

Context, conflict, weights, and identities:
Some psychological aspects of decision making

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Experimental psychology provides a drastically different picture of human abilities, motives, and behavior from that which predominates economic analyses. Individual preferences are normatively assumed to be well-ordered and consistent, but descriptively shown to be inconsistent and malleable. Not having at their disposal clear and reliable procedures for assigning values to options, people need to construct their preferences in the context of decision, which is rife with, among other things, conflict, emotion, contextual influences, and shifts in perspective and attention. Like many other traits and behaviors, preference inconsistency is the outcome not of distracted shortcuts or avoidable errors, but of fundamental aspects of mental life that are central to how people process information. Thus, it may help to think of individual decision makers not as faulty economic agents, but as fundamentally different creatures.

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Psychological assumptions about people's motives and abilities, what people are like and what is good for them, permeate economic analyses and the formulation of policy. The predominant view is based on the Rational agent model, which assumes agents' views are well informed and calibrated, their preferences are well ordered and stable (and mostly about tangibles), and their behavior is generally controlled, selfish, and calculating. People, according to this view, know what is knowable, exploit what is exploitable, and maximize their preferences with great success. In particular, they need no help from others, and certainly no protection from themselves.

Research-based psychology, on the other hand, provides a drastically different picture. People exhibit biased judgment and malleable and incoherent preferences, they care about intangibles, they can be impulsive, myopic, trusting and vindictive, they often have faulty intuitions about their own motives and behaviors, and they often act to bring about outcomes that they themselves judge to be bad. Given the findings, people look like they could benefit from some paternalistic attention and help.

While almost every fact about human cognition and social perception is likely to prove of some relevance to economic behavior, a more realistic objective is to consider some general themes to come out of behavioral research that might inform economic theorizing and policy analysis in fundamental ways. That is what this paper aims to do, knowing full well – after all, that is what the findings show -- that such presentation is likely to be heavily context dependent, selective and incomplete.

Many important findings about everyday psychology are likely to prove pertinent to economic phenomena. Work on “minimal groups” (Tajfel, 1978), for example, has shown that the simple act of categorizing people into separate groups has immediate and consequential impact, so that students who have been arbitrarily divided, say, into “over-estimators” versus “under-estimators” (of displayed random arrays of dots) soon begin to perceive greater similarity among group members, greater differences from other groups' members, and substantial in-group favoritism, including in pecuniary matters. My colleague Nicole Shelton, for another example, has recently shown that immediately after

they engage in a conversation with a person of color, white racists' performance in tasks requiring central executive control (e.g., as demonstrated in a stroop task) is hampered (presumably due to fatigue) in ways that are not observed among non-racists, or following racists' similar engagement with whites (Richeson & Shelton, in press). Such facts about human perception, attention, and effort, are certain to influence decision making. But they are too many to enumerate (best to peruse a good social psychology text), and many are not about the making of decisions per se.

Other findings are more directly pertinent to economic decisions and address specific economic tasks or assumptions. A thorough exposition of these remains beyond the purview of the present paper, although many are essential to developing even a rudimentary understanding of behavioral research in economic decision making. Here are just a few of the important findings (for further exposition, see, e.g., Camerer, 1995; Kagel & Roth, 1995; Rabin, 1998; Kahneman & Tversky, 2000):

Risk attitudes

Evidence suggests that the psychological carriers of value are gains and losses, rather than final wealth (Kahneman & Tversky, 1979; Tversky & Kahneman, 1986). Diminishing sensitivity yields risk aversion for gains and risk seeking for losses, but this can reverse in the case of very low probabilities, which generally have a non-linear impact on decision (Kahneman & Tversky, 1979; Prelec, 2000).

Loss aversion:

People are loss averse: the loss of utility associated with giving up a good is greater than the utility associated with obtaining it (Tversky & Kahneman, 1991). This yields "endowment effects," wherein the mere possession of a good leads to higher valuation of it than if it were not in one's possession (Kahneman, Knetsch, & Thaler, 1990). It also can cause a general reluctance to trade or depart from the status quo, because the things foregone loom larger than those gained (Knetsch, 1989, Samuelson & Zeckhauser, 1988).

Money & mental accounting:

Contrary to standard assumptions of fungibility, people compartmentalize wealth and spending into distinct budget categories, such as savings, rent, and entertainment, and into separate mental accounts, such as current income, assets, and future income (Thaler, 1985; 1992). These lead to differential marginal propensities to consume from one's current income (where MPC is high), current assets (where it is intermediate), and future income (where it is low). Consumption functions thus end up being overly dependent on current income, and people find themselves willing to save and borrow (at a higher

interest rate) at the same time (Ausubel, 1991). In addition, people often fail to ignore sunk costs (Arkes & Blumer, 1985), fail to consider opportunity costs (Camerer et al. 1997), and show money illusion, wherein the nominal value of money interferes with a representation of its real worth (Shafir, Diamond, & Tversky, 1997).

Taste & time

Economic agents are presumed to have a good sense of their tastes, and to show foresight and consistency through time. People, however, often prove weak at predicting their future moods and tastes or at learning from past experience (Gilbert et al., 1998; Kahneman, 1994; Loewenstein & Adler, 1995). Choices exhibit higher discount rates for distant as compared to nearby outcomes, yielding dynamically inconsistent preferences (Loewenstein & Thaler, 1992).

Fairness

People care about fairness and cooperation, even in dealing with unknown others when long-term strategy and reputation are irrelevant (see, e.g., Dawes & Thaler, 1988; Kahneman, Knetsch & Thaler, 1986, Rabin, 1993), and they care about procedural justice often more than about the outcome (Tyler, 2000). People also harbor resentment and are willing to punish unknown others at a cost to themselves (Camerer, 1995; Thaler, 1988).

Emotion

Transient moods and emotions influence choice and judgment. For example, negative mood increases the perceived frequency of undesirable events (Johnson & Tversky 1983), and positive mood can lead to greater risk-aversion (Isen & Geva, 1987). People are less sensitive to the probability of occurrence of emotionally powerful stimuli (Rottenstreich & Hsee, 2001), and are willing to pay more to insure emotionally meaningful items (Hsee & Kunreuther 2000). In general, anticipatory emotions can interfere with cognitive appraisals ((Loewenstein & Elster, 1992; Loewenstein et al, 2001).

In what follows, I consider some general aspects of the psychology of decision making. These follow from fundamental facts about psychology more generally, and are likely to permeate many facets of decision (including many of those listed above).

The construction of preferences in context

One of the major lessons of the last half century of psychological research, which essentially led to the demise of behaviorism and to the emergence of the cognitive sciences, has been the appreciation of the role of “construal” processes in psychological life. People, it turns out, do not produce predetermined responses to objective experience; rather, stimuli are first mentally construed, interpreted, understood (or misunderstood).

Behavior is directed not towards states of the world, but towards their construals.

Driven by a desire to understand a German culture that allowed the horrific events of WWII, psychologists discovered, much to everyone's dismay, the powerful impact of construal processes and of the situation on regular (and non-German) experimental subjects. Decent people in Milgram's experiments administered purportedly dangerous levels of shock to innocent strangers because the directive to do so came not from a powerless experimenter during an inconsequential session at a Yale lab (the real state of affairs, which at some level was common knowledge), but because the instructions, "it is absolutely essential that you continue" were seen to come from an authority figure dressed in "scientific" white garb, who was in full control, had superior understanding, and was counting on the subject's help with an apparently important task (the typical construal).

What is perhaps most stunning is the fluidity with which construals can emerge, and the sweeping picture that they impose. In fact, alongside the lesson about the powerful impact of context, emerged a systematic under-appreciation of its effects. When Milgram asked psychiatrists, students, and other adults to predict behavior in his obedience studies everyone predicted that subjects would quickly disobey (at an average of 135 volts) and no one anticipated that anyone would go up to 300 volts. Instead, every single participant obeyed up to 300 volts and 65% went all the way to 450 volts (which the psychiatrists predicted would be true for about 1 in 1000 people.) The Fundamental Attribution Error, a central construct of modern social psychology, refers to the tendency, when interpreting behavior, to overestimate the influence of internal, personal impulses and to underestimate the influence of external, situational forces.

Like other experience, decision scenarios are also mentally construed. Our choices are not between objective (extensional) states of the world, but between our mental (intensional) representations of these states. And the problem is that our mental apparatus is not built to take alternative mental representations of the same extensional event and to generate a canonical representation. (Note that in other, more "modular" domains, such as language or vision, we effortlessly generate canonical representations. Sentences' active and passive forms are typically understood to convey the same

underlying meaning, and different visual encounters with, say, a blackboard, which occur at a variety of imperfect angles, all produce the visual experience of a perfect rectangle.) As a result of construal processes, nuances in description, procedure, or context can impact the construction of preferences about otherwise identical outcomes. Thus, as classic framing effects show, the same decision problem described in terms of losses or in terms of gains, for example, tends to be construed differently rather than translated into canonical form, leading to frame-dependent preferences (Tversky & Kahneman, 1986).

Preferences are not merely revealed, but rather constructed, in the making of decisions, and their construction tends to be shaped by local and sometimes accidental factors, rather than by global and invariant considerations. In what follows, I consider a number of psychological factors that impact on the construction of preference. The first concerns people's experience of and attempt to reduce decisional conflict; the second considers systematic shifts in attribute weights; and the third explores decision makers' alternating self-conceptions and the shifts in perspective that these generate. Preference inconsistency, I suggest, is the outcome not of distracted shortcuts or avoidable errors, but of fundamental aspects of mental life that are central to how people process information when making decisions. Brief comments on potential implications for theory and for practice conclude the paper.

Decision conflict

People often approach decisions like problem solving tasks, trying to gauge the various attributes and to come up with compelling arguments for choosing one option over another. At times, a comparison of the alternatives yields compelling reasons to choose an option. Other times, the conflict between available alternatives is hard to resolve, which can lead the decision maker to seek additional options, or to maintain the status quo. This has some non-obvious implications, as illustrated below.

People sometimes need to decide whether to opt for an available option or to search for additional alternatives. Psychological studies of decisional conflict suggest that people should be more likely to opt for an available option when they have a compelling

reason which makes the decision easy, and that they should be tempted to delay decision and search further when a compelling account is not readily available and the decision is hard. Conflict, on the other hand, plays no role in the classical analysis, according to which a person is expected to search for additional alternatives if the expected value of searching exceeds that of the best option currently available.

Tversky and Shafir (1992a) presented subjects with pairs of options, such as bets varying in probability and payoff, or student apartments varying in monthly rent and distance from campus, and had subjects choose one of the two options or, instead, request an additional option, at some cost. In the gamble study subjects first reviewed the entire list of 12 gambles to familiarize themselves with the available alternatives, and were then offered a choice between two gambles. One half of the subjects were presented with a choice between options x and y below; the others were presented with options x and x' . Subjects could either select one of the gambles, or they could pay \$1 to add a third option to the choice set, selected at random from the list they had reviewed. They then chose their preferred gamble from the resulting set (with or without the added option) and played it for real payoffs, which corresponded to the amount of money earned minus the fee paid for the added gambles.

(*Conflict:*)

- x) 65% chance to win \$15
- y) 30% chance to win \$35

(*Dominance:*)

- x) 65% chance to win \$15
- x') 65% chance to win \$14

Note that the choice between x and y -- the *conflict* condition -- is nontrivial: x is better on one dimension and y is better on the other. In contrast, the choice between x and x' -- the *dominance* condition -- involves no conflict because the former strictly dominates the latter. While there are reasons for choosing either option in the conflict condition, there is a decisive argument for choosing one of the alternatives in the dominance condition. On average, subjects requested an additional alternative 64% of the time in the conflict condition, and only 40% of the time in the dominance condition ($p < .05$). That is, subjects searched for additional options more often when the choice among alternatives was harder to rationalize, than when there was a compelling reason and the decision was easy.

The search for additional alternatives thus depends not only on the value of the best available option, as implied by value maximization, but also on the difficulty of choosing among the options. The availability of a compelling argument reduces the tendency to search further, whereas conflict increases that tendency. Because the best alternative offered in the dominance condition is also available in the conflict condition, value maximization implies that the percentage of subjects who seek additional options cannot be greater in the conflict than in the dominance condition, contrary to the observed pattern. Instead, an option that proved less attractive than searching in the conflict condition is preferred to searching in the dominance condition, after a competitor is replaced by an inferior alternative. Numerous studies of consumer choice have similarly documented the ability of inferior alternatives to increase the choice probability of superior options (e.g., Huber, Payne and Puto, 1982; Simonson & Tversky 1992).

According to standard analysis the preference ordering between two options cannot be altered by the introduction of additional alternatives. A non-preferred option cannot become preferred when new options are added to the offered set. In particular, a decision maker who prefers y over the option to defer a choice should not defer the choice when both y and x are available. The requirement that the “market share” of an option not increase when the offered set is enlarged (so long as the added alternatives do not provide new information) follows from the standard assumption of value maximization, and is known as the regularity condition (see Tversky & Simonson, 1993). However, because preferences are constructed around available options, the addition and removal of options can alter preference. In particular, the addition of alternatives may make the decision harder to justify and, consequently, may increase the tendency to defer choice, or to choose a default option, contrary to regularity.

Eighty students agreed to fill out a brief questionnaire for \$1.50. Following the questionnaire, one half of the subjects were offered the opportunity to exchange the \$1.50 (the default) for one of two prizes: a metal *Zebra* pen, or a pair of plastic *Pilot* pens. The remaining subjects were only offered the opportunity to exchange the \$1.50 for the *Zebra*. The pens were shown to subjects, who were informed that each prize regularly costs just over \$2.00. The results were as follows. Twenty-five percent opted for the payment over

the *Zebra* when *Zebra* was the only alternative, but a full 53% chose the payment over the *Zebra* or the *Pilot* pens when both options were offered ($p < .05$; Tversky and Shafir, 1992a). Faced with a tempting alternative, the majority of subjects took advantage of the opportunity to obtain a prize of somewhat greater value. The availability of competing alternatives, on the other hand, increased the tendency to retain the default option.

In a recent study, Iyenger and Lepper (2000) documented a related pattern with shoppers in an upscale grocery store. They set up tasting booths offering the opportunity to taste any of 6 jams in one condition, or any of 24 jams in the second. In the 6-jams condition 40% of shoppers stopped to have a taste and, of those, 30% proceeded to purchase a jam. In the 24-jam condition, a full 60% stopped to taste, but only 3% purchased ($p < .001$).

Decisional conflict systematically advantages the status quo, since departures from it typically require more justification than its retention (this is further exacerbated by loss aversion). A striking effect of the reluctance to depart from the status quo has been observed in the context of insurance decisions. New Jersey and Pennsylvania have recently introduced the option of a limited right to sue, which entitles automobile drivers to lower insurance rates. The two states differ in what they offer consumers as the default option. New Jersey motorists have to acquire the full right to sue (transaction costs are minimal: one needs only to sign), whereas in Pennsylvania the full right to sue is the default. When offered the choice, about 20% of New Jersey drivers chose to acquire the full right to sue, while approximately 75% of Pennsylvania drivers chose to retain it. The difference in adoption rates had financial repercussions that are estimated at around \$200 million dollars (Johnson, Hershey, Meszaros, & Kunreuther, 1993).

Related effects in decisions made by expert physicians and by legislators are documented in Redelmeier and Shafir (1995). In one scenario, presented to neurologists and neurosurgeons, prioritization was necessary among several patients awaiting carotid artery surgery because of limited operating room availability. Respondents' task was to select the patient on whom to operate first. Half the respondents received a version with two patients, a woman in her early fifties and a man in his seventies. Others saw the same

two patients along with a third, another woman in her early fifties, highly comparable to the first, so that priority between the two women was hard to determine. As predicted, more physicians (58%) chose to operate on the older man in the latter version, which included two highly comparable women, than in the former version (38%), in which the choice was between only one younger woman and the man ($p < 0.001$).

Standard normative accounts do not deny conflict, nor, however, do they assume any direct influence on choice. (To the extent that people are genuine utility maximizers, there does not appear to be much room for conflict: either utility differences are large and the decision is easy, or they are small, and the decision is of little import.) Instead, when people are conflicted they are more likely to keep on searching than when conflict is low, when there's conflict among a subset of options, competing alternatives are likely to gain, and when there's conflict about 'new options', the default alternative tends to benefit. As it turns out, conflict is an unavoidable element in the making of decisions, and it yields predictable and systematic patterns that violate normative expectations.

Decision Weights

Choice creates conflict partly because people are not sure how to trade off one attribute relative to another or, for that matter, which attributes matter most. Attribute weights turn out to be a highly malleable affair, subject to a variety of "accidental" influences. In what follows, I consider some contextual factors that have been shown to impact on attribute weights and, consequently, on the consistency of preferences.

Compatibility

Stimulus attributes can be differentially weighted as a result of trivial changes in procedure. Among other things, the weight given to an attribute tends to be enhanced by its compatibility with the required response. For example, in the realm of perceptual-motor performance a pointing response is faster than a vocal response if the stimulus is presented visually, but a vocal response is faster than pointing if the stimulus is presented in an auditory mode (see Shafir, 1995, for review and discussion.) In line with compatibility, a gamble's potential payoff is weighted more heavily in a pricing task

(where both the price and the payoff are expressed in the same monetary units) than in choice (Tversky, Sattath, Slovic, 1988). Consistent with this is the preference reversal phenomenon (Lichtenstein and Slovic, 1971; Slovic & Lichtenstein, 1983), wherein subjects choose a lottery that offers a greater chance to win over one that offers a higher payoff, but then price the latter higher than the former. This pattern has been observed in numerous experiments, including one involving professional gamblers in a Las Vegas casino (Lichtenstein & Slovic, 1971), and another offering the equivalent of a month's salary to respondents in the Peoples' Republic of China (Kachelmeier & Shehata, 1992).

For another type of response compatibility, consider choosing one of two options or, alternatively, having to reject one of two options. Logically speaking, the two tasks are interchangeable: if people prefer the first they will reject the second, and vice versa. However, people naturally focus on the relative strengths of options, on reasons for choosing, when they choose between options, and on the weaknesses, on reasons to reject, when looking to reject an option. As a result, options' positive features (their pros) loom larger when we choose, whereas their negative features (their cons) are weighted relatively more when we reject. Shafir (1993) presented respondents with pairs of options, an enriched option, with various positive and negative features, and an impoverished option, with no real positive or negative features. Because positive features are weighed more heavily when we choose and negative features matter more when we reject, the enriched option was the one most frequently chosen as well as rejected. For example, respondents had to decide about a sole-custody case in which one parent had a variety of positive and negative attributes whereas the other was described in highly neutral terms. Half the respondents were asked which parent to award custody to; the others decided whom to deny it. The enriched parent, described in highly positive and negative terms, was the majority choice both for being awarded custody of the child and for being denied it.

Search for information

Attribute weights may shift due to circumstances such as a search for information. People often look for additional information that may facilitate deliberation, even when it

is unlikely to alter the decision (Baron, Beattie, & Hershey, 1988; Tversky and Shafir, 1992b). It is generally assumed that the more information (particularly when not costly) the better. Psychologically, however, information sought can alter attribute weights relative to if it had been available from the start.

In one study (Bastardi & Shafir, 1998; 2000), subjects assumed the hypothetical role of decision makers evaluating applicants for college admissions. Half of the respondents evaluated the folder of an applicant who played varsity soccer, had supportive letters of recommendation, was editor of the school newspaper, and had a combined SAT score of 1250 and a high school average of B. Presented with this information, the majority voted to accept the applicant. Other respondents received similar information. As before, the applicant played varsity soccer, had supportive letters of recommendation, was editor of the school newspaper, and had a combined SAT score of 1250. Now, however, there were conflicting reports of the applicant's average grade. The guidance counselor reported a B, whereas the school office reported an A. Records were being checked, and information about the correct grade was expected shortly. Presented with this situation, the majority of respondents elected to wait and find out the applicant's grade before making a decision. Upon being informed that the applicant's average grade was a B (as in the original version) and not an A, a majority decided to reject the applicant (whereas the original group accepted.)

People are inclined to postpone decision for the sake of additional information that appears relevant. The obtained information then tends to figure more prominently than had it simply been known from the start. This information, furthermore, often has clear implications for how the decision maker ought to proceed with the decision, and it can alter preference. This has been replicated in the context of consumer choices, hypothetical course selections and mortgage decisions, as well as with a version of the Ultimatum game played for real payoffs.

The Ultimatum Game

The Ultimatum Game involves two players who are randomly assigned the roles of Allocator and Recipient. The Allocator is given a fixed sum of money, say \$10, which she is to divide between herself and the Recipient. The Allocator must make an offer; the Recipient can then accept the offer, in which case the Recipient gets what was offered and the Allocator keeps the remainder, or the Recipient can reject the offer, in which case both players get nothing. According to a pure money-maximizing interpretation of game theory, allocators should make offers just above zero, and recipients should accept all positive offers. The experimental data are inconsistent with that prescription. Allocators typically make significantly positive offers, and recipients decline offers that they deem to be too low. These behaviors have been ascribed, among other things, to social norms and to notions of fairness (see Roth, 1995, and Thaler, 1988, for reviews.)

In the following study (Bastardi & Shafir, 1998), each participant was paired with an anonymous other player, who was given \$10 and was to decide what portion of the pot, either \$2 or \$5, he or she wished to give to the subject, keeping the rest (either \$8 or \$5) for him or herself. Participants were arbitrarily assigned to the *simple* or the *uncertain* condition. Those in the simple condition each received a form in which the other's offer was \$2. Those in the uncertain condition each received a form that had not yet been filled. They could choose to 1) accept whichever offer -- \$2 or \$5 -- the other makes; 2) reject whichever offer is made, or 3) wait and see the offer before making their decision. Those who waited then received the same form used in the simple condition, in which the allocator offered \$2 and hoped to keep \$8.

The results were as follows. In the simple condition, when the offer was \$2, 20% of participants chose to decline, giving them nothing. (This is consistent with other data re such allocations; see Roth, 1995.) In the uncertain condition, perhaps reluctant to make a premature decision and in any case seeing no need to rush, more than 40% chose to wait and see the other's offer before making their decision. Upon discovering that the offer was \$2 and not \$5, over 80% of those who waited then rejected the offer. This produced an overall rejection rate of 35% in the uncertain condition, significantly higher than the 20% rate of rejection observed in the simple condition ($p < .05$). Apparently, participants who

waited and then received the low offer had formulated a different threshold of what was minimally acceptable compared to those who received the same low offer up front.

Kidney donations

Important decisions -- especially those that affect others or for which one feels accountable (cf. Tetlock, 1992) -- may exacerbate both the tendency to pursue missing information and the reliance on such information once obtained. In one study, experienced nurses affiliated with kidney dialysis centers were surveyed regarding whether they would donate a kidney to an elderly relative with renal failure (Redelmeier, Shafir, & Aujla, 2001). Half the nurses were to assume that they were a suitable match; of these, 44% expressed willingness to donate and the rest were unwilling. The other nurses were told their suitability was unknown and asked whether they would be willing to be tested to determine whether they're suitable. Faced with this more benign decision, most nurses (69%) agreed to undergo testing. Following the test (which, as for the first group, indicated compatibility), respondents were asked whether they would be willing to donate. Now, a great majority of those who opted to be tested (93%) agreed to donate. In fact, overall stated willingness to donate increased from 44% when the nurses knew they were a suitable match, to 65% when they elected to be tested and then found out they were suitable ($p < .007$). Similar effects have been documented among surgeons specializing in prostate cancer, physicians retired from general practice, and college students responding as medical patients (Redelmeier et al., 2001).

People construct their attitudes partly on the basis of external cues, including their own behavior (for more on self-perception, see Bem, 1972). Unaware of their decision processes (Nisbett & Wilson, 1977), people often misconstrue earlier choices and then form preferences consistent with such misconstrual, leading them to make choices they would not otherwise make. The tendency for a later decision to be made in a manner consistent with a misconstrued earlier behavior has been observed in studies involving compliance (where initial compliance with a request leads people to alter an ensuing judgment), overjustification (where a reward alters people's perceived motivation for an activity), and behavioral prediction (where prior misprediction shapes subsequent

behavior) (see Bastardi & Shafir, 1998, and Sherman, 1980, for further discussion). A noteworthy feature of such patterns is that they appear exceedingly reasonable. People pursue information that seems relevant, and then make decisions based on the information obtained. At no point need they suspect that a different decision would have been taken had the information been available without being pursued.

Separate versus comparative evaluation

Systematic discrepancies emerge between evaluations that are conducted in isolation, one alternative at a time, and choices that are observed in comparative settings, when two or more alternatives are considered simultaneously. As we saw already, alternative elicitation methods can give rise to differential weighting of dimensions and, consequently, to inconsistent decisions. Similar phenomena occur in contexts that exploit people's counterfactual thinking, empathy, and ignorance.

Evaluability

Systematic inconsistency can be observed when attributes are difficult to gauge in isolation, also referred to as "evaluability" (Hsee, 1996; Hsee, Loewenstein, Blount, Bazerman, 1999). In one study, subjects were presented with two alternative second-hand music dictionaries, one with 20,000 entries but a slightly torn cover; the other with 10,000 entries and a cover that was like new. Subjects had little notion of how many entries to expect in a music dictionary. When viewing them one at a time, they were willing to pay more for the dictionary with the new cover than for the one with a cover slightly torn. When the two dictionaries were evaluated concurrently, however, most subjects obviously preferred the dictionary with twice as many entries, despite its inferior cover.

For another example, Hsee (1997) presented subjects with pictures of two servings of Haagen Dazs ice cream. One serving contained more ice cream but failed to fill a large cup; the other contained less ice cream that overfilled a smaller container. When these were evaluated jointly, subjects were willing to pay more for what was clearly a larger serving. In separate evaluation, however, when the precise amount of ice cream was hard

to gauge, subjects tended to pay more for the overfilled cup than for the one that was partly empty.

Empathy

Kahneman and Ritov (1994) explored people's willingness to contribute to one of two environmental interventions, for example, one concerning safe breeding areas for endangered Australian mammals, the other supporting free checkups for farm workers at risk of skin cancer. Half the respondents chose which of the interventions they would rather support; the others were presented with one issue at a time and asked to determine the largest amount they would be willing to pay for each intervention. When asked to evaluate the interventions separately, respondents, who were predictably more moved by the hunted animals' plight, were willing to pay more for the safe breeding of mammals than for workers' checkups. However, when they had to choose, most subjects favored free checkups for humans over safe breeding for animals. As expected, the issue considered more important (human rather than animal safety) acquired greater prominence in the choice condition, which allows for direct comparison between issues, than in separate presentation, where each issue is evaluated in accord with its own generated emotions, and with no simple metric for comparison. Irwin, Slovic, Lichtenstein, and McClelland (1993) report similar effects with environmental issues versus consumer commodities. Common to all these is that people evaluate one alternative more positively than another when these are evaluated independently, but then reverse their judgment in the context of direct comparison, which tends to render prominent the most important dimension.

Counterfactuals

In a study ostensibly intended to establish the amounts of compensation payment that the public considers reasonable, Miller and McFarland (1986) presented respondents with two descriptions of a male victim who was described as having lost the use of his right arm as a result of a gunshot wound suffered during a robbery at a convenience store. Some respondents were told that the robbery happened at the victim's regular store.

Others were told that the victim was shot at a store he rarely frequented, which he happened to go to because his regular store was closed. It was hypothesized that subjects would assign higher compensation to a person whose victimization was preceded by an abnormal event. This is because abnormal events strongly evoke a counterfactual undoing, which tends to raise the perceived poignancy of outcomes and the sympathy for their victims. (For more on the psychology of counterfactual thinking, see Kahneman and Miller, 1986; Roese & Olson, 1995.) Indeed, the person who was shot at a store he rarely visited was awarded significantly greater compensation, to the tune of \$100,000, than was his counterpart shot at the regular store.

The affective impact of events is often influenced by the ease with which an alternative event can be imagined. The death of a soldier on the last day of the war seems more poignant than the death of his comrade six months earlier. The fate of a plane crash victim who switched to the fatal flight only minutes before take-off is seen as more tragic than that of a fellow passenger who had been booked on that flight for months. Whereas the affective impact of such distinctions can be profound, people do not always consider this to be relevant. When the two versions of the robbery scenario -- at the regular versus the unusual stores - were presented to respondents concurrently, the great majority (90%) did not think that the victims in the two cases should be awarded different compensations (Kahneman, 1996). Rules about what is relevant are easier to apply in direct comparison: we can decide that past frequency of visits to the store is immaterial. On separate evaluation, on the other hand, the application of rules remains elusive, and the affective reactions aroused need not conform to principles endorsed upon explicit comparison (see Sunstein et al., 2001, for more relevant data and discussion.)

To briefly summarize, simple psychological processes were shown to yield systematic discrepancies between separate and comparative evaluations. Considerations that predominate in the context of comparative choice were shown to play a lesser role in separate evaluation; aspects that trigger strong sentiments in separate evaluation were shown to lose their appeal in comparative settings; and features that were hard to assess in isolation were sometimes easier to evaluate, and proved decisive, in direct comparisons.

Discrepancies between separate versus concurrent evaluation have profound implications for policy and for the role of intuition. Events in life are typically experienced one at a time - a person lives through one scenario or another. Normative intuitions, on the other hand, typically arise from concurrent introspection - we entertain a scenario along with its alternatives. When an event triggers reactions that depend partly on its being experienced in isolation, important aspects of the experience are likely to be misconstrued by intuitions borne of concurrent evaluation (see Shafir, 2002b, for further discussion.)

Social Identities

"Do I contradict myself? Very well then I contradict myself, (I am large, I contain multitudes.)"

- Walt Whitman (Song of Myself)

Students of group dynamics often speak of the individual within the group *and* the group within the individual. People derive their identity, their self-concept, in large part from the groups to which they belong. Social identities can stem from membership in a variety of groups, including social categories (women, African-Americans), political groups (greens, NRA), social groups (sororities, country clubs), nationality, occupation, family status, and so on; virtually any such role is likely to serve as a social identity in some contexts (Deaux, 1993; Deaux et al., 1995; Turner, 1987). A person may regularly alternate among different identities - she might think of herself primarily as a mother when in the company of her children, but see herself primarily as a professional while at work. The list of potential identities is extensive, and some identities (e.g., “mother”) are likely to conjure up strikingly different values and ideals from others (e.g., “CEO”). Multiple identities notwithstanding, it is intuitively sensible—and normatively required—that a person’s choices should reflect the wishes of the self as a whole. In particular, choice ought not depend on accidental factors such as which identity is momentarily salient. As it turns out, accidental fluctuations in identity salience do have an impact.

To illustrate the impact of identity-salience, consider the following striking example. Because Asians are stereotypically strong in math, and women are

stereotypically weaker, Asian women hold identities that encompass conflicting expectations. Apparently, their math performance depends, in part, on which identity is salient. Shih, Pittinsky, and Ambady (1999) found that Asian-American women graduate students who first completed a survey that evoked their ethnicity scored higher on a subsequent math test than did their counterparts who first completed a survey that evoked their gender. (Cf. Cheryan & Bodenhausen, 2000, for the role of the salience of identity manipulations.)

Not surprisingly, recent experiments show that preferences also assimilate to salient identities. Even when the options, procedure, and description are all kept intact, subtle manipulation of a decision maker's salient self-concept exposes malleable preferences. Take college undergraduates, who are often caught between conflicting identities. On the one hand, they are novice scholars who wish to engage in intellectual pursuits; on the other hand, they find themselves in a milieu that promotes intense socializing and a variety of frivolous activities. Capitalizing on this tension, LeBoeuf and Shafir (2003b) manipulated the salience of scholar versus social identities in undergraduates, who were then invited to choose among various consumer goods.

Half of the participants first answered a brief survey regarding, e.g., co-ed bathrooms in the dorms, designed to bring to mind a host of issues related to gender and socializing on campus. The remaining participants completed a survey about political issues relevant to students, which was expected to evoke a more scholarly identity. All participants then made a series of hypothetical choices between consumer items, each pitting a serious against a more frivolous alternative (*The Economist* versus *Cosmopolitan*, the serious film *Before Night Falls* versus the light comedy *Chocolat*, etc.) As predicted, participants selected the scholar-congruent option significantly more often when their scholar identity than when their social identity was salient. (As it turns out, this is moderated by level of identification with the elicited identities: those high in identification showed the effects, whereas those low in identification did not.)

A host of studies have found differences in cognitive style and values between Chinese and Americans, and more generally between Eastern and Western cultures (see

Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001 for reviews). East Asian cultures tend to place a greater emphasis on collectivism and social groups than do more individualistically-oriented Western cultures (Hofstede, 1980; Markus & Kitayama, 1991). As part of establishing their individuality, for example, Westerners tend to select unique items from an array of alternatives, whereas East Asian participants tend to prefer non-unique items that “blend in” with the rest (Kim & Markus, 1999). Similarly, members of collectivistic cultures tend to be more cooperative (e.g., in Prisoner’s Dilemma games) than members of individualistic cultures (Domino, 1992; Hemesath & Pomponio, 1998; Parks & Vu, 1994).

With this in mind, LeBoeuf and Shafir (2003b) manipulated the salient identities of Chinese-Americans, aiming to assess preferences for uniqueness and cooperation. Participants were born in China, Taiwan, and other East Asian countries, and had lived in the United States for a minimum of 5 years and an average of 15.7 years. To make salient the Chinese identity, a randomly selected half received all materials in Chinese and answered questions such as, “Where were you born?” and “Name one Chinese landmark that you’ve visited or would like to visit.” To make salient their American identity, the remaining participants received all materials in English and answered parallel questions such as, “What town do you live in at the moment?” and “Name one U. S. landmark that you’ve visited or would like to visit.” Four scenarios assessed participants’ preferences for conformity and cooperation. The first assessed preference for a uniquely- versus a traditionally colored car. Another inquired about departing from a norm in ordering a new restaurant dish over the traditional meal. A third investigated participants’ proneness to reciprocate a favor, and the last assessed their tendency to cooperate in a Prisoner’s Dilemma game. An average overall index from 0 (“Chinese option”) to 1 (“American option”) assessed the degree to which preferences were stereotypically American across choices. As predicted, scores were reliably higher, i.e., more American, when the American rather than the Chinese identity had been evoked ($p < .003$).

This malleability of preferences may have profound implications because identity salience most likely does not emerge at random. Ross and Ward (1996) observed significantly lower rates of cooperation in a prisoner’s dilemma-type game when the

game was referred to as the “Wall Street” than as the “community” game. This suggests that Wall Street is likely to induce a competitive identity even among people who may otherwise identify with a less competitive stance. In like fashion, generals make decisions in contexts in which their military self is salient, scientists make decisions in contexts where their scientific identity is primed, investors make financial decisions in contexts where notions of money and wealth predominate, and so forth. This suggests a systematic “extremity” of decisions relative to people’s “true average.” It predicts, among other things, preference inconsistencies reminiscent of those discussed by Schelling (1984) and other students of inter-temporal choice (see Loewenstein & Elster, 1992).

The notion of shifting selves may help explain some social trends. For example, as social welfare programs have become increasingly scarce in the US, low-skilled workers have turned to disability pay in greater numbers as refuge from layoffs. The number of workers on disability pay has grown from 3 million in 1990 to over 5.5 million in 2002, swelling the program’s costs to \$69 billion, far surpassing unemployment insurance and food stamps or any other similar program. As it turns out, disabling injuries are not occurring more frequently, nor are more people cheating a system that requires considerable evidence. Instead, research indicates that the growing numbers are attributable to a reliance on disability benefits by low-end workers who had ignored their ailments as long as their limited skills brought them employment.

An Administrative Law Judge who rules on disability has tried to explain it thus: “When you are a person who has lost a job, and you can’t find another and you are home sitting on the couch, you become preoccupied with ailments that do qualify in many cases as legal disability but while you were working did not come into your mind.” (*New York Times*, Sept. 2, 2002) It seems rather improbable, however, that millions of people who suffered from a disability severe enough to qualify for government payments simply failed to notice it all along. Rather, it is more likely that the decision to receive disability pay, although financially less pressing, was also just less appealing to people when their working self predominated, as compared to when their unemployed self was salient.

We have recently tried a pilot intervention at the Crisis Ministry of Princeton and Trenton Financial Services and Food Bank, an organization in Trenton, NJ, that, among other things, administers food staples to the poor. Sixty women who came for food were randomly presented with a few questions intended to make their “social self” salient (e.g., What do you like to do for fun?, Do you have a favorite place to hang out?); the rest received questions intended to make salient their “family self” (e.g., Who do you live with?, Which of your family members do you feel closest to?, etc.). Following this brief manipulation, all respondents received brief scenarios that inquired about their interest in opening a savings account with a minimum monthly deposit, their interest in attending a night financial management course for low-income people, etc. While the results are highly preliminary, they do suggest that those whose family identity was elicited made more “responsible” choices than those whose social selves were rendered salient ($p < .07$)

Concluding Remarks

This brief review has documented patterns of preference inconsistency in settings ranging from students’ choices among consumer goods, to strategic interactions for payoff, to medical decisions made by experts. Perhaps the most important lesson is that these patterns cannot be relegated to imperfect shortcuts, fallible computation, carelessness, or distraction. Instead, they are attributable to fundamental psychological facts of (mental) life. Among these are psychophysical factors (such as diminishing sensitivity and loss aversion), conflict aversion, shifting weights, and a variety of identity-dependent priorities and urges. Perception and choice are the products of context dependent and comparative evaluation mechanisms that can be systematic and predictable, but that do not readily lend themselves to analyses that assume consistency, independence and invariance.

All this paints a different picture from that envisioned by classical economic thinkers:

We consumers are not expected to be wizards. We may make most of our decisions unconsciously or just out of habit. What is assumed is that consumers are fairly *consistent* in their tastes and actions – that they do not flail around in unpredictable ways, making themselves miserable by persistent errors of judgment or arithmetic. If enough people act

consistently, avoiding erratic changes in buying behavior, our scientific theory will provide a tolerable approximation to the facts.

Samuelson & Nordhaus, Economics, 14th edit.,
1992

(emphasis in
original)

The studies reviewed here do not show people flailing around. They describe behavior that is neither erratic nor unpredictable, nor is it fraught with errors of judgment or arithmetic. Indeed, preferences can be malleable, context dependent, and inconsistent while the decision maker is thoughtful, serious, and engaged. (Thus, LeBoeuf & Shafir, 2003a, find that people high and low in need-for-cognition, a measure of the tendency to engage in and enjoy thinking, are equally likely to be framed in standard, between-subject designs.)

The observed patterns, furthermore, cannot, without begging the question, be relegated to excessive computational complexity. Honeybees, with a brain smaller than the head of a pin, perform wondrous navigational feats, which humans, with their 3 pound brains, would never be able to emulate (see, e.g., Gould, 1982). (Describing the middle ages, when people lived in nameless towns, and with no family names to help with the search, William Manchester (1992) writes, “If war took a man even a short distance from a nameless hamlet, the chances of his returning to it were slight; he could not identify it, and finding his way back alone was virtually impossible..”). Humans have impressive abilities, among them linguistic, mathematical, and visual. Those are computationally not more modest than other tasks – like navigation and decision – which we are not designed to do in certain, normatively prescribed ways.

By this account, it may help to think of individual decision makers not as faulty economic agents, but as fundamentally different creatures. Creatures who are, to be sure, interested in improving their lot and who have preferences, but who, nonetheless, are fundamentally different processors of information from those envisioned by classical analyses. This would have immediate impact for the use of incentives, for example, which often do not improve decision making (Camerer et al.) and can often impede it by leading people to

implement flawed strategies more vigorously (Arkes, Dawes, & Christiansen, 1986), and by evoking a negative affective arousal which can have a deleterious influence (Stone & Ziebart, 1995).

Improper models of decision makers may remain misguided in theory, but can have pernicious effects when implemented by policy makers. Fundamental assumptions about what drives people, what impacts their behavior, and how it can therefore be modified, drive policy, and can drive it in potentially misguided directions. For example, repeated observation of the fact that people's satisfaction, well being, even health, depend largely on their relative, rather than absolute, position (see, e.g., Kahneman et al., 2003, Frank, 1999), has brought into question simple notions of Pareto optimality, among the most fundamental of welfare economics. Because people's perceptions are so fundamentally comparative in nature, it is no longer clear that a policy that doubles the salaries of a few people and increases all other salaries by 5% will make most people happier.

While theory often simplifies matters for the sake of clarity and aesthetics, policy applications, for reasons of expediency and feasibility, instead of proving more "realistic," often simplify matters even further. Thus, whereas theory clearly "allows" people to be driven by things non-pecuniary, policy is often based on the assumption that people care about little more than just money. Consider, for example, the two-tier welfare law adopted in recent years by many states in the USA (and since abandoned for legal reasons unrelated to the analysis below). The law, intended to discourage welfare recipients from moving from lower- to higher-benefit states, dictated that until they have resided a minimum of 12 consecutive months in the adopted state, eligible recipients were entitled to assistance only at the level granted by the previous state of residence (if lower). The guiding assumption is simple: welfare recipients will otherwise move to whichever state pays most. But, of course, what drives people to move are predominantly other considerations, for example, a relative who might help with childcare (many recipients are single mothers), or the possibility of a better job. In fact, the welfare eligible are as likely to move to lower- as to higher-benefit states (Linda Gordon, *The Nation*; www...). But because of the 2-tier system, which is predicated on the assumption that money is what

counts most, a single mother of two who moved from Mississippi to California (in 1997?) was entitled to monthly payments of \$120, rather than the \$565 that California then paid, which essentially guaranteed her misery and failure.

This paper has focused on single individuals facing single decisions. Naturally, extensions to collectives and implications for markets are non-trivial (see, e.g., Akerlof & Yellen, 1985; Haltiwanger & Waldman, 1985; Russell & Thaler, 1985). The hope is that a descriptively more faithful view of decision making will allow for greater insights into economic theorizing and policy applications. Promising first steps in this direction can be seen, for example, in Camerer et al., 2003, 2004, and Sunstein and Thaler, 2003. Referring to people's remarkable abilities as well as persistent weaknesses, Chomsky (1988) juxtaposes what he calls "Plato's Problem," namely, How can people have such profound understanding given such limited evidence? (my paraphrase), with what he refers to as "Orwell's Problem," namely, How can people show such lack of understanding given so much evidence? The task of policy makers is to understand human actors better and to implement policies that take into account both our platonic as well as orwellian impulses.

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