

Running head: BDR IN OB

The Case for Behavioral Decision Research in Organizational Behavior

Don A. Moore

Francis J. Flynn

Abstract:

We argue that the field of organizational behavior (OB) is well positioned to adopt some of the strengths of behavioral decision research (BDR). Doing so would enable the field to gain in influence, scholarly stature, paradigm strength, and practical relevance. In the course of making this argument, we review recent advances in behavioral decision research and highlight its relevance for organizational behavior. In particular, our discussion focuses on how BDR can inform topics of longstanding interest to OB scholars.

Moore, D. A., & Flynn, F. J. (2008). The case for behavioral decision research in organizational behavior. In A. P. Brief & J. Walsh (Eds.), *Academy of Management Annals*, 2(1), 399-431. Mahwah, NJ: Erlbaum.

Don Moore is an Associate Professor at Carnegie Mellon University, where he holds the Carnegie Bosch Institute Faculty Development Chair. Frank Flynn is an Associate Professor at Stanford University. Thanks to Corinne Bendersky, Daylian Cain, Uriel Haran, Chip Heath, and Cade Massey for helpful feedback. Send correspondence to: don.moore@alumni.carleton.edu or flynn_francis@gsb.stanford.edu.

The Case for Behavioral Decision Research in Organizational Behavior

The field of organizational behavior is uniquely positioned to take advantage of a tremendous opportunity. That opportunity is embodied in behavioral decision research, a field prospering at the fertile intersection of economics and psychology. In this paper, we aim to identify how this opportunity manifests itself, as well as some of the impediments to taking full advantage of it. Along the way, we will review recent developments in behavioral decision research that we believe can help chart a course for future research, and what we hope will bring further advances, in organizational behavior.

Organizational behavior research endeavors to understand people in organizations—their motives, their decisions, their interpersonal relations, and the outcomes of their choices. To this end, OB scholars have incorporated theory and research from several disciplines, most notably psychology and sociology. OB scholars have generally neglected the relevance of economics, but economists, for their part, have not made the mistake of ignoring our work. In fact, several economists have been adept at borrowing useful ideas from other disciplines, including psychology and OB (Loewenstein, O'Donoghue, & Rabin, 2003; Odean, 1998b; Rabin, 1993; Thaler, 1991). The result has been a rapid growth in the importance and influence of behavioral economics—a nascent field whose goals are strikingly similar to the goals of OB research.

A small group of scholars in OB have attempted to return the favor by borrowing useful research approaches from economics. Their work generally falls in the category of behavioral decision research (BDR), which is the study of human judgment and decision

making. The BDR approach is distinct from other decision-making research in that it relies on a normative backdrop (for reviews, see Dawes, 1998; Payne, Bettman, & Johnson, 1992; Shafir & LeBoeuf, 2002). That is, BDR work can specify what rational decision makers should have done, and the degree to which actual decisions deviate from the optimal choice. The use of a normative standard represents BDR's defining feature.

BDR's Traditional Core Topics

BDR's traditional core is the "heuristics and biases" research program. Research in this tradition examines the cognitive heuristics that people employ to help them deal with the constraints of their cognitive processing capacities, while they face social worlds not similarly constrained in complexity (Bazerman & Moore, 2008; Hastie & Dawes, 2001; Newell, Lagnado, & Shanks, 2007). For instance, when trying to estimate the likelihood of an event's occurrence, people rely on the information most available in their minds (Tversky & Kahneman, 1973). That is why they tend to worry too much about vivid but low-probability risks, such as an airplane crash or a terrorist attack, and why people worry less about more common but mundane risks, such as obesity or skin cancer (Tversky & Kahneman, 1974).

Yet mental accessibility can play tricks on us. The evidence suggests that systems of mental recall are better at performing positive hypothesis tests rather than negative ones (Klayman & Ha, 1987). In other words, we are better at coming up with evidence consistent with our hypotheses and expectations than evidence against it. For instance, when considering the question of whether George W. Bush is a scoundrel, it is easier to think of instances of Bush's false claims and unfulfilled promises than it is to think of examples of principled successes. When considering the question of whether George W.

Bush is trying his best to do a good job as President, the opposite is true. This so-called “confirmation bias” (Nickerson, 1998) has widespread consequences. It leads to anchoring, in which one’s ultimate conclusion is anchored too closely to one’s initial hunch (Mussweiler & Strack, 1999; Strack & Mussweiler, 1997), and it leads to the hindsight bias, in which people incorrectly believe that they would have correctly predicted what was going to happen (Fischhoff, 1975; Koriat, Fiedler, & Bjork, 2006). Moreover, confirmation bias enables people to sustain kooky or irrational beliefs, because it is usually possible to generate some supportive evidence for even the most implausible hypotheses (Gilovich, 1991).

For many years, BDR researchers gained fame by identifying their own biases and naming them (Krueger & Funder, 2004). The result was a tremendous proliferation of different biases and effects. This is partly a result of the fact that researchers in BDR, as elsewhere, are rewarded more for blazing new terrain than for integrative work that explains the common causes between disparate prior results. Nevertheless, it has become harder for BDR researchers to stake credible claims to new bias territory because so many biases have been identified that they are beginning to run together. Consequently, their commonalities are becoming easier to see. For instance, recent work on anchoring demonstrates its common origins with other biases (Mussweiler, 2003). And recent work on overconfidence reconciles the different ways overconfidence has been studied, accounting for both commonalities and discrepancies across studies (Moore & Healy, in press).

For our purposes here, it is important to reiterate what is distinctive about the BDR approach: BDR always seeks to compare what *is* with what *ought to be*. Intuitive

human judgment is far from perfect. Understanding exactly how it is imperfect sheds light on underlying psychological processes and suggests ways in which people can learn to do better (Kahneman, 2003). This emphasis on optimality represents BDR's distinct advantage and one of its potential contributions to research in organizational behavior.

BDR's normative standard originates from neoclassical economic theory. That is to say, BDR compares actual behavior with the behavior of a perfectly rational, self-interested economic agent with unlimited cognitive processing capacity. Economic theory does not assume that rational agents care only about maximizing their wealth. Instead, it assumes that individuals differ in what they value or care about, and that rational agents will act to maximize those things that provide them with utility, be it money, orgasms, happiness, or something else. BDR studies often examine factors that ought to be normatively irrelevant to a rational actor. For instance, people feeling sad after watching a depressing film should not therefore be willing to pay more to buy a mug, but research on emotional carryover effects shows that they are (Lerner, Small, & Loewenstein, 2004).

The unambiguous normative benchmark provided by economic rationality provides a clear standard for evaluating behavior. Of course, there are many other possible standards, including social norms, common sense, or even the prevailing scholarly consensus. But it is easy for scholars, researchers, and reviewers to disagree about what each of these standards might predict. In contrast, economic rationality is an objective, knowable, and definable standard. The clarity of this normative standard brings consensus among BDR researchers with respect to what is worth studying and how it should be studied. It also gives them a common language that helps them communicate

with economists and their fellow travelers—the scholarly disciplines that rely on the economic research paradigm—such as accounting and finance.

What BDR Offers OB

We believe that BDR speaks more to the interests of OB scholars more than they might recognize. In particular, BDR’s prescriptive focus aligns well with the goals of OB research. Work on OB topics such as motivation, goal setting, emotion, and employee selection has generally sought to identify ways to maximize individual and organizational performance, but the overwhelming majority of this work fails to specify the optimal choice in a specific situation, given the necessary tradeoffs. Adopting the BDR approach would enable OB researchers to explore this tantalizing possibility.

The precise normative standard outlined in BDR offers several notable benefits to OB scholars. First, the use of a standard could boost the field’s paradigmatic consensus because it delineates which research questions are interesting and worth pursuing: namely, “interesting” research explains and documents deviations from the rational benchmark. Second, this perspective might enable researchers to engage with more normative or prescriptive disciplines, including economics, decision science, operations research, marketing science, accounting, engineering, and statistics. Third, the normative benchmark endows research with more applied value because it clarifies how people’s judgments deviate from optimality and what they can do to improve the quality of their choices and decisions. Indeed, the lessons derived from this work refer to a domain that is directly under the control of individual managers’ ~~÷ their own~~ thoughts, judgments, and decisions.

The benefits of having a precise normative standard were clear to early OB scholars. Indeed, the BDR approach played a fundamental role in some of OB's greatest intellectual achievements, including the development of Simon's (1947) theory of bounded rationality and the founding of the Carnegie School of organizational scholarship (Cyert & March, 1963; March & Simon, 1958). In both cases, the normative backdrop of optimal rationality was the foil against which the researchers developed their theories of organizational behavior. It is our view that BDR continues to have much to say about topics of central interest to OB researchers, despite the fact that the BDR approach has lost some of its early footing in the field of organizational behavior.

We argue that OB could gain influence, scholarly stature, paradigm strength, and practical relevance from a more widespread acceptance of BDR approaches. We begin by discussing some of the distinctive features of BDR and then review how BDR can enhance our understanding of a sample of core topics within OB. As our review will highlight, BDR has built on some of the foundations laid by research in OB, and it has appropriated some of its important insights. OB as a field is well positioned to build further upon the progress BDR has made, but that many OB researchers have been reluctant to seize this opportunity. We address some of the key concerns that OB researchers have about adopting BDR approaches. The paper closes by highlighting some of the benefits to OB researchers of incorporating BDR approaches in their own work.

BDR's Influence in OB and Beyond

Herbert Simon's (1947; 1967; 1978; 1997) work on bounded rationality—the notion that people are limited in formulating and solving complex problems and in

processing information—provided an important underpinning for behavioral decision research. Through his collaboration with James March, Simon went on to develop these ideas in ways that helped lay the foundations for modern organization theory (March & Simon, 1958). Simon's and March's work on decision making provided keen insight on topics relating to psychology, organizational behavior, and economics. In 1978, Simon became the first non-economist to win the Nobel Prize in economics, a distinction later matched by Daniel Kahneman, whose work with Amos Tversky remains central to BDR.

The broad appeal of work by Simon, March, and Kahneman, among others, has helped BDR gain a foothold in several disciplines. BDR scholars have been influential in law schools, examining issues such as how juries determine the size of legal penalties (Kahneman, Schkade, & Sunstein, 1998) or how judges determine verdicts (Englich, Mussweiler, & Strack, 2006). BDR has also contributed to the study of medical decision making, investigating issues such as whether physicians are overconfident in their diagnoses (Oskamp, 1965) and the degree to which physician judgments are biased by gifts from pharmaceutical manufacturers (Dana & Loewenstein, 2003; Ubel, 2005). BDR is well represented in marketing, particularly among those who study consumer behavior. It has even become influential among accounting scholars, spawning the sub-field of behavioral accounting (Birnberg & Sutton, 1989; Nelson, Bloomfield, Hales, & Libby, 2001). Likewise, BDR has played a central role in developing the field of behavioral finance, which examines how people make decisions about financial matters (Malmendier & Tate, 2005; Odean, 1998a; Thaler, 1993).

Outside of academia, BDR has influenced a number of policy decisions. For instance, Thaler and Benartzi's (2004) "Save More Tomorrow" program has helped

workers at hundreds of American corporations increase their rates of saving for retirement quite substantially. Using principles drawn from BDR, the program invites workers to commit themselves to increasing their savings rate in the future. After employees join, they can remain in the program until they choose to opt out. The success of Save More Tomorrow has been remarkable, with average saving rates for plan participants increasing from 3.5 percent to 11.6 percent over a period of just 28 months (Thaler & Benartzi, 2004). Other work has relied on BDR in order to understand how simple policy changes may expand the numbers of organ donors, (Johnson & Goldstein, 2003), encourage effective police work (Wells & Olson, 2003) , and increase consumer spending (Epley, Mak, & Idson, 2006; Milkman, Beshears, Rogers, & Bazerman, 2008).

BDR's influence in economics and policy decisions has dramatically increased its potential impact. In terms of clout, economics stands apart from other social sciences: economists work in key positions for governments, Federal Reserve banks, the Bureau of Labor Statistics, and the Council of Economic Advisors. They advise presidents and help set monetary policy. In the corporate world, many businesses employ economists who advise firms' leaders on various matters, including strategy and human resources. Clearly, these are domains in which OB would have a great deal to say (Bazerman & Malhotra, 2007). BDR approaches represent a viable avenue by which our field could exercise such influence.

BDR's Contribution to Core Topics in Organizational Behavior

BDR is an interdisciplinary field with contributions from psychology, economics, marketing, and neuroscience in addition to organizational behavior. Noting this breadth,

some scholars may question whether BDR is close to the heart of the field of OB. We believe it is. The issues that are most fundamental to BDR are central issues in organizational behavior (Bazerman, 2005), such as how people (including managers) make decisions in the face of uncertainty, how they value the outcomes of their decisions, and how they search for and interpret information. In this section, we highlight some of the connections we see between the BDR approach and a few topics of interest to organizational scholars. We begin by discussing some traditional micro-OB topics with clear connections to research in BDR: motivation, goal setting, fairness, workplace emotion, and employee selection. We then address a couple of topics that may be of more interest to macro researchers: institutional inertia and social networks.

The list of OB topics we have chosen here is not exhaustive, nor even comprehensive. It is merely a sample of topics that relate to some of the more insightful findings in BDR, particularly some of the more recent developments. In covering these topics, our aim is not to instruct OB scholars on what they should be studying; rather, we aim to summarize relevant BDR studies that might stimulate readers' imaginations about the potential for future work in each of these areas.

Motivation

What makes employees willing to exert more effort, particularly in ways that improve their performance? Research on employee motivation often implicitly takes the perspective of the employer in examining the rewards that lead people to work harder (Latham & Pinder, 2005). Along this vein, BDR researchers, such as Heath (1999), have found that employers are likely to overestimate the motivating influence of extrinsic

rewards like money (Miller, 1999). However, most of the work in BDR relevant to the topic of work motivation implicitly takes the perspective of the individual employee in asking whether people are motivated optimally. Do people correctly anticipate their own preferences and work to achieve those things that will truly increase their happiness and welfare? A variety of work suggests not.

Are people motivated to pursue the right outcomes? People make systematic errors in predicting what will make them happy. They assume that living in California will make them happy (Kahneman et al., 1998). Junior professors think that getting tenure will make them happy (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). And they believe that more money will make them happy (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006). Sadly, the evidence suggests that ~~better~~ sunny weather, tenure, and increased wealth do not lead to enduring changes in life satisfaction. Fortunately, people recover from negative outcomes, such as being denied tenure or becoming paraplegic, far more rapidly than they expect (Brickman, Coates, & Janoff-Bulman, 1978; Gilbert et al., 1998). Unfortunately, people also get used to tenure, good weather, and wealth.

BDR studies have consistently found that reference points and framing are integral to understanding people's motivation for achievement and their satisfaction with subsequent outcomes. For instance, living near wealthier neighbors leaves people feeling worse off because the neighbors' wealth provides a higher reference point by which they feel poor by comparison (Luttmer, 2005). By the same token, negotiators are happier when they get more than the other side because the other side represents a reference point against which they compare their outcomes (Loewenstein, Thompson, & Bazerman,

1989; Novemsky & Schweitzer, 2004). These results are ironic, of course, because they have counter-intuitive implications--people are happier when they have poorer neighbors, and negotiators may derive more satisfaction from seeing their opponents unhappy than from getting better prices.

Research on incentives, affective forecasting, and reward schedules fits in well with the BDR approach. The same approach on similar topics might also suit research on motivation and job satisfaction in OB. For example, work by Hsee and Abelson (1991) suggests that people strongly prefer an improving series of outcomes to a declining series, which intuitively makes sense. However, the authors also demonstrate that people prefer an increasing series *even when the declining series offers greater benefit*, because the decline is perceived as a loss. Specifically, workers are more satisfied with wages that go up (say salaries of 43, 44, 45, and 46 thousand dollars per year) than with larger salaries that go down (salaries of 48, 47, 46, and 45 thousand dollars per year), even when the trends predict nothing beyond the four years. The same pattern may be apparent in employees' perceptions of age-wage profiles—their satisfaction may depend more on the slope of an age-wage profile, rather than its absolute value at any particular point in time. As for errors in affective forecasting, people may wrongly assume that promotions or raises will lead to increases in job satisfaction.

For organizations, it would be helpful to know the factors that underlie such miscalibration and to know who is more likely to commit these errors in judgment. For example, BDR research suggests that people quickly habituate to changes in income but never quite get used to annoyances like a bad commute (Gilbert, Lieberman, Morewedge, & Wilson, 2004), so that employers may be more likely to retain valued employees by

subsidizing housing close to work rather than by increasing employees' pay. Moreover, BDR approaches suggest another way to reframe research on work motivation: by explicitly considering the necessary tradeoffs. For instance, is it possible to weigh increased productivity (resulting from stronger work motivation) against the increased rate of employee burnout? To what degree does work motivation crowd out or undermine the pursuit of other goals?

Goal Setting

One of the most prominent and well-supported theories in organizational behavior is goal-setting theory. One stylized summary of this sizable literature is the following: Specific goals increase effort over more general instructions to simply "do your best" (Locke & Latham, 1990). Again, much of this work implicitly adopts the perspective of the employer in assuming that more effort and higher productivity are necessarily positive outcomes. The question of whether increased ambition and productivity is one that has not generally been asked in goal-setting research, but BDR has asked it.

Employing a BDR perspective, Heath, Larrick, and Wu (1999) highlighted the value of thinking about goals as reference points. Reference points and framing effects in judgment have been at the core of BDR since the 1979 publication of Tversky and Kahneman's prospect theory, which posits that people judge outcomes relative to reference points, and that losses loom larger than gains. In other words, a loss of a given size is more painful than a gain of the same size is pleasurable. For this reason, people will work harder to avoid a loss by falling short of a goal-established reference point than they will to achieve a gain in performance (Heath et al., 1999).

This tendency to avoid loss is, of course, not an unalloyed positive. Working harder need not always be in the interests of individual workers or even of the organizations that employ them. One of prospect theory's key tenets is that when people are seeking to avoid a loss, they make riskier choices than when they are pursuing a gain. Consistent with this principle, Schweitzer, Ordoñez, and Duouma (2004) found that reliance on performance goals can increase the prevalence of unethical behavior because those who anticipate falling short of a goal are more likely to engage in risky strategies, including cheating, to clear the hurdle. Those who set high goals are also more likely to fall short of them than are people who set modest goals; accordingly, those who set high goals are frequently less satisfied with their outcomes even though they may achieve more (Galinsky, Mussweiler, & Medvec, 2002; McGraw, Mellers, & Ritov, 2004).

BDR has also uncovered some perverse effects of goal setting on workers' decision making. Camerer, Babcock, Loewenstein, and Thaler (1997) examined work patterns of New York City cab drivers and found a surprising effect that they explained using cabbies' goals. Because taxicabs are in greater demand on rainy days than on sunny days, cabbies who set goals for how much money they will make in a work shift find it is easier to achieve their goals when it is raining. Consequently, Camerer and colleagues found that cabbies do not work as long on rainy days—after they achieve their goals, they turn in their cabs and go home. The ironic result is that cabbies work less on days when their hourly wages are higher. This is a bad outcome for those who need cabs because the supply of cabs is lower when they are in greater demand. It is also a bad outcome for the cabbies because they wind up spending more time working when they could be engaging in leisure activities—perhaps outside enjoying the good weather.

While OB research has long considered the performance benefits of goals (with some notable exceptions such as Staw & Boettger, 1990), the disadvantages of goal setting represent a natural line of inquiry for BDR researchers. Many provocative research questions remain open: for example, are ambitious fiscal goals more likely to produce unethical behavior, as the work of Schweitzer and colleagues (2004) suggests, or are they more likely to simply increase higher levels of performance? Further, when does goal setting energize people to work against their self-interest, perhaps in support of a collective cause, or to work against the interest of the group (e.g., Camerer et al., 1997)? Finally, how good are people at setting goals in ambiguous circumstances? Answering these questions requires us to investigate intuitive versus optimal responses to goals, an investigation that should appeal to BDR and OB researchers alike.

Fairness

Organizational justice and fairness have long been of interest to researchers in OB (Bies, 1987; Brockner, Tyler, & Cooper-Schneider, 1992; Greenberg, 1987). But because this research usually lacks a clear normative backdrop, it cannot answer crucial questions about whether a preference for fairness is efficient, rational, or desirable.¹ A parallel literature on fairness judgments exists in BDR, and some of this work examines how fairness judgments clash with economic imperatives (Kahneman, Knetsch, & Thaler,

¹ We should note that there is some research that examines trade-offs between justice and other outcomes. For example, van den Bos et al. (1999) found that while fair processes have benefits in and of themselves, they leave no one to blame but oneself when things come out badly. As a result, the ambiguity created by unfair outcomes may have benefits for ego bolstering because the ambiguity allows those who obtained undesired outcomes to comfort themselves by believing that the outcome was due to discrimination and not to their own personal shortcomings (Brockner & Wiesenfeld, 1996; Schroth & Shah, 2000; Wiesenfeld, Swann, Brockner, & Bartel, 2007). However, this research does not qualify as BDR because it does not address the key question of whether people think about this trade-off rationally. Given the choice, are there circumstances under which people should choose unfair procedures? Do they? Further, what do these choices indicate about how people balance the utility of fairness with other values?

1986). For instance, employees regard a pay cut of five percent from their employer during hard times as unfair. However, when the same employer provides a modest seven-percent raise in a year when inflation is running at twelve percent, employees regard it as acceptable. The buying power of employee salaries is equal in the two conditions, but the two situations produce very different judgments regarding fairness. This research illustrates the fact that fairness judgments are based on intuitive heuristics that are far from systematic or coherent.

Compensation and morale. A normative standard can strengthen some OB theories regarding employee compensation. Take, for example, the issue of downward wage stickiness. Economic models would prescribe that when the supply of labor goes up or demand for it goes down, the wages paid to laborers should drop. But evidence suggests that employers very rarely reduce the wages paid to incumbent workers (Thaler, 1991). This anomaly can be accounted for by justice research, which shows how motivation and effort are undermined when workers are paid less than what they believe they deserve. One way to make an individual feel underpaid is by reducing their rewards when their effort and productivity remain constant (Brockner, O'Malley, Hite, & Davies, 1987; Goodman & Friedman, 1969).

Another interesting economic anomaly involves pay differentials across different industries. Highly profitable industries tend to pay all their employees more than do less profitable industries (Thaler, 1991). In other words, a secretary is likely to be paid more at an investment bank than at a grocery store even if the secretarial duties are similar at both locations. Efficient labor markets should not produce such disparities. Nevertheless, companies pay their employees more in profitable years, even when the profitability is

the result of market conditions over which the employees have no control (Bertrand & Mullainathan, 2001a). While theories of fairness can easily explain why firms would feel the need to share wealth with their employees, standard neoclassical economic theory struggles to explain these outcomes.

Strategic interaction. Perhaps the biggest BDR literature on fairness examines experimental games such as the ultimatum game. These games have proven to be of such lasting interest to BDR researchers because of their improbable outcomes: economic theory provides a clear and unambiguous prediction for what rational actors ought to do, yet these predictions are frequently contradicted by people's actual behavior. In the ultimatum game, two people are offered money (say, \$10) if only they can agree on how to divide it between them. One person must propose how to split the money and the other must respond by choosing whether to accept the offer--in which case the money is divided accordingly--or reject it--in which case neither of them gets anything.

The solution offered by economic theory is simple: the proposer should offer the smallest possible amount to the responder. The responder, rationally preferring something to nothing, should accept. But this is not what people do. Instead, an even split of the money is the most common proposal, and when proposers offer less, their offers are routinely rejected (Roth, 1995). Many scholars have speculated that proposers split the money evenly because they are concerned about fairness, and this same preference for fairness leads responders to reject profitable offers. In short, research on the ultimatum game suggests that people care about fairness and are willing to forego real money in order to punish unfair behavior by others.

The paradigm of the ultimatum game has enabled researchers to ask basic questions about why it is that people seem to care about fairness. One fascinating set of questions surrounds the behavior of the proposer. Are proposers more generous than economic theory predicts because they really care about fairness, or because they expect that responders will reject stingy offers? One way to assess this question is to eliminate the responder's option to reject the proposal. In this so-called "dictator game," the proposer alone determines how the money should be divided. Compared with the standard ultimatum game, proposers' offers go down in this version of the game, but they still stay significantly above zero, suggesting that fear of rejection is not the only motive driving proposers' generosity (Camerer & Thaler, 1995; Rabin, 1993).

Some have suggested that people give money to others in the dictator game is not out of a sense of fairness, but instead out of concern for appearances. If they could escape with the money and without anyone being the wiser, they would. Indeed, when the experimental setup gives dictators the assurance that the experimenter will never know what they choose, their generosity declines (Hoffman, McCabe, Shachat, & Smith, 1994). And when dictators are given the choice of keeping the other player in the dark, their generosity declines still further (Dana, Cain, & Dawes, 2006). Dana and colleagues gave participants in their study a choice: they could either (1) play a standard dictator game in which they could allocate \$10 between themselves and another person, or (2) they could exit the game silently, receive \$9, and the other person would never even know about the existence of the game. Roughly a third of participants took the silent exit option, though this choice is difficult to justify as rational because a self-interested person should play the standard dictator game and just keep the entire \$10.

These experimental studies of fairness preferences offer important insight on how people think about fairness and how fairness norms influence their decisions. Studies of the proposers' decisions in the ultimatum game shed light on the ways that organizational leaders can most effectively allocate the bounty generated by a profitable business venture. Similar work can help elucidate the motives underlying the fairness judgments of workers who depend on those allocation decisions (see Blount, 1995).

The BDR approach also enables researchers to ask interesting questions about how people value fairness. Specifically, how much is fairness worth compared with objectively valued rewards? Managers in organizations must often weigh the tradeoffs between being perceived as fair and being perceived as selfish, and the normative benchmark is not always clear. However, much of the research on justice and fairness in OB focuses on the relative effectiveness of different strategies that aim to promote fairness, assuming that fairness is valued above all else. In contrast, justice research in BDR considers the employee's perspective, which examines the tradeoffs between perceived fairness (e.g., procedural justice) and instrumental rewards (e.g., outcome favorability). Future research in OB might draw on findings from previous BDR work on the same topic to consider the different factors that lead managers to value fairness rather than self-interest.

Emotion in the Workplace

The study of emotion in the workplace has seen a substantial increase in recent years (Elfenbein, in press), but as Brief and Weiss (2002) highlight in their review, this research literature faces a number of challenges. For example, in field settings it is

difficult—if not impossible—to examine the effects of emotion itself. In naturalistic settings, emotions are integral to the situation, and are therefore bound up with thoughts and experiences that produced the emotions. How can OB researchers determine the relative influences of emotions and the cognitions with which they are bound up?

The solution to this problem in the BDR literature has been to study incidental emotion—emotions that people happen to be feeling when they form a judgment or make a decision. Typically, BDR researchers will induce an emotion and examine its carryover to another, unrelated decision. Normatively, incidental emotion should have no effect on a new, unrelated situation. Any influences it does have are therefore of interest to BDR researchers (and to emotion researchers).

In one example, Baron (1990) showed that inducing a positive mood with pleasant scents increased cooperativeness in negotiation. While it may be perfectly sensible to choose to cooperate in negotiation, few negotiators would claim that their decision to cooperate was influenced by what they happened to be sniffing at the time. The influence of scents on behavior seems inconsistent with rationality. Similarly, Forgas (1998) found that negotiators in good moods were happier with their outcomes, regardless of whether they had in fact performed better in their negotiations or not.

Baron's and Forgas's research, like much of the research on affect, examines generalized positive or negative mood. More recent work, however, suggests that grouping all negative emotions together is misleading. Lerner and Keltner (2001), for example, showed that different negative emotions had very different effects on perceptions of risk. Fear increased people's perception of risk, while anger decreased it (see also Lerner, Gonzalez, Small, & Fischhoff, 2003; Tiedens & Linton, 2001).

Happiness, for its part, tends to increase reliance on judgmental heuristics, such as racial stereotypes (Bodenhausen, Kramer, & Suesser, 1994). These results provide useful insights that can help us understand how the emotions expressed and experienced within an organization may create bias in the judgments of its members.

Research on job mood, which often suffers from endogeneity concerns, might benefit from adopting similar BDR approaches. For example, one might predict a relationship between workplace emotion and expense account abuse. Research on emotion suggests that both angry and happy people are more willing to make risky self-interested choices than are fearful people. If an employee is fearful at work when selecting a hotel for an upcoming business trip, she might pick a more cautious, frugal option (e.g., Holiday Inn). If she feels happy or angry, she might be more inclined to throw caution to the wind and go with a more luxurious option (e.g., the Plaza). Such a hypothesis would be difficult to test with field data in which workplace emotions are inextricably linked with expense account activity. However, inducing emotions at work (either negative or positive) and then evaluating whether a change in emotion affects employees' expense account decisions would provide a more interpretable test. Engendering emotions under controlled circumstances can help provide clarity to OB research on emotions in the workplace.

Employee Selection

Hiring decisions are among the most important in organizations. Many firms perform this critical task by relying on managers' intuitive assessments following face-to-face, unstructured employment interviews. This practice remains the norm despite strong

evidence that interviews are not particularly useful in predicting future job performance (Conway, Jako, & Goodman, 1995; Hunter & Hunter, 1984) and that linear models outperform managers' intuitive judgments (Dawes, 1972, 1979; Schneider & Schmitt, 1986). Previous BDR research suggests that managers' enduring faith in the employment interview and in their own intuitive judgments may be driven by several cognitive biases.

Structured employment interviews that utilize standardized questions and consistent formats are generally superior to unstructured employment interviews with respect to their reliability, predictive validity, and legal defensibility (Campion, Palmer, & Campion, 1997). However, organizations rely far more heavily on unstructured employment interviews (Graves & Karren, 1996), and there are at least three reasons for this. First, people are overconfident in their own interviewing abilities (Dawes, 1996; Dawes & Dana, 2007) and their ability to predict the behavior of others (Griffin, Dunning, & Ross, 1990). Consequently, they underestimate the value in doing the work necessary to organize and structure their interviews (Dipboye, 1997). Interviews are also susceptible to self-enhancement and "similar-to-me" biases: interviewers tend to be swayed by ingratiation, even when it seems transparent (Ferris & King, 1991; Gilmore & Ferris, 1989; Gordon, 1996), and they tend to favor applicants who are similar to them with respect to personality, race, or gender (Sears & Rowe, 2003).

Another reason for the popularity of unstructured interviews is that structuring interviews takes time and effort. Personnel selection is so important that even small increases in the quality of employees selected can pay off handsomely in the long run (Schmidt & Hunter, 1998). Nevertheless, most managers and organizations never bother to figure out whether it is worth the effort. As in other domains where BDR has

documented flaws in intuitive judgment, people lack motivation to change how they make decisions when they do not understand how their intuitive judgments are impairing those decisions (Bazerman, 2005; Kahneman, 2003). Finally, unstructured employment interviews remain standard practice, and as research on status quo effects suggests, people routinely fail to question standard operating procedures (see our discussion of institutional inertia, below).

In addition to addressing organizations' failure to use structured job interviews, BDR research also suggests that hiring decisions could be improved by increasing reliance upon linear models. Any sensible hiring process should include a number of considerations in addition to the interview, such as the applicants' educational backgrounds, recommendations, work experience, and performance on ability tests, assessment centers, or job tryouts (Hough & Oswald, 2000). Yet when it comes to combining and weighing all these considerations to arrive at a final decision, organizations rely almost exclusively on unaided human judgments—despite the fact that evidence from BDR indisputably shows the superiority of linear models for making these sorts of structured decisions (Dawes, 1979, 2005).

The BDR approach might provide some new direction for research on interviewing. Work on person perception has demonstrated the reliability of “thin slices”—that people tend to make snap judgments of others after interacting with, or observing, a person for just a few minutes, or maybe even a few seconds—and that these snap judgments correlate fairly well with more complex performance outcomes (Ambady & Rosenthal, 1992). People find it difficult to revise these quick impressions even when they are presented with inconsistent information. Numerous studies have documented this

effect in employment interviews, suggesting that interviewers make up their minds regarding candidates in the first moments of the interview (Arvey & Campion, 1982; Schmidt & Hunter, 1998; Wright, 1969).

These findings are remarkably insightful, but a BDR perspective would ask an entirely different question. Specifically, are these snap judgments better than judgments made using more complete data? If researchers evaluate the objective performance of people who make “thin slice” judgments, do these judges perform poorly relative to their colleagues with more substantial periods of evaluation, or are they comparable in terms of predicting job performance? For example, given that extraversion is an excellent predictor of success in sales positions and an easy trait to detect in interviews, how long should interviews be for sales positions? Five minutes? Perhaps just a handshake and some brief chit-chat? A research program with a normative benchmark would help answer these questions convincingly.

Institutional Inertia

Institutional theory holds that established modes of thought and traditional assumptions are built into organizations. Compliance with institutional rules and norms occurs because they are taken for granted as “the way we do these things” (Scott, 2001, p. 57). One upside of the resulting institutionalization of standard practices is that it helps give organizations some of their stability and inertia, which is essential for predictability and reliability in firm performance (Hannan & Freeman, 1984). On the other hand, inertia is the bane of every CEO who wants to introduce meaningful organizational change. Whereas the normative and regulatory pillars of institutional theory rely on

organizational structures and rules, the cognitive pillar retains the strongest implications for individual cognition (DiMaggio, 1997).

Although there has been little empirical study of the psychological underpinnings of a cognitive pillar of institutionalism (for an exception, see Zucker, 1977), there is some work in BDR that bears directly on the issue. Samuelson and Zeckhauser (1988) documented what they called the “status quo bias,” or people’s reluctance to change the way things have been done in the past. While there have been numerous demonstrations of the status quo bias in the experimental laboratory (Kahneman, Knetsch, & Thaler, 1991), the neighboring states of New Jersey and Pennsylvania unwittingly carried out a natural experiment on the status quo bias when they selected default automobile insurance options for their state’s drivers in the early 1990s. Both states offered their drivers two very similar options, one of which included a full right to sue (the default option in Pennsylvania) and another, less expensive option, which restricted the right to sue (the default in New Jersey). According to Johnson, Hershey, Meszaros, and Kunreuther (1993), 79% of New Jersey drivers selected the limited right to sue, but only 30% of Pennsylvania drivers did so. Normatively, the default option ought to have been irrelevant to drivers’ decisions about which type of insurance they should buy. Nevertheless, it had a powerful influence—they generally chose the default option (see also Johnson & Goldstein, 2003).

Ritov and Baron (1992) showed how the status quo bias leads people to think differently about action versus inaction. Their participants were asked to decide whether to inoculate 10,000 children against a disease that was expected to kill around 10 of them. The problem was that the vaccination itself had unpleasant side effects that were likely to

kill 5 of the 10,000. The possibility that their action (the vaccination) might kill children led to what Ritov and Baron called an omission bias: participants preferred the status quo, even though it meant more children would die, because a change entailed action that would cause harm.

One thing that distinguishes studies of status quo biases from work in the tradition of institutional theory is that in BDR there is a normative benchmark. Institutional theory points out the many ways in which organizations are resistant to change, but usually cannot answer the question of whether such inertia is good or bad for the organization because it cannot specify how much inertia the organization *should* have. Researchers can argue this question until they are blue in the face, but empirical data cannot provide a resolution until these researchers identify a normative standard for how much inertia is optimal for the organization. BDR perspectives can help establish this normative standard.

BDR work on the status quo bias should interest OB researchers in multiple areas. For example, a crucial issue in change management is employee resistance to major change efforts. According to Kahneman and Tversky's (1979) reasoning, such resistance comes from a combination of two factors that relate to the status quo bias: (1) employees valuing certain outcomes more than uncertain outcomes, which makes change less attractive; and (2) asymmetrically valuing the losses and gains derived from changing the status quo (e.g., overvaluing the losses associated with changing compared with those associated with staying put). Using the BDR approach, OB researchers might investigate whether resistance to change can be mitigated by manipulating the framing of perceived gains and losses. This approach might also benefit research on turnover decisions or

leadership, explaining in the first instance why people choose to stay when it would be rational for them to leave and in the second whether charismatic leaders overcome the status quo bias by altering followers' evaluations of potential gains and losses.

Social Networks

OB scholars are fascinated by social networks, and for good reason. Social ties serve as a critical means by which things get done in the workplace, and they provide social support in times of stress. Recently, research on social networks has taken a more cognitive view, examining people's mental representations of their own and others' networks. This is an important topic in part because it can help us understand whether people's social network positions are a consequence of strategic behavior or of happenstance (Flynn, Reagans, Amanatullah, & Ames, 2006; Janicik & Larrick, 2005). After all, if people are unaware of the position they occupy in the social network, then it is unlikely they arrived there on purpose. Occasionally, this line of research asks normative questions regarding the extent to which people's perceptions of social networks are consistent with reality. When it does so, it becomes relevant to BDR.

Krackhardt and Kilduff (1999) examined whether people accurately perceive the social networks in which they are embedded. Their answer was that the accuracy with which people perceive social relations depends on the proximity to the individual making the judgment. Beliefs about ties between those close by, such as friends, were biased because people were motivated to believe that their friends liked the same people they liked and disliked the same people they disliked. Beliefs about those far away in the network were colored by simplifying assumptions and stereotypes because people did not

have enough information to make accurate judgments about those remote individuals. But in between, people had more accurate perceptions of social ties: motivational biases were weaker, yet they had enough information about colleagues who were moderately close to them to make an informed judgment about their social networks.

The inaccuracies present in people's beliefs about social networks represent a profound challenge for some of the common approaches to their study (Krackhardt, 1996). These studies often rely on individuals' reports of their relations with others for establishing the structure of the network. However, as Krackhardt (1987) details, people's perceptions of their social networks correspond only weakly with reality. This fact does not imply that cognitive social networks ought to be dismissed as worthless. Perceptions can, under some circumstances, be more important than reality (Kilduff & Krackhardt, 1994). However, it suggests that researchers would do well to take self-reports with a grain of salt and obtain objective measures of important variables whenever possible.

Current work on cognitive networks raises several questions that bear implications for research in OB. Specifically, are patterns of information sharing in an organization suboptimal because those employees who possess valuable information lack accurate cognitive maps of their social networks? Further, are attempts at social influence susceptible to the same problem? For example, consider a senior manager who is trying to informally influence the thoughts and feelings of a sizable set of employees. The manager may rely on close contacts to act as agents of influence on his behalf, but are these primary contacts as well connected as the manager hopes, or will the manager's perception of their connections be biased in some systematic way? If, in fact, cognitive networks among coworkers are biased, it would be useful for organizations and their

members to know in what ways they are biased so that they may improve their own effectiveness at keeping tabs on the thoughts and feelings of their constituents or influence those individuals in a meaningful way.

The ideas presented in this section represent a small number of ways in which BDR can inform topics of interest to OB scholars. This is not an exhaustive set—we see numerous other domains within OB that could be strengthened by considering BDR's normative question, including ethical decision making in organizations, helping behavior, commitment, group dynamics, and work/life balance, among others. To be clear, much of the research we have discussed and that we believe qualifies as BDR is not done by people who regularly attend the meetings of the Society for Judgment and Decision Making or who regard themselves as part of the BDR crowd. Nevertheless, we classify BDR research as that which considers an explicit normative standard that allows the researchers to specify how--and how much--judgments or decisions deviate from the optimum.

The BDR Approach

As our review suggests, BDR is more of a research approach than a research topic; as such, it pushes scholars to think about what the null hypothesis ought to be. In some cases, as when the experimental manipulation is normatively irrelevant, it makes sense to have a null hypothesis that predicts no difference between conditions. But other times, normative theories provide more specific guidance. Indeed, normative theories may even provide a point prediction regarding what a rational person ought to do, and

researchers can compare actual behavior to this clear standard. Purely descriptive research without a normative backdrop hardly ever produces theory as clear or empirical findings as robust as does normative BDR research.

At this point, we move to address some concerns that OB researchers frequently express about BDR, including the work that we have reviewed here. These concerns converge on two overarching issues: context and generalizability. Critics wonder if BDR studies can account for the richness of organizational contexts or if the findings derived from BDR work apply to most organizations. In addition, some researchers question whether BDR's focus on decision-making errors can be useful in developing practical theories and whether OB researchers can easily identify normative benchmarks in studying complex phenomena. We address these concerns in the following sections.

Gathering Empirical Evidence for BDR

BDR is not necessarily limited to a particular source of empirical data. Most BDR research takes place in laboratory environments, but a significant amount of work takes place in the field. In addition to those studies we have cited, there are many examples of the powerful and important consequences of gain/loss framing and reference points on everything from labor markets (Camerer et al., 1997; Falk, Fehr, & Zehnder, 2006) to racetrack betting (Camerer, 2000) and investing (Odean, 1998a, 1998b). For instance, DellaVigna and Malmendier (2006) found that people's unrealistically virtuous intentions, which have been highlighted in laboratory studies of self-control, are also manifest in the behavior of health club patrons. According to data on usage rates collected from thousands of patrons, people intend to use health clubs more than they actually do, as shown by their willingness to pay monthly fees that exceed the cost of

paying by the visit. DellaVigna and Malmendier (2004) also show how corporations capitalize on people's self-control problems in a number of different ways, for example by offering consumers easy access to credit cards that allow them to consume immediately but force them to pay exorbitant long-term interest rates.

Still, the majority of BDR research comes out of the lab for two main reasons. First, manipulation of the hypothesized independent variable is indispensable for establishing causality—a criterion as critical in organizational research as it is in other sciences. For instance, many people assume that group cohesion leads to higher group performance, but field data showing a correlation between cohesion and performance cannot prove causality. The same factors that lead a group to be productive may also produce group cohesion: Staw (1975) showed that when groups are led to believe that they have succeeded, they come to believe that they have been more cohesive. So group members' reports of group cohesion may be a consequence rather than a cause of group performance. Successfully putting research to use depends on correctly identifying causal relationships and therefore understanding what causes what.

Second—and most characteristically distinctive of BDR—the control afforded by the laboratory setting allows researchers to more easily specify what the optimal decision by participants would be. Many interesting and influential field studies cannot specify what an optimal decision would be. Consider managers who attempt to find employees by relying on their social networks (Granovetter, 1995). These managers are making a tradeoff in favor of convenience over thoroughness of search. Are they making this tradeoff optimally? Field data cannot answer this question for multiple reasons: (1) we cannot know how good the unhired people would have been, (2) it is difficult evaluate

precisely how good the actual employees are, and (3) we cannot compare their quality with the cost of searching for better employees. Using a BDR approach need not assume that managers are rational, but without being able to specify what a rational person ought to do, research is relegated to being descriptive rather than prescriptive (Bazerman, 1999).

While it is tempting to think that it ought to be possible to study managerial decision making in the field by simply asking managers to report what they do or by observing their decisions, these approaches have proven problematic for two reasons. First, people often are deeply and profoundly unaware of how they go about making many decisions (Bertrand & Mullainathan, 2001b; Nisbett & Wilson, 1977; Schwarz, 1999), which makes self-report data unreliable. Second, although observing decisions made in the field can yield rich data, this approach raises concerns about sample size. The BDR field studies that have proven most enlightening are those in which the same decision is made many times by many people, such as in betting, hiring, or investment decisions.

A further limitation of field research is that it fails to capture what *could* have happened. Field studies restrict our attention to the variables at play in the field rather than introduce other variables that might have greater impact. The potential advantages of some decision-making strategies may go unnoticed if the fuller range of possible strategies was not explored thoroughly in an experimental setting. For example, because of carefully conducted laboratory research, we now know that pre-commitment savings programs such as Save More Tomorrow could exist and that they are superior in many ways to traditional retirement savings programs, despite their rare appearance in

organizations. The BDR approach prompts researchers to focus more attention on how to encourage managers to adopt better decision-making practices, perhaps by testing the effectiveness of interventions in a controlled setting.

The Importance of Field Research

Field research, including descriptive research and case studies, can deeply inform our theories by shedding light on possible relationships between variables. In particular, qualitative research is useful in specifying which variables may be critical (Fine & Elsbach, 2000). In addition, field research can help researchers refine and clarify their theories. Applying abstract and general theories to particular contexts is often far from straightforward, but such application can be invaluable for noting boundary conditions, identifying catalysts, and specifying conceptualizations of key variables.

Of course, field research can also inspire questions that then move to the lab for further testing. Moore, Swift, Sharek, and Gino (2007) found that undergraduates from institutions with lenient grading systems were more likely to be admitted to graduate school than were their peers from institutions with tougher grading policies. In an attempt to understand this result and to explore possible explanations for it, the researchers carried out a series of laboratory experiments that eventually offered a new perspective on the basic psychological phenomenon known as the “fundamental attribution error,” which describes the tendency to explain individual behaviors in dispositional rather than situational terms (Davis-Blake & Pfeffer, 1989; Ross, 1977). To pick another example, the common failure to save enough for retirement has inspired insightful research on impatience and intertemporal choice (Loewenstein & Elster, 1992). And organizations’ persistent use of unstructured employment interviews by organizations, despite the

damning evidence regarding their value, has inspired research aimed at understanding this puzzling behavior (Dawes & Dana, 2007).

Many organizational researchers rightly express concern that laboratory research omits the organizational context. In any organizational decision, there are many factors interacting at once, and laboratory designs cannot account for all the important contextual variables simultaneously operating (Mowday & Sutton, 1993). But field research does not necessarily solve this problem. It is usually impractical—and often impossible—to measure all the key influences on an individual decision in an organizational context. If the context matters, researchers should figure out which aspects of context matter, and they should study those aspects in rigorous ways. Researchers who argue that they cannot specify the key features of the context that matter are, in a sense, admitting that they do not understand what they are studying.

Generalizability of Laboratory Results

Some OB researchers worry that laboratory results will not generalize to field contexts. However, the literature is replete with examples of basic phenomena first studied in the laboratory that were then replicated in the field (Camerer, 2000; Locke, 1986). Escalation of commitment was originally studied in the lab (Staw, 1976, 1981), but has been documented in several field settings, including professional basketball teams (Staw & Hoang, 1995), bank loan officers (Staw, Barsade, & Koput, 1997), and government budgeting decisions (Ross & Staw, 1986). The power of gain/loss framing to influence risk preferences has been extensively studied in the lab (Kahneman & Tversky, 1979, 2000), but has also proven useful for explaining actual investment behavior (Benartzi & Thaler, 1995; Odean, 1998a), labor markets (Camerer et al., 1997),

choices to save or spend (Thaler & Benartzi, 2004), and more (see Camerer, 2000). The self-serving nature of fairness judgments in negotiation was originally demonstrated in laboratory studies (Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Thompson & Loewenstein, 1992), but was subsequently documented in the judgments and rhetoric of parties to a labor/management dispute (Babcock, Wang, & Loewenstein, 1996). BDR researchers agree that “field testing” a theory is essential if the theory is to be of practical value.

We enthusiastically endorse the use of a variety of research methods, including both field and laboratory methodologies (see Chatman & Flynn, 2005). Qualitative research can be useful for gaining familiarity with a phenomenon and identifying the key variables. Experiments are essential for being able to establish causality, and experimental research designs are often most feasible to implement in the laboratory. Field studies are essential for demonstrating the generalizability of a particular phenomenon outside the laboratory and for clarifying how causal relationships play out. These insights often lead to more questions that deserve further study, both in the lab and the field.

Is BDR Simply Showing That People Are Stupid?

Several observers have complained that BDR is overly negative, especially work growing out of the “heuristics and biases” tradition (Gigerenzer, 1996; Juslin, Winman, & Olsson, 2000; Krueger & Funder, 2004). According to Khilstrom (2004), decision research essentially demonstrates that “people are stupid,” highlighting their shortcomings and their weaknesses rather than their successes and strengths. Krueger and Funder (2004, p. 316) argue that the shift toward the negative in decision research was

stimulated by the work of Tversky and Kahneman (e.g., 1974), which “viewed distortions and errors as the fundamental and most informative aspects” of human judgment (Krueger & Funder, 2004, p. 317). Indeed, the positive psychology (Seligman & Csikszentmihalyi, 2000) and positive organizational scholarship (Cameron, Dutton, & Quinn, 2003; Luthans & Youssef, 2007) movements have arisen, in part, as a response to this perceived negativity.

There are two primary reasons for BDR’s focus on failures and irrationalities. The first is the same reason why physicists smash atoms. Physicists learned about the structure of atoms by observing how they broke apart or failed when they were smashed with high-velocity particles (Kahneman & Tversky, 1983). Similarly, the inner mechanisms of human cognition are often revealed most clearly in their failures (Epley, Van Boven, & Caruso, 2004). In our attempts to understand human behavior, we are in much the same position as physicists trying to infer the properties of atoms by observing them from the outside, or of someone who is trying to study a complex machine by observing it in action. Those who study human cognition have not made much progress disassembling the machine and seeing how it works from the inside. Instead, the most promising approach has been to give the “machine” tasks to perform and then to observe its performance.

When the machine works perfectly, solving every problem we give it, we learn little about the human machinery other than the fact that it is impressive. And it is indeed impressive. The modest three-pound human brain can solve complex problems of recognition, perception, and coordination that lie beyond the abilities of even the most sophisticated computers. For instance, our abilities to effortlessly recognize faces and

comprehend language are likely to lie outside the capabilities of any computer we can build, at least for the foreseeable future. However, psychologists learn the most about how we accomplish these successes not by observing successes but by taking account of failures. When do we confuse one face with another? When do we confuse one word for another? Answers to these questions have helped us understand how our minds process visual and auditory information (Holt & Lotto, in press; Yovel & Kanwisher, 2005). Likewise, studying how organizations fail can provide useful lessons about what helps them succeed (Perrow, 1984; Ross & Staw, 1986; Sitkin, 1992; Weick, 1993).

The second reason for BDR's focus on failures and irrationalities is that the field prospers by exploiting these anomalies. When people behave in ways that are consistent with normative models—or at least not highly inconsistent with them—BDR researchers have little advice to offer on how to improve. BDR thrives in the productive tension between what *is* and what *ought to be*. This does not mean that BDR is interested only in mistakes and failures; people can also deviate from the normative benchmark by outperforming it, and these instances have been of great interest to behavioral decision researchers. One example is that although economic theory predicts that markets will collapse when the seller knows more than the buyer about the item being sold (Akerlof, 1970), real people manage to sustain markets even with asymmetric information, and BDR researchers have investigated how they do this (Bazerman, Gibbons, Thompson, & Valley, 1998). Another example comes from the well-known prisoner's dilemma game, in which universal competition and mutual destruction is the rational equilibrium, but BDR studies have shown how people manage to avoid this dismal outcome with impressive frequency (Dawes, 1980; Ledyard, 1995).

Lastly, it is worth noting that BDR is interested only in generalizable human tendencies that result from cognitive processes. Mistakes that are due to carelessness, lack of training, and inexperience are not nearly as interesting as those errors whose universality suggests they derive from fundamental cognitive biases that all people share. Further, cognitive processes are, according to at least some scholars (Fischhoff, 1982; Larrick, 2004), more malleable than dispositional traits or resource constraints, which open up opportunities for meaningful interventions (see also Heath, Larrick, & Klayman, 1998).

What's The Right Normative Standard?

We have thus far not addressed the question of where the normative standard comes from in BDR. Usually, the answer to this question is fairly straightforward. The answer comes from decision analysis, the quantitative analytical approach to decision making against which behavioral decision research contrasts itself. Decision analysis is consistent with Bayesian principles of belief updating, statistical principles of expected value, and economic notions of rationality, including game theory. It is tremendously valuable prescriptively, because it guides the way to optimal strategies and stable equilibria. It forms the foundation upon which many fields are built, including neoclassical economics, operations research, accounting, finance, quantitative marketing, and statistics. On the other hand, it is routinely inaccurate as a description of human behavior. That is, of course, where BDR thrives: in examining the contrasts between optimal and actual.

We should note, however, that there is room for researchers to disagree about what the right normative standard is in a particular situation. Sometimes behavior that

appears irrational to outside observers can be perfectly sensible from the perspective of an actor with limited—and selective—information. It is not fair to accuse people of being irrational just because they are not omniscient. Many important phenomena in social psychology and in BDR can be explained by simply considering the selective information that people have at their disposal when they form judgments (Fiedler, 1991, 2000, 2007). For instance, Denrell (2005) has pointed out one such reason why people evaluate outgroups and enemies more negatively than ingroups and friends—once people form a negative evaluation of an outgroup or an enemy, they avoid interactions that might allow them to update (and potentially correct) their negative perceptions. To pick another example, Moore and Small (2007) show how key results from the overconfidence literature can be explained by the simple fact that people do not know how good they are, either in absolute terms or compared with others.

We should also acknowledge that under some circumstances, it is impossible to specify a normative standard because it is not possible to specify the decision maker's incentives, interests, or constraints. We readily concede that this limitation constrains the domains in which it is possible to specify a normative standard on which BDR depends. When it is impossible to specify a normative criterion, it is not possible to do BDR. On the one hand, this represents a real constraint, yet on the other hand, we must be realistic about what is worth studying. There are many fascinating phenomena that elude scientific investigation because we cannot figure out how to examine, measure, or make sense of them. If we do not understand the situation well enough to specify a normative standard, we believe there is room to question whether we, as social scientists, should be spending

our limited time examining it, or whether we should be making more substantial progress on problems to which we can make more useful contributions.

Conclusions

This paper began with the assertion that the field of OB is uniquely positioned to take advantage of BDR's growing strength, status, and influence. What we mean by this is that OB is already comfortable with its status as an interdisciplinary field, is situated between basic disciplines, and is interested in opportunities for applying basic research to real problems. Furthermore, BDR shares with OB a deep interest in the judgments, decisions, and behaviors of people in organizations. OB and BDR are both interested in research with prescriptive implications. OB scholars can deliver the practical insights and pedagogical content of BDR research to MBA students and working managers who are eager to receive it and who can put it to direct and valuable use in their professional lives. Furthermore, many of the best BDR researchers are already in business schools.

In 1993, Jeffrey Pfeffer pointed out many ways in which OB's lack of paradigmatic consensus weakened the field's potential impact. When we, as a field, cannot agree on which research questions are worth asking, let alone which research methods are appropriate for attempting to answer those questions, we undermine our own ability to make theoretical progress in our research and to wield intellectual influence in academe and beyond. Progress is made more difficult by the vague nature of our theories and our resistance to formalization. As Meehl (1978) pointed out in his critique of "soft" social science, our theories are never truly confirmed or refuted—they just sort of hang around until they pass out of fashion. One direct consequence of our field's weakness has

been that other fields—most notably economics—have claimed territory that ought rightfully to belong to us.

BDR does not share these weaknesses. It enjoys a clearer consensus about what is worth studying and how to study it. BDR theories are more amenable to formalization (for example, see Kahneman & Tversky, 1979; Loewenstein et al., 2003; Moore & Healy, in press; Rabin, 1993). In addition, BDR lends itself to prescription and practical application because it tells managers the ways in which their decisions are likely to deviate from optimality and informs them about how they can do better. Perhaps these are some of the reasons for BDR's growing influence in economics departments, medical schools, law schools, schools of engineering, and schools of public policy. Indeed, BDR offers the possibility of connecting OB with scholars doing related work in other fields.

Can BDR provide the paradigm that can unify the disparate camps within OB? We think it might, but not easily. For many scholars within OB, what makes their work “organizational” is that they conduct field research on working professionals in real organizations. While it is possible to do BDR in field settings, it is often difficult to specify the relevant normative standard because it is difficult to get measures of key variables in the field. For instance, understanding whether entrepreneurs are making a mistake when they gamble their life savings on their ventures depends on understanding how much they enjoy running their own businesses. Understanding whether workers are making a mistake when their commitment to the organizations for which they work leads them to sacrifice time with their families depends on being able to compare the quality of these differing forms of fulfillment. Obviously, it is not easy to obtain credible measures of these important constructs.

Nevertheless, OB researchers need not wholly accept BDR as the dominant research paradigm to enjoy the benefits it has to offer. For many research topics, all it takes is a little thought and some refinement of the study's design in order to clarify what people or organizations *ought* to be doing. There are many benefits of being able to specify the normative backdrop against the actual behavior of organizations and their members. The benefits of BDR approaches have been too long neglected by OB researchers. As it happens, OB, more than other disciplines, can capitalize on BDR's strengths and learn from its successes. Our field has only to seize the opportunity laid before us.

References

- Akerlof, G. (1970). The market for lemons: Qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics*, *89*, 488-500.
- Ambady, N., & Rosenthal, R. (1992). Thin slices of expressive behavior as predictors of interpersonal consequences: A meta-analysis. *Psychological Bulletin*, *111*, 256-274.
- Arvey, R. D., & Campion, J. E. (1982). The employment interview: A summary and review of recent research. *Personnel Psychology*, *35*, 281-322.
- Babcock, L., Loewenstein, G., Issacharoff, S., & Camerer, C. F. (1995). Biased judgments of fairness in bargaining. *American Economic Review*, *85*(5), 1337-1343.
- Babcock, L., Wang, X., & Loewenstein, G. (1996). Choosing the wrong pond: Social comparisons in negotiations that reflect a self-serving bias. *Quarterly Journal of Economics*, *111*(1), 1-19.
- Baron, R. A. (1990). Environmentally induced positive affect: Its impact on self-efficacy, task performance, negotiation, and conflict. *Journal of Applied Social Psychology*, *20*(5), 368-384.
- Bazerman, M. H. (1999). Organizational decision making. *Administrative Science Quarterly*, *44*(1), 176-181.
- Bazerman, M. H. (2005). *Judgment in managerial decision making* (6th ed.). New York: Wiley.
- Bazerman, M. H., Gibbons, R., Thompson, L., & Valley, K. L. (1998). Can negotiators outperform game theory? In J. J. Halpern & R. N. Stern (Eds.), *Debating*

- rationally: Nonrational aspects in organizational decision making* (pp. 79-98).
Ithaca, NY: ILR.
- Bazerman, M. H., & Malhotra, D. (2007). Economics wins, psychology loses, and society pays. In D. De Cremer, J. K. Murnighan & M. Zeelenberg (Eds.), *Social psychology and economics*. Mahwah, NJ: Erlbaum.
- Bazerman, M. H., & Moore, D. A. (2008). *Judgment in managerial decision making* (7th ed.). New York: Wiley.
- Benartzi, S., & Thaler, R. H. (1995). Myopic loss aversion and the equity premium puzzle. *Quarterly Journal of Economics*, *110*(1), 73-93.
- Bertrand, M., & Mullainathan, S. (2001a). Are CEOs rewarded for luck? The ones without principals are. *Quarterly Journal of Economics*, *116*(3), 901-932.
- Bertrand, M., & Mullainathan, S. (2001b). Do people mean what they say? Implications for subjective survey data. *American Economic Review*, *9*(2), 67-72.
- Bies, R. J. (1987). Beyond "voice": The influence of decision-maker justification and sincerity on procedural fairness judgments. *Representative Research in Social Psychology*, *17*(1), 3-14.
- Birnberg, J. G., & Sutton, S. G. (1989). Three decades of behavioral accounting researcher: A search for order. *Behavioral Research in Accounting*, *1*, 23-74.
- Blount, S. (1995). When social outcomes aren't fair: The effect of causal attributions on preferences. *Organizational Behavior and Human Decision Processes*, *63*(2), 131-144.

- Bodenhausen, G. V., Kramer, G. P., & Suesser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality and Social Psychology*, *66*(4), 621-632.
- Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, *36*(8), 917-927.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, *53*(1), 279-307.
- Brockner, J., O'Malley, M. N., Hite, T., & Davies, D. K. (1987). Reward allocation and self-esteem: The roles of modeling and equity restoration. *Journal of Personality and Social Psychology*, *52*(4), 844-850.
- Brockner, J., Tyler, T. R., & Cooper-Schneider, R. (1992). The influence of prior commitment to an institution on reactions to perceived unfairness: The higher they are, the harder they fall. *Administrative Science Quarterly*, *37*(2), 241-261.
- Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, *120*(2), 189-208.
- Camerer, C. F. (2000). Prospect theory in the wild: Evidence from the field. In D. Kahneman & A. Tversky (Eds.), *Choices, values, and frames* (pp. 288-300). New York: Russell Sage Foundation.
- Camerer, C. F., Babcock, L., Loewenstein, G., & Thaler, R. (1997). Labor supply of New York City cabdrivers: One day at a time. *Quarterly Journal of Economics*, *112*(2), 407-441.

- Camerer, C. F., & Thaler, R. H. (1995). Ultimatums, dictators, and manners. *Journal of Economic Perspectives*, 9(2), 209-219.
- Cameron, K. S., Dutton, J. E., & Quinn, R. E. (Eds.). (2003). *Positive organizational scholarship: Foundations of a new discipline*. San Francisco: Berrett-Koehler.
- Campion, M. A., Palmer, D. K., & Campion, J. E. (1997). A review of structure in the selection interview. *Personnel Psychology*, 50, 655-702.
- Chatman, J. A., & Flynn, F. J. (2005). Full-cycle organizational psychology research. *Organization Science*, 16(4), 434-447.
- Conway, J. M., Jako, R. A., & Goodman, D. F. (1995). A meta-analysis of interrater and internal consistency reliability of selection interviews. *Journal of Applied Psychology*, 80(5), 565-579.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Upper Saddle River, N.J.: Prentice Hall.
- Dana, J., Cain, D., & Dawes, R. M. (2006). What you don't know won't hurt me: Costly (but quiet) exit in a dictator game. *Organizational Behavior & Human Decision Processes*, 100, 193-201.
- Dana, J., & Loewenstein, G. (2003). A social science perspective on gifts to physicians from industry. *Journal of the American Medical Association*, 290(2), 252-255.
- Dawes, R. M. (1972). In defense of "bootstrapping." *American Psychologist*, 27(8), 773-774.
- Dawes, R. M. (1979). The robust beauty of improper linear models in decision making. *American Psychologist*, 34(7), 571-582.
- Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology*, 31, 169-193.

- Dawes, R. M. (1996). *House of cards: Psychology and psychotherapy built on myth*. New York, NY, USA: Free Press.
- Dawes, R. M. (1998). Behavioral decision making and judgment. In D. T. Gilbert & S. T. Fiske (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 497-548). Boston, MA, USA: McGraw-Hill.
- Dawes, R. M. (2005). The ethical implications of Paul Meehl's work on comparing clinical versus actuarial prediction methods. *Journal of Clinical Psychology*, *61*(10), 1245-1255.
- Dawes, R. M., & Dana, J. (2007). *Belief in the unstructured interview: The persistence of an illusion*. Unpublished manuscript.
- Davis-Blake, A., & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organizational research. *Academy of Management Review*, *14*(3), 385-400.
- DellaVigna, S., & Malmendier, U. (2004). Contract design and self-control: Theory and evidence. *Quarterly Journal of Economics*, *119*(2), 353-402.
- DellaVigna, S., & Malmendier, U. (2006). Paying not to go to the gym. *American Economic Review*, *96*(3), 694-719.
- Denrell, J. (2005). Why most people disapprove of me: Experience sampling in impression formation. *Psychological Review*, *112*(4), 951-978.
- DiMaggio, P. J. (1997). Culture and cognition. *Annual Review of Sociology*, *23*, 263-287.
- Dipboye, R. (1997). Structured selection interviews: Why do they work? Why are they underutilized? In N. Anderson & P. Herriot (Eds.), *International Handbook of Selection and Assessment* (Vol. 13, pp. 455-473). Chichester, England: Wiley.

- Elfenbein, H. A. (in press). Emotion in organizations: A review in stages. *Annals of the Academy of Management*.
- Englich, B., Mussweiler, T., & Strack, F. (2006). Playing dice with criminal sentences: The influence of irrelevant anchors on experts' judicial decision making. *Personality and Social Psychology Bulletin*, 32(2), 188-200.
- Epley, N., Mak, D., & Idson, L. C. (2006). Rebate or bonus? The impact of income framing on spending and saving. *Journal of Behavioral Decision Making*, 19(4), 213-227.
- Epley, N., Van Boven, L., & Caruso, E. M. (2004). Balance where it really counts. *Behavioral and Brain Sciences*, 27(3), 333.
- Falk, A., Fehr, E., & Zehnder, C. (2006). Fairness perceptions and reservation wages: The behavioral effects of minimum wage laws. *Quarterly Journal of Economics*, Nov, 1347-1381.
- Ferris, G. R., & King, T. R. (1991). Politics in human resource decisions: a walk on the dark side. *Organizational Dynamics*, 20(2), 59-71.
- Fiedler, K. (1991). The tricky nature of skewed frequency tables: An information loss account of distinctiveness-based illusory correlations. *Journal of Personality and Social Psychology*, 60(1), 24-36.
- Fiedler, K. (2000). Beware of samples! A cognitive-ecological sampling approach to judgment biases. *Psychological Review*, 107(4), 659-676.
- Fiedler, K. (2007). *The ultimate sampling dilemma in experience-based decision making*. Unpublished manuscript.

- Fine, G. A., & Elsbach, K. D. (2000). Ethnography and experiment in social psychology theory building: Tactics for integrating qualitative field data with quantitative lab data. *Journal of Experimental Social Psychology, 36*(1), 51-68.
- Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance, 1*(3), 288-299.
- Fischhoff, B. (1982). Debiasing. In D. Kahneman, P. Slovic & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases*. Cambridge, Mass.: Cambridge University Press.
- Flynn, F. J., Reagans, R. E., Amanatullah, E. T., & Ames, D. R. (2006). Helping one's way to the top: Self-monitors achieve status by helping others and knowing who helps whom. *Journal of Personality and Social Psychology, 91*, 1123-1137.
- Forgas, J. P. (1998). On feeling good and getting your way: Mood effects on negotiator cognition and bargaining strategies. *Journal of Personality and Social Psychology, 74*(3), 565-577.
- Galinsky, A. D., Mussweiler, T., & Medvec, V. H. (2002). Disconnecting outcomes and evaluations: The role of negotiator focus. *Journal of Personality and Social Psychology, 83*(5), 1131-1140.
- Gigerenzer, G. (1996). On narrow norms and vague heuristics: A reply to Kahneman and Tversky. *Psychological Review, 103*(3), 592-596.
- Gilbert, D. T., Lieberman, M. D., Morewedge, C. K., & Wilson, T. D. (2004). The peculiar longevity of things not so bad. *Psychological Science, 15*(1), 14-19.

- Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology*, 75(3), 617-638.
- Gilmore, D. C., & Ferris, G. R. (1989). The effects of applicant impression management tactics on interviewer judgments. *Journal of Management*, 15(4), 557-564.
- Gilovich, T. (1991). *How we know what isn't so: The fallibility of human reason in everyday life*. New York: Free Press.
- Goodman, P. S., & Friedman, A. (1969). An examination of quantity and quality of performance under conditions of overpayment in piece rate. *Organizational Behavior and Human Decision Processes*, 4(4), 365-374.
- Gordon, R. A. (1996). Impact of ingratiation on judgments and evaluations: A meta-analytic review. *Journal of Personality and Social Psychology*, 71(1), 54-70.
- Granovetter, M. (1995). *Getting a job*. Chicago: University of Chicago Press.
- Graves, L. M., & Karren, R. J. (1996). The employee selection interview: A fresh look at an old problem. *Human Resource Management*, 35, 163-180.
- Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review*, 12(1), 9-22.
- Griffin, D. W., Dunning, D., & Ross, L. (1990). The role of construal processes in overconfident predictions about the self and others. *Journal of Personality and Social Psychology*, 59(6), 1128-1139.
- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 49(April), 149-164.

- Hastie, R., & Dawes, R. M. (2001). *Rational choice in an uncertain world: The psychology of judgment and decision making*. Thousand Oaks, Calif.: Sage.
- Heath, C. (1999). On the social psychology of agency relationships: Lay theories of motivation overemphasize extrinsic incentives. *Organizational Behavior & Human Decision Processes*, 78(1), 25-62.
- Heath, C., Larrick, R. P., & Klayman, J. (1998). Cognitive repairs: How organizational practices can compensate for individual shortcomings. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior, Vol. 20: An annual series of analytical essays and critical reviews*. (pp. 1-37). Greenwich, CT, USA: Jai Press, Inc.
- Heath, C., Larrick, R. P., & Wu, G. (1999). Goals as reference points. *Cognitive Psychology*, 38(1), 79-109.
- Hoffman, E., McCabe, K., Shachat, K., & Smith, V. (1994). Preferences, property rights, and anonymity in bargaining games. *Games and Economic Behavior*, 7(3), 346-380.
- Holt, L. L., & Lotto, A. J. (in press). Speech perception within an auditory cognitive science framework. *Current Directions in Psychological Science*.
- Hough, L. M., & Oswald, F. L. (2000). Personnel selection: Looking toward the future-- Remembering the past. *Annual Review of Psychology*, 51, 631-664.
- Hsee, C. K., & Abelson, R. P. (1991). Velocity relation: Satisfaction as a function of the first derivative of outcome over time. *Journal of Personality and Social Psychology*, 60, 341-347.

- Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin*, 96(1), 72-98.
- Janicik, G. A., & Larrick, R. P. (2005). Social network schemas and the learning of incomplete networks. *Journal of Personality and Social Psychology*, 88(2), 348-364.
- Johnson, E. J., & Goldstein, D. G. (2003). Do defaults save lives? *Science*, 302, 1338-1339.
- Johnson, E. J., Hershey, J., Meszaros, J., & Kunreuther, H. (1993). Framing, probability distortions, and insurance decisions. *Journal of Risk and Uncertainty*, 7(1), 35-51.
- Juslin, P., Winman, A., & Olsson, H. (2000). Naive empiricism and dogmatism in confidence research: A critical examination of the hard-easy effect. *Psychological Review*, 107(2), 384-396.
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*, 58(9), 697-720.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). Fairness as a constraint on profit seeking: Entitlements and the market. *American Economic Review*, 76(4), 728-741.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives*, 5(1), 193-206.
- Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. A. (2006). Would you be happier if you were richer? A focusing illusion. *Science*, 312, 1908-1910.

- Kahneman, D., Schkade, D. A., & Sunstein, C. R. (1998). Shared outrage and erratic awards: The psychology of punitive damages. *Journal of Risk and Uncertainty*, *16*, 49-86.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263-291.
- Kahneman, D., & Tversky, A. (1983). Can irrationality be intelligently discussed? *Behavioral and Brain Sciences*, *6*(3), 509-510.
- Kahneman, D., & Tversky, A. (Eds.). (2000). *Choices, values, and frames*. New York: Russell sage Foundation.
- Khilstron, J. F. (2004). Is there a "people are stupid" school in social psychology? *Behavioral & Brain Sciences*, *27*(3), 346-347.
- Kilduff, M., & Krackhardt, D. (1994). Bringing the individual back in: A structural analysis of the internal market for reputation in organizations. *Academy of Management Journal*, *37*(1), 87-108.
- Klayman, J., & Ha, Y.-w. (1987). Confirmation, disconfirmation, and information in hypothesis testing. *Psychological Review*, *94*(2), 211-228.
- Koriat, A., Fiedler, K., & Bjork, R. A. (2006). Inflation of conditional predictions. *Journal of Experimental Psychology: General*, *135*(3), 429-447.
- Krackhardt, D. (1987). Cognitive social structures. *Social Networks*, *9*, 109-134.
- Krackhardt, D. (1996). Comment on Burt and Knez's third-party effects on trust. *Rationality and Society*, *8*, 111-116.

- Krackhardt, D., & Kilduff, M. (1999). Whether close or far: Social distance effects on perceived balance in friendship networks. *Journal of Personality and Social Psychology, 76*(5), 770-782.
- Krueger, J. I., & Funder, D. C. (2004). Toward a balanced social psychology: Causes, consequences, and cures for the problem-seeking approach to social behavior and cognition. *Behavioral and Brain Sciences, 27*(3), 313-327.
- Larrick, R. P. (2004). Debiasing. In D. J. Koehler & N. Harvey (Eds.), *Blackwell Handbook of Judgment and Decision Making*. Oxford, England: Blackwell Publishers.
- Latham, G. P., & Pinder, C. C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology, 56*, 485-516.
- Ledyard, J. O. (1995). Public goods: A survey of experimental research. In J. H. Kagel & A. E. Roth (Eds.), *The handbook of experimental economics*. Princeton, NJ: Princeton University Press.
- Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of fear and anger on perceived risks of terrorism: A national field experiment. *Psychological Science, 14*(2), 144-150.
- Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology, 81*(1), 146-159.
- Lerner, J. S., Small, D. A., & Loewenstein, G. (2004). Heart strings and purse strings: Carryover effects of emotions on economic transactions. *Psychological Science, 15*(5), 337-341.

- Locke, E. A. (1986). *Generalizing from laboratory to field settings*. Lexington, Mass: Lexington.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal-setting and task performance*. Englewood Cliffs, N.J.: Prentice Hall.
- Loewenstein, G., & Elster, J. (Eds.). (1992). *Choice over time*. New York, NY, USA: Russell Sage Foundation.
- Loewenstein, G., O'Donoghue, T., & Rabin, M. (2003). Projection bias in predicting future utility. *Quarterly Journal of Economics*, November, 1209-1248.
- Loewenstein, G., Thompson, L., & Bazerman, M. H. (1989). Social utility and decision making in interpersonal contexts. *Journal of Personality and Social Psychology*, 57, 426-441.
- Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behavior. *Journal of Management*, 33(3), 321-349.
- Luttmer, E. F. P. (2005). Neighbors as negatives: Relative earnings and well-being. *Quarterly Journal of Economics*, 120(3), 963-1002.
- Malmendier, U., & Tate, G. (2005). CEO overconfidence and corporate investment. *Journal of Finance*(60), 6.
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York: Wiley.
- McGraw, A. P., Mellers, B. A., & Ritov, I. (2004). The affective costs of overconfidence. *Journal of Behavioral Decision Making*, 17(4), 281-295.
- Meehl, P. E. (1978). Theoretical risks and tabular asterisks: Sir Karl, Sir Ronald, and the slow progress of soft psychology. *Journal of Consulting and Clinical Psychology*, 46(4), 806-834.

- Milkman, K. L., Beshears, J., Rogers, T., & Bazerman, M. H. (2008). *Mental accounting and small windfalls: Evidence from an online grocer*. Boston: Harvard Business School Working Paper.
- Miller, D. T. (1999). The norm of self-interest. *American Psychologist*, *54*(12), 1053-1060.
- Moore, D. A., & Healy, P. J. (in press). The trouble with overconfidence. *Psychological Review*.
- Moore, D. A., & Small, D. A. (2007). Error and bias in comparative social judgment: On being both better and worse than we think we are. *Journal of Personality and Social Psychology*, *92*(6), 972-989.
- Moore, D. A., Swift, S. A., Sharek, Z., & Gino, F. (2007). *Correspondence bias in performance evaluation: Why grade inflation works*. Tepper Working Paper 2004-E42. Available at SSRN: <http://ssrn.com/abstract=728627>
- Mowday, R. T., & Sutton, R. I. (1993). Organizational behavior: Linking individuals and groups to organizational contexts. *Annual Review of Psychology*, *44*, 195-229.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review*, *110*(3), 472-489.
- Mussweiler, T., & Strack, F. (1999). Hypothesis-consistent testing and semantic priming in the anchoring paradigm: A selective accessibility model. *Journal of Experimental Social Psychology*, *35*(2), 136-164.
- Nelson, M. W., Bloomfield, R., Hales, J. W., & Libby, R. (2001). The effect of information strength and weight on behavior in financial markets. *Organizational Behavior and Human Decision Processes*, *86*(2), 168-196.

- Newell, B. R., Lagnado, D. A., & Shanks, D. R. (2007). *Straight choices: The psychology of decision making*. New York: Routledge.
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*, 175-220.
- Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology, 35*(4), 250-256.
- Novemsky, N., & Schweitzer, M. E. (2004). What makes negotiators happy? The differential effects of internal and external social comparisons on negotiator satisfaction. *Organizational Behavior & Human Decision Processes, 95*, 186-197.
- Odean, T. (1998a). Are investors reluctant to realize their losses? *Journal of Finance, 53*(5), 1775-1798.
- Odean, T. (1998b). Volume, volatility, price, and profit when all traders are above average. *Journal of Finance, 53*(6), 1887-1934.
- Oskamp, S. (1965). Overconfidence in case-study judgments. *Journal of Consulting Psychology, 29*(3), 261-265.
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1992). Behavioral decision research: A constructive processing perspective. *Annual Review of Psychology, 43*, 87-131.
- Perrow, C. (1984). *Normal accidents: Living with high-risk technologies*. New York: Basic Books.
- Pfeffer, J. (1993). Barriers to the advance of organizational science: Paradigm development as a dependent variable. *Academy of Management Review, 18*(4), 599-620.

- Rabin, M. (1993). Incorporating fairness into game theory and economics. *American Economic Review*, 83(5), 1281-1302.
- Ritov, I., & Baron, J. (1992). Status-quo and omission biases. *Journal of Risk and Uncertainty*, 5, 49-61.
- Ross, J. M., & Staw, B. M. (1986). Expo 86: An escalator prototype. *Administrative Science Quarterly*, 31(2), 274-297.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 173-220). New York: Academic.
- Roth, A. E. (1995). Bargaining experiments. In J. H. Kagel & A. E. Roth (Eds.), *The handbook of experimental economics* (pp. 253-348). Princeton, NJ: Princeton University Press.
- Samuelson, W. F., & Zeckhauser, R. J. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, 7-59.
- Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*, 124(2), 262-274.
- Schneider, B., & Schmitt, N. (Eds.). (1986). *Staffing organizations*. Glenview, IL: Scott Foresman.
- Schroth, H., & Shah, P. P. (2000). Procedures: Do we really want to know them? The effects of procedural justice on performance self-esteem. *Journal of Applied Psychology*, 85, 462-471.

- Schwarz, N. (1999). Self-reports of behaviors and opinions: Cognitive and communicative processes. In *Cognition, aging, and self-reports* (pp. 17-43): , 1999 xv, 407.
- Schweitzer, M. E., Ordoñez, L. D., & Duouma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal*, 47(3), 422-432.
- Scott, W. R. (2001). *Institutions and organizations* (2nd ed.). Thousand Oaks, CA: Sage.
- Sears, G. J., & Rowe, P. M. (2003). A personality-based similar-to-me effect in the employment interview: Conscientiousness, affect-versus competence-mediated interpretations, and the role of job relevance. *Canadian Journal of Behavioural Science*, 35(1), 13-24.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.
- Shafir, E., & LeBoeuf, R. A. (2002). Rationality. *Annual Review of Psychology*, 53(1), 491-517.
- Simon, H. A. (1947). *Administrative behavior: A study of decision-making processes in administrative organization*. New York: Macmillan.
- Simon, H. A. (1967). *The science of the artificial*. Cambridge, MA: MIT Press.
- Simon, H. A. (1978). Rationality as process and as product of thought. *American Economic Review*, 68, 1-16.
- Simon, H. A. (1997). *Models of bounded rationality* (Vol. 3). Cambridge, MA: MIT Press.
- Sitkin, S. B. (1992). Learning through failure: The strategy of small losses. *Research in Organizational Behavior*, 14, 231-266.

- Staw, B. M. (1975). Attribution of the "causes" of performance: A general alternative interpretation of cross-sectional research on organizations. *Organizational Behavior and Human Decision Processes*, 13(3), 414-432.
- Staw, B. M. (1976). Knee-deep in the Big Muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Decision Processes*, 16(1), 27-44.
- Staw, B. M. (1981). The escalation of commitment to a course of action. *Academy of Management Review*, 6(4), 577-587.
- Staw, B. M., Barsade, S. G., & Koput, K. W. (1997). Escalation at the credit window: A longitudinal study of bank executives' recognition and write-off of problem loans. *Journal of Applied Psychology*, 82(1), 130-142.
- Staw, B. M., & Boettger, R. (1990). Task revision: A neglected form of work performance. *Academy of Management Journal*, 33(3), 534-559.
- Staw, B. M., & Hoang, H. (1995). Sunk costs in the NBA: why draft order affects playing time and survival in professional basketball. *Administrative Science Quarterly*, 40, 474-494.
- Strack, F., & Mussweiler, T. (1997). Explaining the enigmatic anchoring effect: Mechanisms of selective accessibility. *Journal of Personality and Social Psychology*, 73(3), 437-446.
- Thaler, R. H. (1991). *Quasi rational economics*. New York, NY, USA: Russell Sage Foundation.
- Thaler, R. H. (Ed.). (1993). *Advances in behavioral finance*. New York, NY, USA: Russell Sage Foundation.

- Thaler, R. H., & Benartzi, S. (2004). Save more tomorrow: Using behavioral economics to increase employee saving. *Journal of Political Economy*, *112*(1), S164-S187.
- Thompson, L., & Loewenstein, G. (1992). Egocentric interpretations of fairness and interpersonal conflict. *Organizational Behavior and Human Decision Processes*, *51*(2), 176-197.
- Tiedens, L. Z., & Linton, S. (2001). Judgment under emotional certainty and uncertainty: The effects of specific emotions on information processing. *Journal of Personality and Social Psychology*, *81*(6), 973-988.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, *5*(2), 207-232.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*, 1124-1131.
- Ubel, P. A. (2005). How did we get in to this mess? In D. A. Moore, D. M. Cain, G. Loewenstein & M. H. Bazerman (Eds.), *Conflicts of Interest*. Cambridge: Cambridge University Press.
- van den Bos, K., Bruins, J., Wilke, H. A. M., & Dronkert, E. (1999). Sometimes unfair procedures have nice aspects: On the psychology of the fair process effect. *Journal of Personality and Social Psychology*, *77*(2), 324-336.
- Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, *38*(4), 628-653.
- Wells, G. L., & Olson, E. A. (2003). Eyewitness testimony. *Annual Review of Psychology*, *54*, 277-295.

Wiesenfeld, B., Swann, W. B., Brockner, J., & Bartel, C. (2007). Is more fairness always preferred? Self-esteem moderates reactions to procedural justice. *Academy of Management Journal*, 50(5), 1235-1253.

Wright, O. R. (1969). Summary of research on the selection interview since 1964. *Personnel Psychology*, 22, 391-413.

Yovel, G., & Kanwisher, N. (2005). The neural basis of the behavioral face-inversion effect. *Current Biology*, 15, 2256-2262.

Zucker, L. G. (1977). The role of institutionalization in cultural persistence. *American Sociological Review*, 42(5), 726-743.