

Laurion silver mines, which supported Athenian democracy, male slaves typically died in 2 to 3 years. People's supporting cognitions were appropriately flawed. Aristotle argued that slavery is justified because slaves come from losers in wars, and losing wars shows that the losers are inferior in merit. Aside from whether "merit" should mean merit in warfare, and whether this "merit" should spread to a man's wives, women, and descendants, consider the following: Is every man on a losing side actually inferior in manly "merit" to every man on the winning side? Of course not. By this logic, the great Trojan Hector "deserved" to be a slave to any warrior on the winning Greek side. Aristotle benefited from slavery, and this corroded his reasoning, making it, I believe, "contemptible."

The examples proliferate. Doctors, through the centuries, were one of the best-educated classes, but, as Montaigne wrote, they did not use formal operational thought. For example, for more than two thousand years, doctors followed the practice of bleeding people, which killed many and cured none; during these centuries, no doctors (an educated class) tested whether bled people actually recovered better than non-bled people; no one proposed it, either, apparently. Self-interest (a doctor has to have something to do) impaired cognition, as it always does.

Until unions formed, employers always paid employees as little as possible, just enough to get workers, and to have surviving children as laborers (the "iron law of wages"). When the English government passed laws against children working for a shift longer than ten hours, manufacturers employing child labor invented the "split shift" (e.g., dinner ends one shift; a new one begins). These (usually evangelical Christian) manufacturers generally thought God wanted them to prosper this way. In much of Asia today, if someone is raped, or steps on a land mine, or is a permanent social leper (untouchable), you don't have to pity them, or help them. They did something in a former life to deserve this (Karma); religious cognition obviates the burden of sympathy. On Wall Street, according to Scott Paltrow in "Heard on the Street," scandals occur and will continue to occur because (1) there's no money in playing straight with small investors (commission regulations); (2) there's money in helping big guys; (3) you're almost never caught; (4) big executives nearly always negotiate no punishment for themselves as part of the settlement with the government (e.g., Sandy Weill, Citibank); and (5) small investors are viewed as contemptible suckers who deserve it (Scott Paltrow, "Heard on the Street," *Wall Street Journal*).

Very few westerners ever trouble themselves seriously over the poverty-stricken conditions of the third-world people whose cheap labor helps support their lives.

These and many other everyday things are, of course, all "adaptive" for the perpetrators; but K&F think "adaptive" for the self and its favored associates means, somehow "generally good." This is K&F's second major mistake, one that evolutionary theorists do not make.

I don't rest my case (or refine it; unfortunately, there isn't enough space for that here). Self-interest makes people worse, and the real world is full of it, *much more* so than in our pallid experimental situations; that people commonly act or think so badly in these experimental situations, only adds to the terrible knowledge we have of ordinary people and human nature in the real world.

Proper experimental design and implementation are necessary conditions for a balanced social psychology

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Abstract: We applaud the authors' basic message. We note that the negative research emphasis is not special solely to social psychology and judgment and decision-making. We argue that the proposed integration of null hypothesis significance testing (NHST) and Bayesian analysis is promising but will ultimately succeed only if more attention is paid to proper experimental design and implementation.

We do subscribe to the basic message of Krueger & Funder (K&F), that there is a negative research emphasis in social psychology and judgment and decision-making, and that this negative research emphasis hinders theory developments, such as programs that try to understand to what extent seemingly maladapted heuristics in laboratory settings may be quite reasonable in real-life settings (e.g., Gigerenzer et al. 1999).

K&F persuasively lay out the allure of such a negative research emphasis. Indeed, it is much more interesting (and, we submit, on average easier, faster, and less expensive) to generate violations of norms or conventions than to explain why they have arisen in the first place. Although we are as surprised as the authors that the persistent emphasis on norm violations has not yet decisively eliminated its allure, we do see evidence that, at least in psychology, the tide is turning (e.g., Gigerenzer 1991; 1996b; Gigerenzer et al., in press; Juslin et al. 2000; Koehler 1996). The target article strikes us as yet another good example of that encouraging trend.

Curiously, but maybe not surprisingly, although the unbalanced view of humans as cognitive misers seems slowly but surely on its way out in social psychology and judgment and decision-making, the heuristics-and-biases program, which seems mostly responsible for the unbalanced view, has during the past decade invaded economics with little resistance (e.g., Rabin 1998; see Friedman 1998 for an early and lone attempt to stem the tide), amidst outrageous claims. To wit, "mental illusions should be considered the rule rather than the exception" (Thaler 1991, p. 4). Sounds familiar?

It is easy to see why the widespread practice of taking the predictions of canonical decision and game theory as an explicit or implicit null hypothesis (e.g., the predictions of no giving in standard one-shot dictator, ultimatum, or various social dilemma games), has facilitated this development. Although the simplistic rational actor paradigm surely deserves to be questioned – and experimental evidence questioning it has generated some intriguing theory developments recently (e.g., Goeree & Holt 2001) – the rational actor paradigm is often questioned by perfunctory reference to the various "anomalies" that psychologists in the heuristics-and-biases tradition claim to have discovered. This negative research strategy nowadays often goes under the name of behavioral economics and finance.

Alleged errors of judgment and decision-making, such as the overconfidence bias or the false consensus effect (or any other choice anomaly of the list provided in Table 1 in the target article), are taken to be stable and systematically replicable phenomena.¹ Rabin (1998), whose article has become the symbolic reference for most self-anointed experts in the areas of behavioral economics and finance, is particularly explicit about it when he says, "I emphasize what psychologists and experimental economists have learned about people, rather than how they have learned about it" (Rabin 1998, p. 12).

Of course, there is no such thing as an empirical insight per se; each and every empirical result is a joint test of some (null) hypothesis about the behavior of people and of the way the test was designed and implemented. Think of the giving behavior in dicta-

tor, ultimatum, or various other social dilemma games, and how it can be systematically affected by social distance (e.g., Hoffman et al. 1996), or think of the dramatic effects that real versus hypothetical payoffs (e.g., Holt & Laury 2002) can have on choice behavior. Or, take the false consensus effect (FCE) that figures prominently in the K&F narrative. Mullen et al. (1985) argued that there was overwhelming evidence in the psychology literature that such an effect existed and that it was rather robust. Dawes (1989; 1990) already questioned the meaning of the FCE as defined then. Interestingly, he found that a more appropriate definition (one which calls a consensus effect false only if one's own decision is weighed more heavily than that of a randomly selected person from the same population) often (but not always) shows just the opposite of what the old definition led to.

Most recently, Engelmann and Strobel (2000) tested the false consensus effect in the way it arguably should be done – with representative information and monetary incentives – and found that it disappears. Similar issues of representativeness of information and selected sampling of problems (as in the context of overconfidence), as well as more fundamental issues of the benefits and costs of certain experimental practices, are at the heart of the controversy surrounding the question of the reality of cognitive illusions (e.g., Gigerenzer 1996b; Gigerenzer et al., in press; Hertwig & Ortmann 2001; Kahneman & Tversky 1996) and, more generally, the negative research emphasis that K&F persuasively attack.

An acknowledgment of the central role of experimental practices for the move towards a balanced social psychology, is curiously absent in K&F's list of suggestions that might get us back to balance. We therefore propose that thinking about methodological issues would be an appropriate addition, for both economists and psychologists, to their two empirical suggestions to de-emphasize negative studies and to study the range of behavior and cognitive performance.

We fully agree with the authors' critique of NHST (see also, Gigerenzer et al. 2004) and find promising the authors' suggestion of integrating NHST with Bayesian concepts of hypothesis evaluation. We caution, however, that the success of such a strategy is crucially dependent on aspects of proper experimental design and implementation, such as the proper construction of the experimental (learning) environment (e.g., appropriate control of the social distance between experimenter and subjects, representativeness of information, and learning opportunities), proper financial incentives, and unambiguous and comprehensive instructions that facilitate systematic replication, among others (Hertwig & Ortmann 2001; 2003; Ortmann & Hertwig 2002).

NOTE

1. The fact that pretty much each and every bias enumerated in Table 1 has a contradictory sibling has escaped the attention of almost all economists.

Multi-process models in social psychology provide a more balanced view of social thought and action

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Abstract: Krueger & Funder (K&F) describe social psychology as overly consumed with maladaptive heuristics and biases. This characterization fails to consider multi-process models of social thought and action. Such models, especially with respect to attitudes, have outlined the situational and individual difference variables responsible for determining when thoughts and actions are relatively thoughtful versus when they are more reliant on mental shortcuts.

In a provocative article, Krueger & Funder (K&F) have outlined what they think is wrong with contemporary social psychology. In

their view, the field is too focused on the maladaptive aspects of human thought and action. Among other evidence, they characterize social psychological work as overly focused on the use of mental shortcuts (heuristics and biases) to the exclusion of rational and adaptive thought and action. In this sentiment, they join the positive psychology movement, which aims to focus on human capabilities and talents. Notably, and appropriately, however, the authors caution that an exclusive focus on either the adaptive or the maladaptive is limiting. Thus, they join Spinoza in calling for research on the full range of human thought and action. This is an important point, and one with which I agree. However, the authors have downplayed research traditions within social psychology where such balance is present – at least more present than readers of this target article might suspect.

In making their critique, the authors have captured mainstream work on heuristics and biases fairly well. But, social psychology is more than social cognition, and social cognition is more than work on heuristics and biases (e.g., see the burgeoning work on implicit processes). The authors are aware of this, as they describe numerous “behavioral” effects to help make their point. But, they have largely excluded work that seems inconsistent with their relatively narrow characterization of the field. For example, they imply that the dominant view in work on attitudes and social influence is that attitudes are rationalized after the fact, rather than based on careful thought, and that people often mindlessly go along with the majority view (conformity).

First, consider whether attitudes are invariably rationalized, rather than based on thought. Ever since Gordon Allport (1935) called attitudes the single most indispensable construct in social psychology, researchers have considered both relatively thoughtful and non-thoughtful processes of influence (e.g., see Kelman & Hovland 1953). Indeed, one of the most prominent models of attitudes and behavior is Fishbein and Ajzen's (1975) theory of *reasoned* action. This model, based on subjective utility theory, holds that people's evaluations are determined by the underlying information people have regarding those objects. The popularity of this “reasoned” approach is evident in the fact that Fishbein and Ajzen's 1975 text has been cited over 3,500 times since its publication (similar to the over 3,000 times that the Kahneman et al. [1982] edited reader on heuristics and biases has been cited).

Second, consider whether social influence research has emphasized mindless conformity to the will of the majority. In fact, research has demonstrated that majority influence is not necessarily a mindless endeavor. Rather, hearing what others think can motivate issue-relevant thought that results in changed opinions (e.g., see Burnstein & Vinokur 1975; Harkins & Petty 1987). Thus, conformity to a majority sometimes represents a simple heuristic process, but can also represent an effortful and more reasoned cognitive process. Furthermore, there is a rather large literature documenting the sometimes powerful effects that *minorities* have (e.g., see Wood et al. 1994). Researchers in this area have celebrated the benefits of the divergent thinking that is inspired by minorities, rather than the convergent thinking induced by majorities (Nemeth 1986).

Of course, not all behavior is thoughtful or rational. Sometimes people rely on mental shortcuts and merely conform to majorities. This flexibility is recognized in many contemporary social psychological theories, which postulate that different psychological mechanisms determine judgments and behavior in different situations (moderated mediation). As Fiske and Taylor noted in their 1991 *Social Cognition* text, the field has moved beyond viewing individuals as “cognitive misers,” who are inevitably prone to various errors and biases that stem from their limited cognitive capacity, to a model of the individual as a “motivated tactician,” who is a “fully engaged thinker who has multiple cognitive strategies available” (Fiske & Taylor 1991, p. 13).

In fact, current multi-process models in social psychology emphasize that behavior and judgment are sometimes based on relatively simple cues and heuristics, but at other times result from an effortful evaluation process.¹ For example, in one study (Petty