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Free will, temptation, and self-control: We must believe in free will, we have no choice (Isaac B. Singer)

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Abstract

Baumeister, Sparks, Stillman, and Vohs (2007) sketch a theory of free will as the human ability to exert self-control. Self-control can produce goal-directed behavior, which free will conceptualized as random behavior cannot. We question whether consumer psychology can shed light on the ontological question of whether free will exists. We suggest that it is more fruitful for consumer psychology to examine consumers' belief in free will. Specifically, we propose that this belief arises from consumers' phenomenological experience of exercising self-control in the face of moral or intertemporal conflicts of will. Based on extant literature in philosophy, psychology, and economics, we offer both a narrower conceptualization of the nature of self-control problems and a more general conceptualization of self-control strategies, involving not only willpower but also precommitment. We conclude with a discussion of the consequences of consumers' belief in free will.

When Adam and Eve succumbed to the serpent's temptation to eat the fruit of the tree of knowledge of good and evil, thus committing the original sin, they acquired two things, consciousness of good and evil and responsibility for choosing among them. Both consciousness and responsibility imply free will, with which God had endowed Adam and Eve. So the existence of free will has been linked to consciousness and to the ability to resist temptation from the earliest moments of Judaeo-Christian tradition and is also reflected in most other religious beliefs about man's place in the world. Baumeister, Sparks, Stillman, and Vohs (2008 this issue, hereafter BSSV) sketch a theory of free will that closely resembles this Judaeo-Christian conception of free will. Specifically, BSSV suggest that free will represents an "evolutionary adaptation" that enables "human beings to behave in self-controlled and rationally intelligent ways" (p. 10), a characterization that reflects responsibility and consciousness. BSSV derive the notion of free will from empirical evidence of conscious, deliberative (System 2) choice processes and of people's attempts to control their automatic (System 1) impulses (e.g., Kahneman & Frederick, 2002; Strack, Werth, & Deutsch, 2006).

We question whether such empirical evidence has any implications for whether free will really exists from an ontological point of view. Religion or any other system of ethical beliefs with a focus on moral choices may necessitate the existence of free will. Philosophy, however, has been characterized by raging debates about the existence of free will for more than 2,000 years. We do not believe that (consumer) psychology as an empirical social science can shed light on the question of whether free will exists and hence relegate this question to where it came from, to ontology. We do so by invoking the contrast between free will and determinism. Originating from Leibniz's principle of sufficient reason, causal determinism in philosophy and physics posits that a specific set of antecedents necessitates one and only one set of consequences, although no human being (or machine) may have the requisite skills to analyze the contingency that is ultimately based on complex laws of nature (Earman, 1986; Laplace, 1814; Vihvelin, 2003), laws such as biochemical principles that govern neurological

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activity.[1] Thus, the notion of causal determinism precludes the operation of free will (Clarke, 1995; O'Connor, 1995).

Rather than taking sides in an ontological debate to (dis) prove the existence of free will, we believe it is more fruitful for consumer psychologists to focus on the belief in free will, on its origins, and on its effects on consumer behavior. So in contrast to BSSV, we prefer to decouple the ontological question (what do we know?) of whether free will exists from the epistemological question (how do we know it?) of whether and why human beings (i.e., consumers) believe in its existence. We broadly agree with BSSV that the belief in free will is rooted in consumers' phenomenological experience of consciousness, preferences and trade-offs, and willpower and self-control. Our central thesis, however, is more circumspect—the antecedents of the belief in free will lie specifically in consumers' experience of willpower and precommitment in the face of temptation. Believing in free will provides consumers with essential benefits—if the choice between good and evil is left up to us, then we are free to choose virtue and to hope for redemption or, in terms more suited to a materialistic consumer society, for a better world. Hence, the notion of free will allows us to work for, and anticipate, a better life and greater happiness. It is needed to experience accomplishment, autonomy, dignity, and even love and friendship (Kane, 1996; Clarke, 2003). Finally, belief in free will and its concomitant sense of self-efficacy may even have important implications for organizing economic systems and redistribution in society (Alesina & Angeletos, 2005).

Philosophical underpinnings: free will and (in)determinism

BSSV note that many philosophers now regard free will as compatible with determinism, yet many scientists and psychologists find the two incompatible. In particular, to study behavior scientifically, empirical psychologists assume that it is fully caused, as opposed to freely willed by the individual, conjuring up echoes of behaviorist conditioning. Without causation, the scientific study of behavior would be implausible. So the scientific assumption of causation (i.e., of causal determinism) leaves no room for the operation of free will in empirical psychology. Causal determinism means that every event is determined by antecedent conditions together with the laws of nature. If determinism is true, then we do not have free will. The philosophical problem of free will and determinism is the problem of understanding how, if at all, the (scientific) truth of determinism is compatible with the truth of our commonsense belief that we have free will (Vihvelin, 2003).

To address this problem, philosophers have proposed "compatibilist" and "incompatibilist" theories of free will. Compatibilist theories maintain that ontological determinism is compatible with the notion of *freedom of action*. Incompatibilist theories regard determinism and *freedom of will* as incompatible; free will requires indeterminacy. Yet the indeterminate free will in these incompatibilist theories produces goal-directed behavior. In other words, assuming indeterminacy of the will does not imply that behavior is random but rather allows it to be purposeful (for overviews of incompatibilist theories of free will, see Clarke, 2005; Kane, 2002; O'Connor, 2006).

For example, Kane (1996) suggested that those choices are most relevant to our autonomy that involve exercising our will as part of the deliberation process. These are choices that involve a conflict of will, where our duty or long-term self-interest competes with a more immediate desire. Struggling to prioritize our values, the possible outcomes of our choices are *indeterminate*: "At each stage of the struggle, the possible outcomes have no specific objective probability of occurring. This indeterminacy, Kane believes, is essential to freedom of will" (O'Connor, 2006). We propose that it is the phenomenological experience of this indeterminacy in conflicts of will that leads consumers to believe in free will.

Similar to philosophy, the challenge for empirical (consumer) psychology is to square its scientific assumption of causal determinism with this phenomenological experience of free will. Empirical evidence of deliberative System 2 processing does not mean that a particular set of psychological antecedents allows consumers to pursue more than one particular course of action. So the empirical evidence that is obtained under the scientific assumption of causal determinism cannot be taken as evidence of the existence of free will, except from an incompatibilist perspective. Perhaps this is why BSSV refrain from positing extremes of either full determinacy or full indeterminacy of behavior by stating that "people experience some of their actions as freer than others, and they make similar distinctions while perceiving the actions of others." (p. 6)

However, this conceptualization of *experienced freedom of action* seems to confuse freedom of action with freedom of will and belief in free will with the ontological status of free will (Bargh, 2007, emphasizes the necessity for any theory of free will to make these distinctions; cf. also O'Connor, 2006). The *experienced* continuum from completely determined behavior to total freedom describes how free people *perceive actions* to be. However, the continuum does not apply to *freedom of will*. Suppose, for example, that an action was produced under full deliberation and absence of external constraints (e.g., time pressure). The action would be experienced as free. However, humans are complex biological and neurological apparatuses subject to natural laws and thus could plausibly be seen as having no freedom of choosing among possible behaviors (cf. Bechara, Tranel, Damasio, & Damasio, 1996). Will is either indeterminate (but not random) or determinate, there is no continuum. Basing a theory of free will on the experience continuum does not help BSSV avoid the "metaphysical and epistemological pitfalls" (p. 6) in characterizing behavior as either completely determinate or indeterminate.

BSSV's theory of free will relies on the concept of ego depletion and characterizes a broad set of conditions under

[1] However, ontological determinism is not, as it is often portrayed, a prerequisite for the scientific endeavor. For example, in quantum physics, the outcome of measuring the momentum of an electron that is in a state of superposition is indeterminate; that is, each measurement outcome is equiprobable (Sklar, 1992). Among physicists, this indeterminism is widely accepted as ontological.

which behavior originates from deliberative, conscious processing. Yet these conditions do not seem to provide sufficient insight into the nature of free will. A major problem with conceptualizing free will as conscious, deliberative, System 2 behavior is that social psychology has produced an abundance of findings that show how deliberative processing is systematically influenced by external factors outside the decision maker's awareness. Bargh (1997) argues that human perception, evaluations, attitudes, and goals are influenced by external stimuli which largely control our behavior outside our awareness (see also, e.g., Dijksterhuis, Smith, van Baaren, & Wigboldus, 2005). For example, participants who are primed with an achievement goal perform better than those who are not (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Troetsche, 2001). Likewise, participants primed with a cooperation goal replenish a commonly held resource more readily than nonprimed participants. Moreover, even higher mental processes involved in social interaction, judgment, and goal structures can originate from nonconscious automatic processing (Bargh & Ferguson, 2000). For instance, Ariely, Loewenstein, and Prelec (2003) showed that initial valuations of products and simple hedonic experiences are driven by arbitrary anchors such as a person's social security number. Because subsequent valuations were coherent, an illusion of stable underlying preferences was generated. Because people are not aware of these nonconscious, automatic processes, they attribute their behavior to those aspects of reality that they are aware of. Reasons for behavior are thus post hoc rationalizations. Bargh (1997) argues that the consciousness of these attributions provides a necessary feeling of stability and control and thus is adaptive, but at the ontological level, conscious System 2 processing is not sufficient to prove free will (Bargh, 2007).[2] Experienced freedom of will tells us little about whether we have free will or not.

Our discussion suggests that the ontological status of indeterminacy and free will is not resolved, and consumer psychology as an empirical social science may not be able to contribute to the ontological debate. Instead, we propose that the relevance of indeterminacy to consumer behavior lies in allowing consumers to believe in free will, as captured by Isaac B. Singer's famous quote: "We must belief in free will. We have no choice." From an ontological standpoint, we are not sure whether BSSV's theory of free will provides new insights into the nature of free will.

Antecedents of belief in free will: self-control

Consumers' belief in free will reflects what philosophers have called preferences among preferences (e.g., Elster, 1984; Frankfurt, 1971; Jeffrey, 1974). As human beings, we have the unique ability to reflect upon our preferences. What suggests to us that we have free will is not that we are aware of our preferences (which economists assume to be exogenous and which psychologists often derive from System 1 impulses) and that we can make reasoned trade-offs between them (System 2 processing, sometimes under the influence of System 1); in fact, animals, to which human beings do not accord free will, make trade-offs, exhibit goal-directed behavior, and solve problems just like us (e.g., Köhler, 1925). Rather, it is the fact that we can evaluate our preferences and act according to these evaluations. For instance, imagine a smoker who, when offered a cigarette, prefers to smoke that cigarette over not smoking it. Despite wanting to give in to the impulsive smoking preference, the person may prefer not to have that preference for smoking and may therefore act to mitigate the smoking preference. Psychologists (e.g., Ainslie, 1975) and economists (e.g., Thaler & Shefrin, 1981) have described such preferences over preferences using the analogy of multiple selves, such that higher order selves control the behavior of lower order selves.

BSSV distinguish between System 1 (automatic) and System 2 (controlled) processing and link their conception of free will to System 2 processing. However, as the System 1/System 2 conceptualization lumps together the dichotomies affective/automatic and cognitive/controlled, the possibility that affective processing can be an instance of free will is ignored. BSSV give the example of consumers who refrain from short-term indulgences for a variety of reasons (i.e., to keep to their monthly budgets for instance) and infer that these consumers have free will (p. 8). But suppose that these very consumers feel bad and *want* to feel better. Research has shown that people sometimes deliberately give in to their short-term urges (they eat fattening snacks, seek immediate gratification, or procrastinate) to feel better (Tice, Bratslavsky, & Baumeister, 2001). Indulging may thus also result from willful, strategic choice (e.g., Kivetz & Simonson, 2002). This suggests that the multiple-selves analogy may be more appropriate in capturing the consumer experience of exercising free will in the face of conflicts of will.

In general, we concur with BSSV that consumers' belief in free will arises from the conscious experience of being tempted by an impulse (System 1) yet not wanting to give in to the temptation and of implementing impulse control (System 2). BSSV apply such impulse control to a wide array of general response conflicts and describe it as depleting a cognitive resource, or as ego-depleting. Although we agree with BSSV on the general point, we build on much extant research on the strategic nature of self-control to suggest that both a more specific view of self-control problems and a more general conceptualization of self-control strategies are needed.

What are self-control problems?

We build on Kane's (1996) view that the indeterminacy of responses to a conflict of will that involves one's duty or long-term self-interest on the one hand and an opposing short-term impulse on the other is essential to (experienced) freedom of will. Accordingly, self-control problems are response conflicts that involve violations of moral norms and/or self-interest. This view of self-control problems is, of course, fundamentally embedded in the story of the original sin, it is echoed by

[2] On the other hand, do demonstrations of automaticity in everyday life prove that there is no free will? Not necessarily. Even Libet (2002) suggested that we might retain the ability to *veto* actions that are initiated by nonconscious psychological structures. Consistent with this view, making participants aware of the potential influence that a stimulus might have is often sufficient to eliminate such nonconscious influences and de-automate behavior.

Ulysses's temptation to expose himself to the sirens' singing, and it also characterizes most research on the topic in modern economics and psychology and in psychoanalysis (for excellent overviews, see Loewenstein & Elster, 1992; Loewenstein, Read, & Baumeister, 2003; also, e.g., Ainslie, 1975; Hoch & Loewenstein, 1991; Laibson, 1997; O'Donoghue & Rabin, 1999; Strotz, 1956; Wertenbroch, 1998).

BSSV characterize self-control problems much more generally, explicitly using the terms self-control and self-regulation interchangeably. To illustrate, research on ego depletion often employs the Stroop task to show that performing one self-regulation task leads to subsequent decrements in self-control, thus providing evidence of depletion (e.g., Gailliot et al., 2007; Wallace & Baumeister, 2002). Yet the Stroop task is not a self-control problem as it does not involve moral conflict and does not affect a person's self-interest in any way. Tasks that involve low-level response conflicts (e.g., Stroop tasks, trying not to think of white bears, or even trying to control neurophysiological reflexes) are similar to making trade-offs among attributes when choosing job offers, apartments, or mobile phone providers in that they all involve conflict that has to be resolved by invoking an executive control function embedded in System 2. In line with much of the extant literature, we prefer to refer to such executive control of response conflicts as self-regulation (Carver & Scheier, 1981; Norman & Shallice, 1986; Scheier & Carver, 1988).

In contrast, we reserve the term self-control only for those specific response conflicts (1) that involve intertemporal and/or moral conflict and (2) that consumers would invariably resolve in favor of their short-term impulses in the absence of self-control. These response conflicts are typically described by hyperbolic discounting (e.g., Ainslie, 1975; Frederick, Loewenstein, & O'Donoghue, 2001; Soman et al., 2005) and, at least partially, have been attributed to visceral factors (Loewenstein, 1996). This much narrower conceptualization has the advantage of closely reflecting both the bulk of the social science literature on self-control problems over the last two centuries and most people's intuitive understanding of self-control problems as shaped by the fundamental religious and cultural narratives of humankind (e.g., Bhagavad Gita, Thora, Odyssey, Bible, Koran). It is the latter feature that is important in the context of belief in free will. As we have seen, Kane's (1996) notion of free will embodies the story of the original sin with its fundamental emphasis on moral conflict and temptation versus long-term self-interest. Loewenstein's (1994) analysis of curiosity in terms of time inconsistency provides an interesting and a telling illustration of the structural similarity between the original sin (giving in to the temptation to acquire knowledge) and the modern-day analyses of dynamic inconsistency.

What are self-control strategies?

Willpower and ego depletion

BSSV conceive of self-control strategies as those that require a depletable resource. In the context of self-control problems, this resource is perhaps best referred to as willpower (Hoch & Loewenstein, 1991). In the past decade, dozens of studies have documented the so-called ego-depletion effect (for a review, see Vohs & Baumeister, 2004). Yet the resource conceptualization of ego-depletion effects continues to evolve. BSSV themselves cite a number of studies that demonstrate how depletion effects can be overcome through motivation to help others, belief in effort and monetary incentives (Muraven & Slessareva, 2003), implementation intentions (Webb & Sheeran, 2003), thinking about one's close relationships (Stillman, Tice, & Baumeister, 2007), humor (Tice, Baumeister, Shmueli, & Muraven, 2007), and thinking about one's life values (Schmeichel & Vohs, 2007). Moreover, recent research suggests that depletion effects seem to critically depend on the dissimilarity of the control strategies in two sequential self-control situations. Depletion effects were observed if the control strategies were dissimilar but reversed (i.e., self-control improved) if the control strategies were similar (Dewitte, Bruyneel, & Geyskens, 2006). The authors suggested that the recruitment of control strategies is a gradual process characterized by a degree of inertia, and that this inertia can explain depletion effects. Because of difficulties switching between control strategies, performance at a task involving different control strategies than a previous task will suffer. Taken together, those findings seem to cast doubt on whether exerting self-control really depletes a specific self-control resource.

Relatedly, BSSV cite the findings of Shiv and Fedorikhin (1999) as evidence of resource depletion and impaired self-control. Shiv and Fedorikhin, however, manipulated cognitive load rather than depletion in their studies (keeping in mind a seven digit number while making choices that required self-control). Cognitively loading participants has been a popular means to reduce cognitive capacity in the literature on (consumer) decision making, resulting in similar effects as depletion (e.g., Dhar, Nowlis, & Sherman, 2000; Drolet & Luce, 2004). Cognitive load puts a constraint on working memory and processing capacity, but it is not clear whether it depletes a resource. For example, most cognitive load manipulations in the literature have not been applied to self-control problems. This raises the issue of whether depletion is really self-control specific, or whether it describes a more general form of mental fatigue. Researchers have demonstrated depletion for behaviors as diverse as thought suppression (Muraven, Tice, & Baumeister, 1998), emotion control (Vohs & Heatherton, 2000), response inhibition (Wallace & Baumeister, 2002), intellectual performance (Schmeichel, Vohs, & Baumeister, 2003), self-presentation (Vohs, Baumeister, & Ciarocco, 2005), and active choice making (Bruyneel, Dewitte, Vohs, & Warlop, 2006). The depletion effects in these tasks do not seem to involve Kane's (1996) moral or intertemporal *self-control* conflicts that are essential to the experience of free will.

Precommitment

Although BSSV focus on solving self-control problems by (ego) depleting willpower, it is important to recognize that much research on self-control has examined precommitment as a key self-control strategy (e.g., Ainslie, 1975; Ariely &

Wertenbroch, 2002; Gul & Pesendorfer, 2001; Schelling, 1984; Thaler & Shefrin, 1981; Trope & Fishbach, 2000; Wertenbroch, 1998, 2003). Precommitment means that a consumer who foresees being tempted by a particular stimulus in the future takes measures in the present that will prevent him or her from giving in to the future temptation. We propose that this strategic foresight allows consumers to believe in free will—they make plans for curbing anticipated future conflicts of will by self-imposing costly constraints at a time when temptation has not overcome them yet.

Ulysses's strategy of tying himself to the mast to hear the sirens sing without being able to give in to the temptation to steer his ship toward them is probably the first example on record. In more recent years, other examples have abounded. Much of this work has been theoretical (e.g., Ainslie, 1975; Gul & Pesendorfer, 2001; Thaler & Shefrin, 1981). For instance, Schelling (1984) describes how consumers who are afraid of being tempted to hit the snooze button when their alarm clock rings in the morning precommit to not being able to give in to that temptation by placing the alarm clock at the other side of the bedroom the night before, forcing themselves to get out of bed to turn off the alarm in the morning. But beginning with Wertenbroch (1998), empirical evidence of precommitment has been mounting as well in recent years (e.g., DellaVigna & Malmendier, 2004; Trope & Fishbach, 2000). For example, Wertenbroch (1998) showed that consumers with a need for self-control prefer to buy vice products in smaller quantities than comparable virtue products, thus rationing their vice consumption. Importantly, these consumers forgo quantity discounts for the vice products, paying a small-size premium that can be conceived of as a self-control premium and that can be translated into a smaller price elasticity of demand for vices than for virtues. In another demonstration of costly precommitment strategies, Ariely and Wertenbroch (2002) found that consumers self-impose costly deadlines to mitigate their impulses to procrastinate on important yet unpleasant tasks, and recent research by Ashraf, Karlan, and Yin (2006) looked at bank customers who were offered voluntary participation in a precommitment savings account. Participants could withdraw their money only after a specific date or once they had reached a prespecified savings goal. After 12 months, average savings balances were 81% higher in the precommitment accounts than in regular accounts in a control group.

In sum, we propose that it is not only the effortful exercise of willpower but also this willful and strategic precommitment in the face of moral or intertemporal conflicts of will that provides consumers with the phenomenological experience of exercising free will. It is in these conflicts that consumers experience the indeterminacy that allows them to feel that they are the masters of their own destiny.

Consequences of belief in free will: well-being and control

Our earlier discussion of incompatibilist theories of free will pointed to the ontological relationship between free will and indeterminacy. From a phenomenological perspective, we suggest that belief in free will goes hand in hand with belief in indeterminacy. Recent research by Vosgerau, Wertenbroch, and Carmon (2006) explored the concept of indeterminacy in the context of consumer preferences for watching events live on TV. Controlling for a number of other factors, the authors found that these preferences arise when consumers believe the broadcast event to be indeterminate, that is, when they believe the event is unfolding in ways that have not been decided ex ante. The indeterminacy of an experience makes it more exciting and enjoyable and hence more preferable. Consumers like indeterminacy.

We propose that it is the experienced indeterminacy of alternative decision outcomes in situations, in which consumers are faced with conflicts of will and to which they apply willpower and precommitment, that provides them with hope for a better life and with the motivation to strive for it. Belief in free will is functional; without it, consumers would not be able to feel that they can control their environment, with devastating consequences for psychological well-being as illustrated by research on learned helplessness (Petersen, Maier, & Seligman, 1995). Consequently, consumers report wanting to have choices, and many cannot even imagine not preferring to have a choice (Iyengar & Lepper, 1999). The ability to choose also increases intrinsic motivation (Deci & Ryan, 1985). The preference for freely choosing is so strong that choices are preferred even when the control that they offer is illusionary, as is evidenced by the large body of research on illusion of control (Thompson, Armstrong, & Thomas, 1998). The belief in a free will provides consumers with a feeling of stability and control (Bargh, 1997), and it enables them to define, and act with, moral responsibility. As Kane (1996) suggested, it is essential to striving for, and appreciating, achievement, autonomy, dignity, love, and friendship.

An interesting field for future research is therefore to empirically explore the consequences of believing in free will in more detail. As some initial studies referenced by BSSV suggest, believing in free will can lead to less aggressive and more helpful behavior (Baumeister, Masicampo, & DeWall, 2006), and disbelief in free will can increase cheating (Vohs & Schooler, 2007). Yet we can also imagine situations in which belief in free will may have less favorable consequences. For example, freedom of choice does not always make consumers happier. Although consumers may believe ex ante that more choice is better, resulting postchoice satisfaction and happiness are often greater in restricted choice situations (Iyengar & Lepper, 2000). Moreover, believing in determinism might reduce negative consequences of negative emotions such as anger, frustration, rage, jealousy, and envy, leading consumers to be more accepting of the circumstances that bring these about.

In conclusion, belief in free will is an exciting and yet to be fully explored phenomenon, both for consumer psychology and for psychology in general. We hope that our discussion of BSSV's thought-provoking article has highlighted some interesting facets of both the origins as well as the consequences of this phenomenon.

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