefs*. Cambridge, MA: Blackwell.
- Hogarth, Robin M., Tomás Lejarraga, and Emre Soyer. 2015. "The Two Settings of Kind and Wicked Learning Environments." *Current Directions in Psychological Science* 24(5):379-385.

Holt, Douglas B. 1997. "Distinction in America? Recovering Bourdieu's Theory of Tastes from Its Critics." *Poetics* 25:93–120.

Hunt, Matthew O. 1996. "The Individual, Society, or Both? A Comparison of Black, Latino, and White Beliefs About the Causes of Poverty." *Social Forces* 75(1):293-322.

----- . 2000. "Status, Religion, and the 'Belief in a Just World': Comparing African Americans, Latinos, and Whites." *Social Science Quarterly* 81(1):325-343.

----- . 2004. "Race/Ethnicity and Beliefs about Wealth and Poverty." *Social Science Quarterly* 85(3):827-853.

----- . 2007. "African American, Hispanic, and White Beliefs About Black/White Inequality, 1977-2004." *American Sociological Review* 72(3):390-415.

Hunzaker, MB Fallin. 2016. "Cultural Sentiments and Schema-Consistency Bias in Information Transmission." *American Sociological Review* 81(6):1223-1250.

Ignatow, Gabriel. 2009. "Culture and Embodied Cognition: Moral Discourses in Internet Support Groups for Overeaters." *Social Forces* 88(2):643–70.

Jack, Anthony A. 2015. "(No) Harm in Asking: Class, Acquired Cultural Capital, and Academic Engagement at an Elite University." *Sociology of Education* 89(1):1-19.

Johnson-Hanks, Jennifer, Lynette Hoelter, Rosalind Berkowitz King, and Pamela J. Smock, eds. 2011. *Understanding Family Change and Variation: Toward a Theory of Conjunctural Action*. New York, NY: Springer.

Kahan, Dan M., Donald Braman, John Gastil, Paul Slovic, and C. K. Mertz. 2007. "Culture and Identity-Protective Cognition: Explaining the White-Male Effect in Risk Perception." *Journal of Empirical Legal Studies* 4(3):465-505.

Kahan, Dan M., Hank Jenkins-Smith, and Donald Braman. 2011. "Cultural Cognition of Scientific Consensus." *Journal of Risk Research* 14(2):147-174.

Kahan, Dan M. and Donald Braman. 2006. "Cultural Cognition and Public Policy." *Yale Law & Policy Review* 24(1):149-172.

Kahan, Dan M., Donald Braman, Paul Slovic, John Gastil, and Geoffrey Cohen. 2009. "Cultural Cognition of the Risks and Benefits of Nanotechnology." *Nature Nanotechnology* 4:87-90.

Kahneman, Daniel, and Shane Frederick. 2002. "Representativeness Revisited: Attribute Substitution in Intuitive Judgment." Pp. 49-81 in *Heuristics and Biases: The Psychology of Intuitive Judgment*. T. Gilovich, D. Griffin and D. Kahneman, eds. New York, NY: Cambridge University Press.

Kahneman, Daniel and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision Under Risk." *Econometrica* 47(2):263-292.

-----, 1982. "The Simulation Heuristic." Pp. 201-208 in *Judgment Under Uncertainty: Heuristics and Biases*, edited by Daniel Kahneman, Paul Slovic, and Amos Tversky. New York: Cambridge University Press.

Knuegel, James R. and Eliot R. Smith. 1981. "Beliefs About Stratification." *Annual Review of Sociology* 7:29-56.

Koivula, Nathalie. 1999. "Gender Stereotyping in Televised Media Sport Coverage." *Sex Roles* 41(7):589-604.

Kuran, Timur. 1995. *Private Truths, Public Lies: The Social Consequences of Preference Falsification*. Cambridge, MA: Harvard University Press.

Kuran, Timur and Cass R. Sunstein. 1998. "Availability Cascades and Risk Regulation." *Stanford Law Review* 51(4):683-768.

Lamont, Michele, and Annette Lareau. 1988. "Cultural Capital: Allusions, Gaps and Glissandos in Recent Theoretical Developments." *Sociological Theory* 6(2):153.

Lamont, Michèle, and Mario Small. 2008. "How Culture Matters: Enriching Our Understanding of Poverty." Pp. 76-102 In *The Colors of Poverty: Why Racial and Ethnic Disparities Persist*, edited by Ann Lin and David Harris. New York: Russell Sage Foundation.

Lareau, Annette, and Elliot B. Weininger. 2003. "Cultural Capital in Educational Research: A Critical Assessment." *Theory and Society* 32(5-6):567-606.

Lizardo, Omar. 2005. "Can Cultural Capital Theory Be Reconsidered in the Light of World Polity Institutionalism? Evidence from Spain." *Poetics* 33(2):81-110.

- , 2006. "How Cultural Tastes Shape Personal Networks." *American Sociological Review* 71(5):778–807.
- , 2016. "Improving Cultural Analysis: Considering Personal Culture in Its Declarative and Nondeclarative Modes." *American Sociological Review* 82(1):88-115.
- Lizardo, Omar, and Michael Strand. 2010. "Skills, Toolkits, Contexts and Institutions: Clarifying the Relationship between Different Approaches to Cognition in Cultural Sociology." *Poetics* 38(2):205–28.
- Martin, John Levi. 2010. "Life's a Beach But You're an Ant, and Other Unwelcome News for the Sociology of Culture." *Poetics* 38(2):229-244.
- Martin, John Levi, and Matthew Desmond. 2010. "Political Position and Social Knowledge." *Sociological Forum* 25(1):1–26.
- McCrae, Neil and Galen V. Bodenhausen. 2000. "Social Cognition: Thinking Categorically About Others." *Annual Review of Psychology* 51:93-120.
- McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27:415-444.
- Merton, Robert King. 1968. *Social Theory and Social Structure*. New York: Free Press.
- Moody, James. 2001. "Race, School Integration, and Friendship Segregation in America." *American Journal of Sociology* 107(3):679-716.
- Morewedge, Carey K. and Colleen E. GIBLIN. 2015. "Explanations of the Endowment Effect: An Integrative Review." *Trends in Cognitive Science* 19(6):339-348.
- Newell, Benjamin R., David A. Lagnado, and David R. Shanks. 2015. *Straight Choices: The Psychology of Decision Making*. New York, NY: Psychology Press.
- Nickerson, Raymond S. 1998. "Confirmation Bias: A Ubiquitous Phenomenon in Many Guises." *Review of General Psychology* 2(2):175-220.
- Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. New York, NY: Schocken Books.
- Patterson, Orlando. 2014. "Making Sense of Culture." *Annual Review of Sociology* 40(1):1-30.

Pennebaker, James W., Dario Paez and Bernard Rimé. 1997. *Collective Memory of Political Events: Social Psychological Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.

Pennycook, Gordon and Valerie A. Thompson. 2017. "Base Rate Neglect." Pp. 44-61 in *Cognitive Illusions*, edited by Rudiger F. Pohl. London: Routledge.

Petty, Richard E., Russell H. Fazio, and Pablo Brino. 2009. *Attitudes: Insights from the New Implicit Measures*. New York, NY: Psychology Press.

Phillips, Jonathan, and Fiery Cushman. 2017. "Morality Constrains the Default Representation of What Is Possible." *Proceedings of the National Academy of Sciences* 114(18):4649–54.

Ridgeway, Cecilia L., and Tamar Kricheli-Katz. 2013. "Intersecting Cultural Beliefs in Social Relations: Gender, Race, and Class Binds and Freedoms." *Gender and Society* 27(3):294–318.

Robinson, Dawn, Lynn Smith-Lovin, and Allison K. Wisecup. 2006. "Affect Control Theory." Pp. 179-202 in *Handbook of the Sociology of Emotions*. Jan E. Stets and Jonathan H. Turner, eds. New York, NY: Springer.

Sigelman, Lee and Susan Welch. 1993. "The Contact Hypothesis Revisited: Black-White Interaction and Positive Racial Attitudes." *Social Forces* 71(3):781-795.

Simon, Herbert A. 1959. "Theories of Decision-Making in Economics and Behavioral Science." *The American Economic Review* 49(3):253-283.

Sloman, Steven A. 2005. *Causal Models: How People Think about the World and Its Alternatives*. New York, NY: Oxford University Press.

Small, Mario Luis, David J. Harding, and Michèle Lamont. 2010. "Reconsidering Culture and Poverty." *Annals of the American Academy of Political and Social Science* 629:6–27.

Smith, Herbert L. and Brian Powell. 1990. "Great Expectations: Variations in Income Expectations among College Seniors." *Sociology of Education* 63(3):194-207.

Spillman, Lynette. 2001. *Cultural Sociology*. Malden, MA: Blackwell Publishers.

Srivastava, Sameer B., and Mahzarin R. Banaji. 2011. "Culture, Cognition, and Collaborative Networks in Organizations." *American Sociological Review* 76(2):207–33.

Steele, Claude M., and Joshua Aronson. 1995. "Stereotype Threat and the Intellectual Test Performance of African Americans." *Journal of Personality and Social Psychology* 69(5):797.

Surowiecki, James. 2005. *The Wisdom of Crowds*. New York: Anchor Books.

Swidler, Ann. 1986. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51(2):273–286.

Swidler, Ann. 2001. *Talk of Love: How Culture Matters*. Chicago: University of Chicago Press.

Tajfel, Henri and John C. Turner. 1979. "An Integrative Theory of Intergroup Conflict." Pp. 33-47 in *The Social Psychology of Intergroup Relations*. William G. Austin and Stephen Worchel, eds. Pacific Grove, CA: Brooks/Cole Publishing.

Thaler, Richard H., and Cass R. Sunstein. 2009. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New York, NY: Penguin Books.

Tversky, Amos and Daniel Kahneman. 1974. "Judgment under Uncertainty." *Science* 185(4157):1124-1131.

-----, 1983. "Extensional versus Intuitive Reasoning: The Conjunction Fallacy in Probability Judgment." *Psychological Review* 90(4):293-315.

Tyson, Carolyn. 2011. *Integration Interrupted Tracking, Black Students, and Acting White after Brown*. New York: Oxford University Press.

Vaisey, Stephen. 2009. "Motivation and Justification: A Dual-Process Model of Culture in Action." *American Journal of Sociology* 114(6):1675-1715.

-----, 2014. "The 'Attitudinal Fallacy' Is a Fallacy: Why We Need Many Methods to Study Culture." *Sociological Methods & Research* 43(2):227-231.

Varian, Hal R. 2006. "Revealed Preference." Pp. 99-115 in *Samuelsonian Economics and the Twenty-First Century*. Michael Szenberg, Lall Ramrattan, Aron A. Gottesman, eds. New York, NY: Oxford University Press.

Willer, Robb. 2009. "Groups Reward Individual Sacrifice: The Status Solution to the Collective Action Problem." *American Sociological Review* 74(1):23-43.

Wuthnow, Robert. 1989. *Meaning and Moral Order: Explorations in Cultural Analysis*. Berkeley, CA: University of California Press.

Young, Alford. 2004. *The Minds of Marginalized Black Men: Making Sense of Mobility, Opportunity, and Future Life Chances*. Princeton, NJ: Princeton University Press.

Zerubavel, Eviatar. 1997. *Social Mindscales: An Invitation to Cognitive Sociology*. Cambridge, MA: Harvard University Press.

Zimmer, Carl. 2011. "100 Trillion Connections: New Efforts Probe and Map the Brain's Detailed Architecture." *Scientific American*.

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