

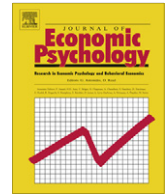


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# Journal of Economic Psychology

journal homepage: [www.elsevier.com/locate/joep](http://www.elsevier.com/locate/joep)



## Review

# Why process matters: A social cognition perspective on economic behavior

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### ARTICLE INFO

*Article history:*

Available online 14 September 2011

*JEL classification:*

A12  
B4  
C9

*PsycINFO classification:*

3000

*Keywords:*

Social cognition  
Psychological processes  
Economic psychology  
Behavioral economics

### ABSTRACT

Much research on economic behavior has been devoted to demonstrating deviations from standard economic theories. Such descriptive research has proven invaluable in showing that systematic violations of the norm occur frequently in human decision making. Here, we advocate a shift to a more process-focused research approach aimed at uncovering the *why* of economic behavior. We provide several examples highlighting that seemingly similar phenomena can be governed by very different psychological processes, that the same processes can have explanatory power in very different domains, and that the situational context is a crucial determinant of the mental processes governing behavior. In doing so, we advocate a social-cognitive perspective on economic behavior, aimed at revealing the psychological mechanisms that shape how people construe a particular situation. We hope that such a perspective can contribute to theoretical and empirical integration, novel predictions, and more precise strategies to change behavior.

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### Contents

1. Introduction . . . . .	677
2. Similar effects, different processes . . . . .	678
3. Same process across different domains . . . . .	680
4. Context determines mechanisms and effects . . . . .	681
4.1. Contextual information influences behavior . . . . .	681
4.2. Mindsets influence behavior. . . . .	682
5. Summary and conclusion. . . . .	683
References . . . . .	683

## 1. Introduction

Much research on economic behavior has been devoted to demonstrating deviations from standard economic theories. Such descriptive research has proven invaluable in showing that systematic violations of the norm occur frequently in human decision making. Often, these violations are thought of as a window to the mind, allowing insights into how people

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arrive at rational as well as irrational decisions. However, in the present article, we want to draw attention to the benefits of taking a more direct approach. We argue that it is time to shift the focus from examining *what* people do in specific economic situations to *why* they do it. In other words, we suggest that in order to advance the field it is essential to address the underlying psychological mechanisms that shape economic behavior. We are convinced that doing so will greatly enhance not only our understanding of specific economic phenomena, but will also yield novel predictions and allow theoretical and empirical integration by uncovering the mechanisms that are common to diverse findings. Finally, we believe that firm knowledge about psychological processes is often crucial to change people's behavior in real-life situations.

Consider the endowment effect as an initial case in point. The endowment effect refers to the finding that the lowest price at which the owners of a good accept to sell this good is usually higher than the highest price they would pay for it if they did not own the item (Kahneman, Knetsch, & Thaler, 1990; Thaler, 1980). This stands in conflict with the standard economic theory of preferences, which would assume the same utility for buying and selling. The standard explanation of the endowment effect is loss aversion. According to this account, sellers and buyers differ in how they perceive the value of a good because people perceive losses to be higher than gains of equal absolute size. However, this explanation has been criticized as being mainly a paraphrase of the phenomenon rather than an account of the underlying process, particularly because the reasons for differential perceptions of gains and losses remain unclear (Gawronski, Bodenhausen, & Becker, 2007).

Even though the endowment effect has been frequently studied and proven to be a robust and widespread phenomenon, researchers have just begun to examine its underlying mechanisms. Neuroscientific research has greatly enhanced our knowledge showing that the differential encoding of gains and losses is represented in specific neural areas (e.g., Tom, Fox, Trepel, & Poldrack, 2007) and providing support for the view that the endowment effect may be related to an enhanced salience of potential losses (Knutson et al., 2008). Furthermore, researchers focusing on the cognitive underpinnings of the endowment effect have shown that sellers and buyers vastly differ in how they retrieve and focus on different information about a good (see e.g., Carmon & Ariely, 2000; Johnson, Häubl, & Keinan, 2007; Nayakankuppam & Mishra, 2005). Recent evidence suggests that an even more telling answer to the question *why* the endowment effect occurs may be found in the psychological consequences of ownership (and thus bears resemblance to the mere ownership effect, Beggan, 1992). According to this research, the mere association of an object with the self leads to a transfer of people's implicit self-evaluation to the object (Gawronski et al., 2007; Morewedge, Shu, Gilbert, & Wilson, 2009). Because people lean towards self-enhancement, their implicit self-evaluation is usually fairly positive (e.g., Bosson, Swann, & Pennebaker, 2000; Greenwald & Farnham, 2000). Hence, this simple associative transfer should result in a more positive evaluation and, consequently, different construal of an owned good—and may thus be the cause of the endowment effect. Moreover, an associative transfer account of endowment allows for new predictions. For example, the endowment effect should be bigger for people who are more inclined to engage in self-enhancement. In line with this prediction, recent evidence suggests that cultural differences in self-construal (a stronger tendency for self-enhancement in independent than in interdependent cultures) explain cultural differences in the size of the endowment effect (Maddux et al., 2010).

This research on the endowment effect highlights a central difference of a more standard economic approach to a social cognition approach. At the same time, it highlights what might be gained from combining the two. While economic research has developed ingenious paradigms that isolate provocative phenomena and show how (sometimes very subtle) structural differences in the situation can change the outcomes of a particular task in non-intuitive ways, social cognition research focuses on the mental processes that connect situations and their outcomes.

Broadly speaking, social cognition is the study of how people understand and make sense of others, themselves, and the situation they are in (Bless, Fiedler, & Strack, 2004; Fiske & Taylor, 1991; Kunda, 1999). The basic tenet of social-cognitive research is that it is the mental representation of the external stimulus reality rather than the objective situation itself that determines human behavior. Thus, what comes in between external stimuli and behavioral outcome—the subjective construal of a situation—is seen as crucial in understanding why people behave in a certain way. In keeping with this basic premise, the key question for social cognition researchers concerns the causes and the effects of these construals. Social cognition research seeks to uncover how people structure and how they process social information, that is, how this information is attended to, interpreted, stored, retrieved, and how the representation of past events interacts with incoming information to shape behavior. Furthermore, social cognition researchers share the conviction that the content of people's cognitions as well as the cognitive processes themselves are highly flexible and depend on the context people are in.

We would like to suggest that adopting a social-cognitive, process-focused approach may enhance our understanding of numerous findings in economic research. In support of this argument, we provide several examples highlighting that seemingly similar phenomena can be governed by very different psychological processes, that the same processes can have explanatory power in very different domains, and that the context is crucial in determining which thoughts and mental processes govern economic judgments, decisions, and behavior.

## 2. Similar effects, different processes

A first reason to go beyond a descriptive account of economic behavior is highlighted by research showing that empirical phenomena which appear to be the same or highly similar may, in fact, be caused by very different cognitive processes. Disentangling the different processes and their situational determinants may thus in itself lead to a more complete description of human behavior. Furthermore, knowing the specific mental mechanism that is responsible for an outcome in a certain situation may be crucial when trying to change people's behavior.

Consider the anchoring effect—a classic example of bounded rationality and one of the most stable and pervasive phenomena of biased decision making. Anchoring refers to the finding that judgments are influenced by the initial value that judges use when performing an uncertain judgment. For example, when estimating the percentage of African countries in the United Nations (Tversky & Kahneman, 1973), choosing the appropriate sentence for a criminal offense (Englich, Mussweiler, & Strack, 2006), or deciding what to pay for a luxury chocolate (Ariely, Loewenstein, & Prelec, 2003), people's judgment is assimilated towards (often arbitrarily determined) anchor values.

For a long time, the explanation for this effect followed Tversky and Kahneman's (1973) view that people make these judgments “by starting from an initial value that is adjusted to yield the final answer” (p. 1128). Thus, instead of engaging in an exhaustive search for relevant information to generate their judgment, people may use the anchor as a starting point and then serially adjust this value until they reach a satisfactory estimate. However, because “adjustments are typically insufficient” (p. 1128), final estimates tend to be biased towards the initial anchor value. In this vein, anchoring has been (and still is) used as a text-book example of a mental heuristic—a quick and efficient rule of thumb that is used to simplify a complex judgmental task.

After much descriptive research demonstrating the robustness of anchoring and its pervasiveness in many judgmental domains (for a review, see e.g., Mussweiler, Englich, & Strack, 2004), social cognitive research has taken a closer look at the mental processes underlying the anchoring effect. Much of this research is at odds with the idea that insufficient adjustment is the primary cause for anchor-biased judgments. For example, offering people incentives for accuracy or forewarning them about anchoring effects—manipulations that should increase the amount of cognitive effort spent on adjustment—do not reduce anchoring (Wilson, Houston, Etling, & Brekke, 1996). Conditions that increase deliberate thought may sometimes even amplify anchoring effects. For instance, being in a negative mood, which is associated with more systematic processing and less reliance on heuristics (Schwarz & Clore, 1996), increases the effect of judgmental anchors (Bodenhausen, Gabriel, & Lineberger, 2000).

Process evidence points to a different cognitive mechanism that produces anchoring effects. Rather than being caused by insufficient adjustment, anchoring seems to be due to confirmatory hypothesis testing (Chapman & Johnson, 1999; Mussweiler & Strack, 1999a, 1999b, 2000a, 2000b; Strack & Mussweiler, 1997). In short, when given an anchor, judges consider whether the anchor might be the correct answer. Because people usually do this by searching for information that is in line with the initial hypothesis, they selectively activate anchor-consistent knowledge. As a consequence, their judgment is assimilated towards the anchor. The most compelling evidence for this account stems from data showing increased accessibility of anchor-consistent knowledge after exposure to an anchor. For example, after considering a high anchor for the average value of a new car, people are faster in recognizing words related to expensive cars (Mussweiler & Strack, 2000a).

Nevertheless, it may be premature to dismiss a mechanism of insufficient adjustment completely. According to Epley and Gilovich (2001, 2006) participants in a typical anchoring study will scrutinize the validity of an anchor given to them by another person because of conversational norms and because it often falls in a range of plausible correct answers (even if it is normatively uninformative). However, if there is no externally provided anchor, people may often generate an anchor themselves. For example, when trying to determine the boiling point of water on Mt. Everest, people may use 212 °F (100 °C) as an anchor. Epley and Gilovich (2001, 2006) contend that people know that—while close to the true answer—their self-generated anchor is wrong to begin with. Hence, there should be no reason to engage in confirmatory hypothesis testing. However, a serial adjustment process should be all the more likely. In line with this reasoning, subtle manipulations of participants' acceptance of initial self-generated anchor values (Epley & Gilovich, 2001) and manipulations that undermine people's motivation or ability to engage in effortful adjustment (Epley & Gilovich, 2006), have been shown to increase anchoring, but only, when no external anchors are provided.

Thus, process-focused anchoring research not only reveals that the term “anchoring heuristic” is a misnomer for anchoring effects in the original paradigm. It also demonstrates that seemingly similar anchoring phenomena are, in fact, caused by (at least) two different cognitive processes (for a numerical priming perspective on anchoring, see Wilson et al., 1996; Wong & Kwong, 2000). These insights have immediate applied implications. Specifically, attempting to reduce anchoring effects by increasing people's motivation to come to accurate conclusions may reduce the influence of self-generated anchors. However, such a strategy will likely backfire and increase the impact of externally provided anchors. Instead, a strategy of “considering the opposite”—which makes anchor-inconsistent information more accessible—should often be better suited to reduce anchoring in such situations (Galinsky & Mussweiler, 2001; Larrick, 2004; Mussweiler, Strack, & Pfeiffer, 2000).

Another illustration of the importance to disentangle different processes that may underlie the same phenomenon is given by research on the availability heuristic. According to Tversky and Kahneman (1973), when judging the likelihood or frequency of events, people make informational use of the “ease with which relevant instances come to mind” (p. 207). For example, when asked to estimate the frequency of words starting with the letter R as compared to words with an R in the third position, people overestimate the frequency of the first option (Tversky & Kahneman, 1973, Exp. 3). Presumably, this occurs because it is easier to retrieve instances of words starting with the letter R from memory than retrieving words with the letter R in the third position. Individuals are thus hypothesized to rely on a metacognitive judgment when answering the question: If it is experientially easy to recall exemplars of a particular category, the frequency of the exemplars is assumed to be higher than when recall is difficult.

However, as Schwarz et al. (1991) point out, this initial experiment and many of those that followed are ambiguous regarding the underlying process of the effect because ease of recall is confounded with the amount of information that participants recall. For example, in Tversky and Kahneman's (1973) experiment, participants may have tried to recall as many

words from the respective categories as they could. Because recalling words that start with a particular letter is relatively easy, participants may have experienced subjective ease. However, they probably recalled more words starting with this letter as well, which also carries the implication that words from this category are more frequent. Thus, the judgment could both be based on the accessible memory content and the subjective ease of its recall (for a review, see Schwarz, 1998).

Schwarz et al. (1991) resolved this ambiguity by experimentally separating the ease of recall from the amount of recalled information. While the implications of accessible content and experienced ease are consistent when recall is experienced as easy, they are opposing when recall is difficult. For example, they asked participants to recall 6 or 12 instances of assertive behavior. While the first task is relatively easy, the latter task is experienced as difficult. In line with the ease account of the availability heuristic, participants rated themselves as more assertive when having listed six examples than when having listed 12 examples, even though they recalled twice as much instances of assertive behavior in the latter condition. In other words, because it felt so difficult to recall being assertive, they concluded that they were not.

Interestingly, however, people do not always base their judgments on the ease of recall, but sometimes rather on the content made accessible. For instance, rendering subjective ease non-diagnostic (e.g., by giving a plausible alternative explanation for ease or difficulty of recall) causes participants to judge themselves as more assertive after having recalled 12 rather than six instances of assertive behavior (e.g., Schwarz et al., 1991). Also, content of recall (instead of ease) guides judgments when people are highly motivated to process information systematically—for example, because the judgment is highly self-relevant (Rothman & Schwarz, 1998). Finally, there is evidence that the judgmental impact of subjective recall experiences is shaped by naïve metacognitive theories about memory (Winkielman & Schwarz, 2001).

To summarize, these examples not only highlight the need for process-agnostic terminology for empirical phenomena (as in the case of the anchoring “heuristic”), they also show important ways in which process evidence can enhance our understanding of these phenomena. Seemingly similar findings in slightly different contexts may in fact be caused by very different psychological mechanisms. On a phenomenological level, “anchoring” is an umbrella term that covers many findings showing that judgments are biased towards anchor values. It thus describes a class of effects but it is not a mechanism. Process evidence reveals that insufficient adjustment may be a mechanism that contributes to some anchoring effects, while selective accessibility may cause other anchoring effects. Similarly, as demonstrated by research on the accessibility of memory content versus the experiential ease of its recall, the outcomes of different processes may overlap in some situations, but will diverge in others. Disentangling these processes should allow better predictions and, ultimately, provide better means to alter behavior in a specific situation.

### 3. Same process across different domains

We now turn to another reason to adopt a social cognitive approach in research on economic behavior. In our view, uncovering the mental processes that connect situations and outcomes may also allow to integrate research areas that have previously been studied in isolation. Even though admittedly, social cognition cannot offer a unified theory of economic behavior, we argue that, on the contrary, a process-focused approach will reveal considerable integrative potential. Adopting a social-cognitive perspective does not only imply that different cognitive mechanisms are at work in different phenomena, but rather that the same basic psychological processes will underlie many phenomena to different extents. Thus, insights about mechanisms identified in one domain can often be applied in other domains, instead of reinventing the wheel repeatedly. For example, the aforementioned process of associative transfer of self-evaluation may be a mechanism contributing to phenomena in several experimental paradigms, including the endowment effect, mere ownership, post-decisional spreading of preferences, and ingroup favoritism (Gawronski et al., 2007).

Take research on comparative processes as another prominent case in point. Comparison is a remarkably ubiquitous psychological process. Abundant data show that whenever people perceive a target, when they process information or form judgments about it, and prepare behavior towards it, they do so by comparing it to a salient norm or comparison standard (Mussweiler, 2009). For instance, social and non-social comparisons have been demonstrated to play a central role in many important and diverse psychological research areas such as attitudes (Eiser, 1990), stereotyping (Biernat & Manis, 1994; Corcoran, Hundhammer, & Mussweiler, 2009) person perception (Herr, 1986; Mussweiler & Damisch, 2008), self-evaluation (Festinger, 1954; Higgins, Strauman, & Klein, 1986; Miller & Prentice, 1996), automatic behavior and goal pursuit (Crusius & Mussweiler, submitted for publication; Schubert & Häfner, 2003), judgment and decision making (Sherman, Houston, & Eddy, 1999; Tversky & Kahneman, 1974), consumer behavior (Van Horen & Pieters, in press), and negotiation (Babcock, Wang, & Loewenstein, 1996; Crusius & Mussweiler, forthcoming). The notion that comparisons play an important role in shaping behavior is also highly influential in research on economic behavior. For example, incorporating social comparisons in economic models has immensely enhanced their descriptive value (e.g., Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999).

The importance of comparison in cognitive functioning is not only evidenced by its ubiquity, but also by its robustness. Comparisons are often carried out spontaneously and without intention (Dunning & Hayes, 1996; Gilbert, Giesler, & Morris, 1995; Mussweiler & Rüter, 2003), sometimes even with comparison standards that people have perceived outside of conscious awareness (Mussweiler & Englich, 2005; Mussweiler, Rüter, & Epstein, 2004a). Comparison thus seems to be a very basic cognitive process that may not only be carried out frequently, but also in an automatic fashion.

Apart from elucidating the reasons for this striking ubiquity and robustness of comparisons, social cognitive research on comparisons has been guided by four questions (for reviews, see Corcoran, Crusius, & Mussweiler, 2011; Mussweiler, 2003,

2009). First, what are the mechanisms that shape standard selection? That is, if people process information about a particular target, what standard of comparison do they use? Second, which informational features of standard and target do they consider? Third, what are the mechanisms of comparison itself? In other words, how are the actual comparisons carried out? And finally, how do comparisons shape people's judgmental, affective, motivational and behavioral reactions?

We believe that applying the insights that have been gained from trying to answer these questions will contribute to a deeper understanding of various economic phenomena in which comparisons may play a role. For example,—as alluded to in the section on anchoring—amounting evidence supports the view that comparisons are carried out in the form of an hypothesis testing process that selectively alters the accessibility of comparative information (Mussweiler, 2003). This reasoning implies that the outcome of a comparison crucially depends on the kind of hypothesis tested during comparison. On the most basic level, comparative hypotheses can either be that a standard and a target are similar or that they are different. Engaging in a test for similarities leads to assimilation (e.g., in judgment). Engaging in a test for differences leads to contrast. While similarity testing seems to be a default, research has identified several variables that can “tip” the hypothesis in one direction or the other, such as salient features or the category membership of standard and target. Their common denominator seems to be that they affect an initial, broad assessment of similarity (for a comprehensive review, see Mussweiler, 2003). A case in point for the potential explanatory value of a comparison perspective on economic behavior is research that has manipulated initial similarity perceptions in mixed-motive situations (Fischer, 2009). This research shows that perceptions of (dis-)similarity can be crucial in determining people's inclination to cooperate or defect in mixed-motive situations. Participants who subjectively perceived their interaction partner to be similar to themselves were more likely to cooperate, presumably, because they engaged in social comparisons to predict the behavior of the other.

To conclude, the ubiquity and robustness of comparisons underlines the importance of paying close attention to the role of comparative processes in shaping behavior. Comprehending why people compare, why they select specific standards, why they consider particular comparative information, and how they carry out the comparison itself may deepen our understanding of the many phenomena in which comparisons play a role. Comparison may thus be an example of a psychological mechanism that can help to integrate diverse findings from within and outside economic psychology.

#### 4. Context determines mechanisms and effects

We have argued that to understand and predict the outcome of a specific economic situation (what), it is of importance to know the processes that lead to this outcome (why). In other words, process matters. In the first section we demonstrated that process evidence can serve to test between different explanations (e.g., selective accessibility versus insufficient adjustment) about a specific outcome (anchoring), even when these explanations predict an identical outcome in some situations. The second section illustrates that one process (comparative information processing) can account for many different effects (self-evaluation, preferences, decision making). In this last section we will argue that outcomes can change radically because the situational context can affect what and how people think.

A central finding of social cognition is that the way in which people experience the task at hand can be greatly influenced by the information that has been made accessible in the situation they are in. Economic models have traditionally assumed that individuals have consistent preferences. Even though many non-standard economic accounts of judgment and choice have acknowledged that the world is a dynamic place and that preferences are subjectively construed (i.e., they depend on the individual, situation, and culture, Loewenstein, 2001) we suggest that the influence of the situation is still underestimated. Mainly, research on economic behavior has focused on how small differences in the characteristics of the task or the surface content (e.g., framing, Tversky & Kahneman, 1981) influence the way in which the value of the task-information is being perceived. But whether someone will be competitive or cooperative in the Prisoners Dilemma Game, or will be willing to distribute his or her money egoistically or fairly in the Ultimatum Game is not only dependent on the rules of the game, the number of players involved, or the payoff structure, but is also critically determined by what has been made accessible by environmental cues (Kay & Ross, 2003; Kay, Wheeler, Bargh, & Ross, 2004; Smeesters, Wheeler, & Kay, 2009). The people we encounter, the room we are in, the mood we woke up with that day, all may have an important impact on how we perceive and construe the world around us (e.g., Higgins, 1996), which in turn affects how we think, feel, and behave.

##### 4.1. Contextual information influences behavior

Priming, or making specific information more accessible, is a way in which social psychologists during the last decades have tried to understand how a different perception of the situation can change how people react on a specific task. As people are cognitive misers (Corcoran & Mussweiler, 2010; Fiske & Taylor, 1991) accessible information is often used to disambiguate the situation in order to preserve cognitive resources (Wyer & Srull, 1989). In numerous studies it has been demonstrated that what is on top of one's mind guides perception, judgment, and behavior. In a classic study, Bargh, Chen, and Burrows (1996) showed for instance that when people were primed with the concept of rudeness, they were more likely to interrupt a conversation than participants who were primed with the concept of politeness. Similarly, they found that when participants were primed with the stereotype of the elderly, they walked more slowly from the lab to the elevator, than participants who were primed with neutral words. These studies suggest that primes can immediately make specific behavioral representations accessible, making us behave in a prime-consistent way.



Besides affecting behavior directly, priming may also alter behavior by affecting different cognitive processes, for example by activating a specific mindset or by changing the perception of the self or of others, or by changing the construal of the situation they are in (Wheeler & DeMarree, 2009; Wheeler & Petty, 2001). For example, when people were exposed to business objects (e.g., boardroom tables and briefcases) which increased the accessibility of the construct of competition, they perceived an ultimatum game as more competitive and kept more money for themselves (i.e., they acted more competitively), particularly, when the situational context was ambiguous (Kay et al., 2004). In related research, Kay and Ross (2003) primed participants with words either related to cooperation or competition in an initial task. In a second task, participants were asked to indicate which name would be more appropriate for the Prisoners Dilemma. When primed with cooperation, participants intended to cooperate more, but also indicated that the name “Community Game” would be a better name for the game. Participants primed with competition, on the other hand, behaved more competitively, and thought that the competitive name “Wall Street Game” was more suitable. Thus, priming may not only affect our behavior directly, but also by altering the perceptions of what constitutes normative behavior in a specific situation.

Similarly, in some situations, priming can affect behavior by changing how we construe other people. As research by Smeesters et al. (2009) shows, this is particularly likely if people focus on their interaction partners and use primed information to disambiguate their perceptions of them. For example, in one study, participants were primed with words related to the concept of unkindness or they were primed with neutral words. Then, they played a reciprocal Dictator Game, in which they could freely divide an amount of money between them and another player. They were also told that they and the other player would play another round of the game in which the other player would be the dictator and decide about the allocation of another amount of money between the two. The game can thus be assumed to induce people to ponder the potential actions of the other player. Priming participants with unkind words led them to perceive their interaction partners to be unkind. Mediation analyses indicated that because of this, they allocated less money to them (and thus behaved more unkindly themselves). In a non-reciprocal one-shot-Dictator Game, the priming had the same effect—participants in the dictator role who were primed with unkindness kept more money for themselves. However, in this case, perceptions of the other person did not mediate the effect. In this variation of the game, the other person cannot reciprocate and, consequently, there is no need to use perceptions of the other as a guide to behavior. Presumably, the prime affected behavior directly or by changing participants’ self-construals. Thus, the perceptual focus induced by different versions of the Dictator Game caused the prime to affect behavior by different routes, even though the behavioral outcome was the same.

In the Ultimatum Game, the same prime can have different effects, depending on whether it is used to disambiguate the perception of one’s interaction partner or not (Smeesters et al., 2009). In one study, some participants were primed with the concept of competition. Subsequently, they were asked to adopt the role of the ultimatum giver who can propose a division of money, which the ultimatum receiver can then either accept or reject. As a consequence of being primed with competition, they behaved more competitively by allocating less money to their interaction partner. In another experimental condition, some people were primed with competition as well. Additionally however, they were also induced to focus their thoughts more strongly on their interaction partner by a subtle priming manipulation. In this case, a different pattern of results emerged. Priming them with competition led participants (who were all ultimatum givers) to believe that the ultimatum receiver was more competitive. In the Ultimatum Game, perceiving the receiver of an ultimatum to be competitive carries the implication that this player is more likely to reject a less than fair offer. In line with this notion, competition-primed participants who focused their thoughts on the other player acted *more cooperatively* in the ultimatum game, because they anticipated the possibility of more competitive behavior of the other.

These results illustrate that besides explicit manipulations of economic situations (e.g., changes in the outcome structure, sequence of games, etc.), complex economic decisions are strongly affected by the way in which contextual changes affect how accessible information is used to construe the situation and the people in it. Thus, preferences and choices can be highly dependent on how the context affects what is on people’s minds and how contextual influences shape the routes by which these thoughts affect behavior.

#### 4.2. Mindsets influence behavior

Another way, in which the context can influence people’s thoughts, is by affecting how they process information, that is, which mindsets they apply to a given task. Mindsets critically influence the procedures that people use to perceive and process subsequent task information, which in turn influence their decisions and preferences. In social comparisons, for example, different informational foci may be activated depending on contextual information such as whether a moderate or extreme comparison standard is made accessible. A moderate athletic standard (Bill Clinton) causes people to search for similarities and focus on what they have in common with the standard in order to judge their own athletic abilities. When, on the other hand, an extremely athletic standard (Michael Jordan) is activated, people are more likely to search for dissimilarities and focus on ways to separate themselves from the standard (Mussweiler, Rüter, & Epstude, 2004b; Mussweiler & Strack, 2000a, 2000b).

Another instance of how a general mindset affects how people process information is put forward by Construal Level Theory (CLT, Trope & Liberman, 2003). CLT is a general framework that explains how the representation of events, and consequently, judgments and decisions about them, is affected by their psychological distance. As alternative to traditional economical models, it offers explanations for important economical phenomena like intertemporal choice and risk taking

behavior in gambles (for a comprehensive discussion of the implications of CLT for economic behavior, see Leiser, Azar, & Hadar, 2008).

CLT posits that, for example, temporal changes in the evaluation of events alter the way in which people mentally construe those events. When people are instructed to think of an event in the distant future (trip to place X in the next month) they construe such an event in terms of more stable, abstract, high level characteristics (enjoying the picturesque village, having a break), whereas when asked to think of an event in the near future (trip to place X tomorrow) they represent the event in terms of contextualized, concrete, low level features (which clothes should I take, how much petrol do I have in my car). In the distant future, people are more likely to think of the desirability of the outcome (why). In the near future, however, they are more likely to think about the feasibility of the outcome (how) (Liberman & Trope, 1998). As a consequence, higher temporal distance is associated with preferences that reflect higher level construals. This basic phenomenon can explain a variety of temporal effects on economic decisions (Leiser et al., 2008; Trope & Liberman, 2003).

For example, Sagristano, Trope, and Liberman (2002) posited and found that differences in how an event is construed have important consequences for people's preferences in uncontrollable gambles. Consistent with CLT they argued that in gambles, payoffs represent the desirability of the outcome and that this information weighs more heavily in the distant future. Probabilities, on the other hand, represent the feasibility of attaining the payoff and thus weigh more heavily in the near future. In line with these theoretical considerations, empirical results demonstrate that indeed in the distant future people preferred (and bid more for) gambles that had a high payoff but a low probability, whereas in the near future, gambles with low payoffs but high probabilities were preferred. These results held even when the exact probabilities of winning were unknown (card game, raffle). Prospect theory (Kahneman & Tversky, 1979) posits that people overweigh outcomes that are certain (high probability), relative to outcomes that are relatively probable. These results demonstrate, however, that this is only the case when people think of the near future. In the distant future, outcomes become more important in deciding which gamble to choose, independent of probability. Thus, construing the task at hand in an abstract, higher level changes the preferences that would be predicted by one of the most influential models in research on economic behavior.

## 5. Summary and conclusion

In this paper we have advocated a shift from descriptive to process-focused research on economic behavior. To portray the benefits of a social-cognitive approach that centers on the mental processes which connect a situation with behavioral outcomes, we provided several examples of diverse research that has adopted such an approach. These examples show that process matters. More specifically, similar effects can be caused by very different psychological processes, the same process can be responsible for different phenomena, and contextual influences can have dramatic effects on how people process information. Admittedly, social cognition fails to offer a general and unifying theory of economic behavior. Nevertheless, we are convinced that adopting a social-cognitive process view can greatly enhance our understanding of phenomena in economic behavior, offers the potential of theoretical and empirical integration, holds novel predictions, and may, eventually, help to change economic behavior with greater precision.

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