Let us consider these points in a little more detail. Recent research in the social sciences highlights the extraordinary diversity of modes of identity-constitution in the global age (see Elliott 2007; Elliott and du Gay 2009). How might such complex forms of identity-constitution in the current age be best approached? Is there a way in which personal, affective, social, and cultural differences might be better apprehended from within the theory of liquid modernity? Bauman's account provides a subtle appreciation of the ambivalence of modernity as it operates through identities, and yet the responses of subjects and especially alternative and non-conformist subjectivities are sometimes downplayed or disowned in this sociological approach. For example, is "liquid life" only a means of adjusting narcissistic individuals to the dictates of late capitalism? Is this liquidization of identity always a defensive closure at the level of private life, against the range of possibilities and perils inaugurated by globalization? What of identities resistant to the short-term temper of liquid modernity, of those individuals who reject cultural pressures towards change and flexibility? Due to the generality and sweep of the theory of liquid modernity, what threatens to recede into the shadows is the point that all of us have multiple identities, some overlapping, some contradictory, and that at any moment these identities are interacting with (incorporating, resisting and transforming) broader social values and cultural differences, shaping and being reshaped by modernity. Following from this point, we might also ponder the location of the sociological critic, and of those readers who adopt a similarly critical stance, toward the episodic nature of liquid life. Given the sharply critical dimension of Bauman's analysis, and given the wide influence of the theory of liquid modernity within and beyond the discipline of sociology, why have individuals not decried the corrosive character of liquefaction in a more systematic and widespread way?

Whatever the merits of these analytical concerns, *Collateral Damage* represents a formidable achievement. In his exquisitely heterodox and imaginatively capacious sociology, Bauman's influence on the direction of the social sciences remains significant.

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The End of Rationality?

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Thinking, Fast and Slow, by **Daniel Kahneman.** New York, NY: Farrar, Straus and Giroux, 2011. 499pp. $30.00 cloth. ISBN: 9780374275631.

David Brooks writes that "Kahneman and his research partner, the late Amos Tversky, will be remembered hundreds of years from now." It is a claim that will be hard to validate but may well hold true. I have even less doubt that their work would have been read with great interest over a century ago by Emile Durkheim when he was working on *The Division of Labor in Society* (first published in 1893) and by Talcott Parsons as he was preparing *The Structure of Social Action* (published in 1937). Both were towering sociologists who struggled with the same underlying issue that Daniel Kahneman's work addresses: how rational are people? Are they able to make decisions based on empirical information and logical deliberations? And if not, what are the bases of their judgments?

In social science, the issue is completely current, as the traditional division of academic fields of study and specialization—economics, political science, sociology, law, and others—is being overshadowed by a division between those who build on a rational paradigm and those who reject it and seek another. Thus, the economists, sociologists, and political scientists who expect that customers, members, and voters will make rational decisions and will seek to maximize their utility—those who employ a rationalistic, neoclassical paradigm—are closer to one another in terms of their meta-assumptions than to academics of the same disciplines who hold that customers, members, and voters are poor decision-makers and slow learners who are deeply affected by values, bonds of affinity, and social structures and therefore seek to advance their self-interest as well as normative-induced purposes. Kahneman's volume clearly undermines the very foundations of one of these two paradigms, the neoclassical one, although for reasons soon to be explored, his is not an in-your-face style.

Rationalists also tend to see the world as moving from the Dark Ages, through a period of Renaissance, to an age of Enlightenment, a change that is marked by progress from a world riddled with mystiques and religions and other forms of irrational beliefs and conducts, to a world dominated by reason. On the other side are those who consider the world to be mired in challenges that cannot be resolved and who find considerable value in old structures and beliefs, such as the extended family and religious commitments. Moreover, irrational or at least non-rational (more about this concept later) beliefs and conducts are not viewed as transitional. Kahneman's volume will provide very little solace for those who believe in progress, as he finds that education and training do not help people overcome their biases. For example, 85 percent of doctoral students in Stanford Graduate School of Business' decision science program, who had extensive training in statistics, still made basic mistakes in combining two probabilities (p. 158). And even people specifically alerted to the kind of biases Kahneman discusses are still affected by them in their deliberations (p. 336).

Kahneman's book presents a culmination of a lifetime of work by its author, although he continues to share much of the credit for his achievements with Amos Tversky, who died in 1996. Kahneman's ideas have generated and built a school, behavioral economics, which includes many scores of scholars across the world whose cumulative work is reflected in the book, although it is mainly dedicated to Kahneman's own work.

Because the main findings of behavioral economics are so familiar—they have found great resonance even in the mass media over the last years—I recapture them here only very briefly and then turn to examine their implications. The essential finding of behavioral economics is that human beings have hardwired cognitive biases that prevent them from making rational decisions. People misread information and draw inappropriate or logically unwarranted conclusions from it. Their failings come in two different forms. One takes place when we think fast (which Kahneman calls in this volume System 1 thinking, a thinking that is based on intuition). For instance, when we ask what two plus two equals, no processing of information and no deliberations are involved. The answer jumps out at us. (A quibbler might argue that no thinking is involved.) However, even when we are engaged in slow thinking (System 2)—which we are reluctant to do because it is demanding, laborious, and costly—we often fail. In short, we are not rational thinkers.

One of the great merits of Kahneman's work is that his observations are not based on case studies or insights but are largely supported by experiments and quantitative measurements. Moreover, unlike many other major bodies of social science, Kahneman's findings (and those of other behavioral economists) are surprisingly robust. That is, experiment after experiment yields the same results, confirming those that came before. For instance, study after study finds that most people require a larger expected outcome to take a risk when a sure thing is available as an alternative (risk aversion), and they dislike losses much more than they like gains of equivalent size (loss aversion), in defiance of what a rational creature would do.

Critics argue that the experiments deal with trivial situations, and hence their findings would not apply to situations in which the actor was truly engaged and surely not in real life situations. True, a fair number of the experiments do deal with pencil and paper tests or transactions where the value of objects involved is minimal. However, when Kahneman designed studies that involved colonoscopies, the same findings were made. Patients were asked to report on their pain every 60 seconds throughout the procedure. The studies found that patients who underwent colonoscopies that were not only longer, but had far more "peaks" of sharp pain still remembered the procedure more positively than patients with shorter, less painful procedures. How patients ultimately remembered the colonoscopy depended not on overall length or discomfort, but on how the procedure *ended*. Those that ended with sharp pain were viewed less favorably than procedures that were longer but only mildly uncomfortable at the very end. A rational creature would take the total pain generated into account. Colonoscopies, unlike pencil and paper tests, surely qualify as "the real world."

When Richard Thaler, Schlomo Benartzi, and Alessandro Previtero studied what economists call "the annuity puzzle"—the tendency of people to forego annuitizing their wealth when they retire, even though it would assure them more annual income for the rest of their lives and reduce the risk of outliving their retirement savings—the behavioral economics findings held. In the survey of 450 401(k) plans they cited, only 6 percent of participants chose an annuity when it was available (Benartzi, Previtero, and Thaler 2011).

While this cannot be documented here, I suggest that, by and large, the findings of behavioral economists are much more robust than those of neoclassical "Chicago School" economists, in part because much of the work of neoclassical studies is based on models, on the what-if rather than the as-is world.

Sociologists will be taken aback by a tendency, common to behavioral economists and other psychologists, to write about attributes of "people" while often ignoring the matter of distribution. Statements such as "people have strong systematic cognitive biases" are regularly made. However, a sociologist would wonder if they apply to all people, and above all, if there are significant variations, and what accounts for them. Thus on closer examination, one finds that not all subjects failed the cognitive tests. One often-used test is Kahneman's question about whether Linda, depicted as a progressive activist, was more likely to be a bank teller—or a bank teller active in the feminist movement. The logical answer is the first, but many people go for the second answer. However, as Kahneman reports, in some groups as many as 64% got the right answer; in others, 15%. The data are complicated by the fact that the question was asked in different ways (p. 159). This critical point is not given much attention in Kahneman's book or elsewhere in behavioral economics. Nor do we learn much about what accounts for the differences among those who got the right and the wrong answer. Instead, the Linda studies are used to further document that we are poor learners. Kahneman and Tversky categorized participants as "naïve" (no background in either probability or statistics), "informed" (at least one basic statistics course), or "sophisticated" (advanced coursework in probability, statistics, and decision theory). Despite these wide differences in statistical training, the rate of correct responses improved only modestly over the three categories, with 9.5 percent of "naïve," 12 percent of "informed," and 16 percent of "sophisticated" respondents answering accurately (Sedlmeier 1999). Even studies that more directly trained participants to avoid the Linda task slip-up have failed to show much improvement. After teaching participants the "conjunction rule" underlying the Linda task (and giving them specific examples to illustrate the rule), Crandall and Greenfield found that nearly half still could not answer correctly (ibid).

It is unfair to criticize a book—especially one that covers so much ground as the total scope of human cognition and deliberation—for what it does not cover. The best way to proceed seems to be to hope that a future volume II of *Thinking, Fast and Slow* will contain many more findings about the effects of values and emotions (not to be lumped with cognitive biases) on thinking and decision-making. Thus, a devout Jew or Muslim will not consume pork, even after major price cuts, in defiance of supply and demand curves, not because they do not understand cost-benefit analysis, but because such deliberations are blocked out by their beliefs. They need not engage in comparative shopping for an object that they would not consume regardless of the price.

Indeed, a major criticism that can be raised against Kahneman and his fellow behavioral economists is that they ignore the work carried out on systematic biases in thinking caused by affective and normative sources, found by scores of sociologists and social psychologists for more than 150 years.

My colleagues who follow the Kuhnian view of paradigms shifts (Kuhn 1962) will find Kahneman's progress to be of special interest. Kahneman faced a basic choice from the outset of his influential work: whether to seek to reform the neoclassical paradigm or to replace it. Kahneman chose the first course, gained a fair measure of conversation with neoclassical economists, and was awarded a Nobel Prize in economics. I argued that the data show we need a new paradigm, one which assumes utilities are conflicted, decisions are deeply affected by values and affect, and decisions are mainly made by people as group members and not as freestanding agents (Etzioni 1990). I contended that it was not possible to incorporate Kahneman's data, and that of other behavioral economists and socio-economists, into the neoclassical paradigm based on the opposite assumptions. As Freeman Dyson put it, in reference to Kahneman's discovery of the endowment effect (once people consider an item ''theirs,'' they will tend to hold on to it, even beyond its market value), ''the experiment convincingly demolished the central dogma of classical economics'' (Dyson 2011). You will not find such strong statements anywhere in Kahneman's work.

As I see it, both approaches failed, although mine more completely than Kahneman's. While Kahneman's work is very widely known, both in and outside of academia, relatively few adjustments have been made in the neoclassical paradigm that takes these findings into account, and the neoclassical paradigm continues to dominate in academia and in policymaking circles. No alternative paradigm has emerged as a foundation for a new communitarian or socio-economics. This resistance is hardly unique. Old paradigms typically resist challenges from new ones. And I agree that it is too early to give up hope, as Kahneman put it (private communication with Daniel Kahneman, April 10, 2012): ''. . . at this point there is no behavioral macro-economics, no forecasting models based on behavioral foundations etc. It is probably too early to conclude that these achievements are impossible. In any event, I think it is fair to see that behavioral approaches have prevailed wherever they have competed—but they have not competed in many central domains of economics, and the standard model remains dominant by default. It turns out to be extremely difficult to do good economics with more complex assumptions, although steady progress is being made.''

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