

Doing the Right Thing: Determinism, Moral Responsibility, and Agency

Shirley Matile Ogletree

Texas State University

Department of Psychology

601 University Drive, San Marcos, TX 78666-4616 USA.

Abstract

The relations among free will—determinism, moral responsibility, and agency are considered. A deterministic perspective is defined here as an individual's having only one possible outcome, rather than multiple outcomes, of a decision-making situation; in other words, the person could not have done otherwise. This perspective does not negate moral responsibility or the phenomenological experience of choosing. Even though only one outcome is possible in a decision-making situation, from the perspective of the individual choosing, this ultimate outcome is unknown during the deliberative process. Recent psychological research related to free will, determinism, moral responsibility, and agency is reviewed and critiqued. Free will assessments have been confounded with items assessing moral responsibility and self-control; similarly manipulations to decrease free will also may have decreased agency. Disentangling determinism, moral responsibility, and agency in psychological research would help clarify relations among these concepts in future research.

Keywords: determinism, free will, agency, choice

1. Human Choice: Free Will versus Determinism

Scholars from multiple disciplines have been concerned with the nature of choice, whether or not choice is “determined” or “free.” Philosophers have differentiated between “hard” determinism (Ayer, 1954) and “soft” determinism (Stace, 1952). Although in both forms of determinism, one’s motivations as well as one’s actions are ultimately determined, according to soft determinism, in the absence of an immediately pressing circumstance or agent, such as a gun to one’s head, choices can be said to be “free.”

Psychologists and others have also focused on what is necessary for an action to be considered freely chosen. Hodgson (2005), arguing for free will, describes propositions necessary for free will and indicates that a minimum of two possible outcomes are necessary with the resulting choice being non-random. Others, including Skinner (1972) and more recently Wegner (2004), have argued that our actions are determined.

The primary distinction between free will and determinism used here is based on the number of outcomes possible in any given decision-making experience. Free will implies that more than one nonrandom option is possible, that the individual “could have done otherwise.” Determinism, on the other hand, is defined as only one possible nonrandom outcome of any choice, given a person’s genes, past/present environments, and any gene-environmental interactions. Even though only one ultimate outcome is possible, however, the individual choosing does not know what that outcome is at the time they are deliberating. The phenomenological experience is one of choosing among multiple options. The free will—determinism issue is important because of implications related to the nature of choice. Whether or not the individual can be held morally responsible without free will is one of the most frequently debated topics related to determinism. Similarly, agency has often been presumed to necessitate free will. These concepts will be explored next.

2. Implications Related to the Nature of Choice

2.1. Moral responsibility

Some philosophers (Kane, 2002, 2009) have argued that determinism and moral responsibility are incompatible. How can one be held responsible, in the sense of what is just or fair, for his/her actions if no other outcome is possible than the one chosen? Smilansky (2005), with some concern, describes determinism as “the great eraser” (p. 259), reducing individual guilt as well as negative judgments of others.

Rather than using fairness as the criteria for consequences and hence moral responsibility, Skinner's (1948, 1972) perspective was that positive outcomes for the individual and society serve as sufficient justification. Fairness becomes a lesser concern compared to what ultimately benefits the individual and society.

Does the lay person perceive a necessary connection between moral responsibility and free will? In one study (Nahmias, 2006) college students read one of two scenarios about a hypothetical planet Erta, in which the behaviors of Ertans were "completely caused"; participants were more likely to believe that Ertans deserved credit or blame for actions if the scenario described "thoughts, desires, and plans" (77%) as controlling decisions rather than decisions controlled by "chemical reactions and neurological processes occurring in their brains" (19%; p. 231). Moreover, only 18% of participants reading the neurological description believed Ertans had free will whereas 72% of those reading the thoughts and desires version believed Ertans had free will. If similar logic is applied to humans, one might wonder about the physiological basis of "thoughts, desires and plans" or if these are assumed to be part of a spirit that is a separate entity, essentially a dualistic perspective.

Although advances in neuroscience are providing more information about the biological mechanisms ultimately leading to decisions and behaviors, thus challenging a free will perspective, Roskies (2006) suggests that fears regarding challenges to moral responsibility are unwarranted and that our views will change and adjust along with scientific understanding. Moral responsibility as defined here is that positive consequences following desirable behavior and negative consequences following undesirable behavior are justified, but not necessarily fair. As Skinner (1948, 1972) argued, consequences help mold the individual to be successful in the society in which he or she lives.

2.2. Agency

Albert Bandura (2006) defined human agency as intentionally influencing "one's functioning and life circumstances" (p. 164), based on the four key properties of intentionality, forethought, self-reactiveness (which includes self-regulation), and self-reflectiveness (which includes evaluating one's thoughts and functioning). Agency, then, from Bandura's perspective means that the individual is consciously making decisions that involve awareness at a metacognitive level, the individual is aware of options and considering consequences, intentionally choosing an option.

According to MacIntyre (1999), people need to view themselves as agents as they lead their everyday lives before they can be held fully morally responsible. The deliberative act of choosing has been regarded by some philosophers as a hallmark of free will (Bernstein, 2005; Coffman & Warfield, 2005; Frankfurt, 1971; Kane, 2002; Watson, 1987).

The folk perspective also tends to link agency and free will. Monroe and Malle (2010), when analyzing college students' open-ended responses to "what it means to have free will" (p. 214), reported that 65% of the answers mentioned "ability to make a decision/choice" (p. 215). In a similar vein, Stillman (Stillman, Baumeister, & Mele, 2011) compared undergraduates' descriptions of actions that were regarded as either the result of free will or actions that were unfree. Actions that were regarded as the result of free will were more likely to be related to deliberation and reflection and were more likely to agree with the moral beliefs of participants.

Can a person view decision-making outcomes as determined and still deliberately choose? Horgan and Timmons (2011) argue that the compatibilist position related to determinism and agency should be the default hypothesis since it is simpler, less extravagant, than a libertarian position. Phenomenologically, a person experiences a deliberative process in any choice situation and, during the process of making a decision, perceives more than one outcome as possible. However, the perception of more than one option during the deliberative process does not preclude determinism. The ultimate outcome of a decision-making process can be determined, meaning only one outcome is possible, but the individual may still consider multiple options, weighing pros and cons against each other while deciding. The agentic individual, from a deterministic perspective, weighs costs and benefits of different action choices when making an important decision, even though ultimately only one outcome is possible. Even the decision-making process is determined, the extent of deliberation, the options considered, and the potential influences (both environmental and biological) that might affect such a decision.

According to Wegner, "a causal agent moves or acts apparently on its own, in the pursuit of some future state," (2004, p. 652). Even though the ultimate choice is determined by environmental and genetic factors, the individual is still deciding on a direction, consciously choosing a path to follow.

Wegner (2004) discusses a hypothetical “free willer,” a black box unit somewhere in the brain that is completely independent of environmental and biological influences. If the “free willer” is not influenced by one’s genes or environment, what would it be based on? Some indeterminacy? Hodgson (2005) specifies that a free will choice needs to be non-random for it to be considered “free will.” A determinist perspective of agency includes the recognition that individuals make choices and that the decision-making process is very important because individuals impact their future with these choices. However, unlike those who believe in free will, the determinist believes that there is only one outcome possible in any given decision-making process. The argument here is that individuals subscribing to either a free will or deterministic perspective can regard themselves as conscious agents who are having the phenomenological experience of making impactful decisions regarding their lives. The experience is one of making a choice even if only one outcome is possible in the end.

Agency, as used here, is similar to elements of Bandura’s (2006) understanding of human agency. Simplifying for the purpose of this paper, agency is defined as requiring two components, a) an awareness of options as the individual intentionally reflects upon and evaluates possible life pathways/outcomes, and b) the perception that the decision-making process is important. Unfortunately some of the psychological research related to free will, determinism, moral responsibility, and agency has assumed an incompatibilist perspective, based on the assumption that determinism precludes moral responsibility and agency. The following sections will consider this research and critique the assumption that determinism is incompatible with moral responsibility and agency.

3. Psychological Research Related to Free Will, Moral Responsibility, and Agency

3.1. Research describing consequences/correlates of free will beliefs

Recent articles published in psychological journals have been related to the social and moral consequences of believing in free will. One line of research has emphasized the negative individual and societal consequences for a diminished belief in free will. Vohs and Schooler (2008) found that participants who read paragraphs minimizing choice, portraying free will as an illusion, were more likely to cheat than control participants and scored lower on a measure of free will.

A variety of other negative effects also have been noted. For example, having student participants read “determinism” statements, versus “free will” statements, decreased helping summed across six hypothetical helping scenarios (Experiment 1) and increased aggressive behavior, measured by the amount of hot sauce added to food prepared for a partner who disliked spicy food (Experiment 3; Baumeister, Masicampo, & DeWall, 2009). In the second experiment reported, indicated willingness to donate hours to help a woman who was responsible for caring for her siblings was positively related to scores on a free will scale. Stillman and colleagues (Stillman, Baumeister, Vohs, Lambert, Fincham, & Brewer, 2010) reported a positive correlation among undergraduates between a free will measure and their own expected career performance and success. In a second study, work performance ratings given by supervisors of day laborers were positively related to laborers’ belief in free will.

One mechanism assumed to be responsible for some of the negative consequences of decreasing the belief in free will is the impact on agency, both in conscious awareness and in unconscious processing. Aarts and van den Bos (2011) manipulated agency in their first experiment by participants voluntarily pressing a key to produce a sound when they chose to do so, compared to control trials. Based on a three-way interaction in the time of judgment error, Aarts and van den Bos (2011) reported that participants who believed strongly in free will were especially likely to make a negative judgment error anticipating the tone sounding in the agency condition, compared to the non-agency (key press not causing a tone) condition. In their second experiment Aarts and van den Bos (2011) examined the effect of unconscious priming on illusory perceptions of agency. Participants who scored a standard deviation above the mean on a free will scale exhibited a significantly stronger subconscious priming effect than those participants scoring a standard deviation below the mean.

Aarts and van den Bos interpret the unconscious priming as suggesting that “people’s view of their ability to cause their own behavior . . . relies on an unconscious authorship process” (p. 536). Using the same manipulation employed by Vohs and Schooler (2008) in their first study, Rigoni and colleagues (Rigoni, Kühn, Sartori, and Brass, 2011), reported that, compared to a control group, participants in the “no-free-will” condition scored lower on a measure of personal free will. In addition, the EEG early response potential in the participants in the “no-free-will” condition was lower than the control group, indicating that the brain processes related to “voluntary motor preparation” may have been affected by the manipulation.

Decreasing the belief in free will may impact brain correlates related to taking action, therefore possibly affecting agency. Even though a number of studies, as just reviewed, have reported negative consequences or correlates of lowered beliefs in free will, Carey and Paulhus (2013) reported negative correlates of stronger beliefs in free will. In a series of three studies free will was associated with punitiveness, authoritarianism, believing in a just world, and in-group loyalty.

In related research (Savani, Stephens, & Markus, 2011) negative interpersonal consequences related to “activating the concept on choice” decreased support among U.S. students for policies that would benefit the greater good (reducing pollution, for example), reduced empathy for those who are disadvantaged, and increased victim blaming. With the possible exception of Savani and colleagues’ (Savani et al., 2011) research, flaws related to the manipulation and measurement of free will/determinism affect the conclusions drawn from these studies. The basic problem, as discussed next, deals with confounding free will-determinism, as differentiated by the number of possible outcomes following deliberation, with moral responsibility, self-control, and agency.

3.2. A critique of free will, moral responsibility, and agency research

Savani and colleagues (Savani et al., 2011) activated choice (without specifying “free” or “determined” choice) in four of five of their studies by having participants watch a video and push a space bar anytime they a) saw someone make a choice (choice activated condition) or b) anytime they saw someone touch something (control condition). This manipulation was not prejudicial in terms of a describing a choice as free (more than one outcome possible) or determined (only one outcome possible); rather, it simply focused the attention of participants in the experimental group on acts of choice. However, other research in this area has confounded a free will/determinism perspective with other constructs.

The Vohs and Schooler (2008) manipulations were also used or adapted by others (Baumeister et al., 2009; Rigoni et al., 2011). In Vohs and Schooler’s first experiment, participants read one of two excerpts from Francis Crick’s *The Astonishing Hypothesis*. In the “anti-free will condition,” students read statements indicating that most scientists and other rational individuals recognized “that actual free will is an illusion” and “that the idea of free will is a side effect of the architecture of the mind” (p. 50). Control participants read an excerpt about consciousness.

Vohs and Schooler’s (2008) second experiment manipulated free-will, determinism, and neutral conditions by having participants read statements like “Avoiding temptation requires that I exert my free will” (p. 51; free will condition), “Ultimately, we are biological computers—designed by evolution, built through genetics, and programmed by the environment” (p. 51; determinism condition), and “Sugar cane and sugar beets are grown in 112 countries” (p. 51; neutral condition).

Although the complete excerpts and statements are not given in the methodological descriptions, confounds related to free will—determinism and agency are likely. The manipulations apparently did not include anything related to the number of possible outcomes of a decision-making process; the most basic distinction between the free will versus deterministic perspective is that with determinism only one outcome is possible whereas in the free will perspective, more than one outcome must be possible.

In Vohs and Schooler’s (2008) first experiment, describing free will as a “side effect of the architecture of the mind” may be the antithesis of an active, choosing process. The metaphor of a biological computer used in the second experiment also seems far from a deliberative, choosing (even if determined) individual. The number of outcomes appears confounded with agency. The assessment of free will/determinism in several of these studies is also an area of concern.

An earlier version of a published free will-determinism scale (FAD-4; Paulhus & Carey, 2011) was used in several studies (Baumeister et al., 2009; Stillman et al., 2010; Vohs & Schooler; 2008), and the final scale, the FAD-PLUS, was used in the Carey and Paulhus (2013) as well as the Aarts and van den Bos (2011) research. In the development of the 27-item published scale (FAD-PLUS), 23 “pro-trait” items from the earlier scale were initially used. Of the seven items loading on the free will factor, five (one slightly reworded) were used in the FAD-4 (Paulhus & Carey, 2011). The final free will subscale included three items related to moral responsibility or blame, “People must take full responsibility for any bad choice they make,” “Criminals are totally responsible for the bad things they do,” and “People are always at fault for their bad behavior” (p. 104).

Three more items dealt with control or overcoming obstacles: “People have complete control over the decisions they make,” “People can overcome any obstacle if they truly want to,” and “Strength of mind can always overcome the body’s desires” (p. 104). The final item, one of the two new items, was “People have complete free will.” None of the seven items included an assessment of one outcome versus more than one outcome to a decision-making process. Instead, these items seem to be primarily assessing moral responsibility or self-control, rather than free will.

As discussed previously and outlined by Skinner (1948, 1972), determinists also believe that people are responsible for their actions and that consequences are justified by positive outcomes for the individual and society. Although Baumeister (2008) has argued that self-control is one of two components of “freedom of action evolved as a new, more sophisticated form of controlling behavior” (p. 18), for a determinist, self control is not a function of some unseen or unknown “free will.” Self-control is the result of nature/nurture determinants. In *Walden Two* Skinner (1948) describes the conditioning of self-control in preschool children.

Related to the faulty conclusion that determinism rules out agency, the argument to the contrary, that agency becomes even more important from a deterministic perspective, could be made. Since one’s choices are determined by the sum total of one’s genes, one’s past environment, the present environment, and interactions among them, any particular choice becomes even more important because the results of that choice become part of one’s past and/or present environment that will permanently impact any future choice. A determinist could believe that individuals make choices and that the decision-making process is very important. However, unlike those who believe in free will, the determinist believes that there is only one outcome possible in any given decision-making process. Since we are in essence creating ourselves with each decision we make, no matter how small or large that decision is, we need to carefully consider each decision. Escher’s (1981) famous “hand drawing a hand” print symbolizes such a dynamic understanding of the deterministic philosophy. In Raskin’s (2012) words in a discussion of determinism and agency, “everything is both *cause* and *caused*” (p. 128).

Similarly, from a philosophical perspective, viewing ourselves as an agent (MacIntyre, 1999) is crucial to being morally responsible. The argument here is that individuals subscribing to either a free will or deterministic perspective can regard themselves as morally responsible agents who are making impactful decisions regarding their lives and the lives of others.

4. Untangling Confounds: Future Research

Crucial to a sense of agency is the perception that we actively choose and are responsible for our decisions. In essence the choosing process itself becomes important in our viewing ourselves as active agents. As previously argued, determinism can be regarded as compatible with both moral responsibility and agency. Any free will manipulation or assessment should therefore not be conflated with moral responsibility and agency. Some of the negative interpersonal and social consequences that have been associated with a deterministic perspective (Baumeister et al., 2009; Stillman et al., 2010; Vohs & Schooler, 2008) may have been due to minimizing the importance of choosing, of the deliberative process. Future research related to agency and free will/determinism needs to disentangle the importance of choice from the free will/determinism dimension.

A careful experiment would counterbalance statements of the importance of choosing with a free will versus determinism perspective in a 2 X 2 design. In other words, a free will perspective emphasizing more than one possible outcome of a decision-making process versus a deterministic perspective emphasizing one outcome of a decision-making process could both be presented as the free will/determinism conditions. One version in each of the free will/determinism conditions could emphasize the importance of the decision-making process while one version could minimize the importance of this process. This would allow for the separation of the free will/deterministic perspective (one versus multiple outcomes possible) versus the importance of choosing, the decision-making process.

4.1. An example of possible research

Possible paragraph manipulations of free will/determinism and high/low importance of choosing are given below:

Free will: The choices that individuals make are the result of their free will and are independent of their genes and environment. An individual can weigh options and consider the outcome of any decision made. Ultimately the individual is free to choose among options, and multiple outcomes are possible. (47 words)

Determinism: The choices that individuals make are determined by their genes, environment, and related interactions. An individual can weigh options and consider the outcome of any decision made. Only one outcome is ultimately possible, however, given who an individual is at the time the decision is made. (46 words)

High importance: Our lives are impacted by the decisions that we make. Therefore, we need to carefully consider the impact of each choice, how we will be affected by the outcome of the decision we make. Each choice we make is important. (40 words)

Low importance: We make many decisions in our lives, and ultimately we cannot know whether any decision we make was the best one we could have made. If we had chosen differently, would we be better off? Each choice is not that important. (41 words)

In summary, to test if and how interpersonal/societal consequences are related to a deterministic versus a free will perspective, assessments or manipulations of free will-determinism should focus on one versus more-than-one choice being caused or not caused by nature/nurture factors. Including items or manipulations related to moral responsibility, self-control, or agency confound the issue at hand. The importance of the deliberative process, an important part of agency, should be considered as a separate dimension.

5. Determinism and Tolerance

Although promoting the importance of the decision-making process (whether from a free will or a deterministic perspective) could increase agency, emphasizing choice could have negative interpersonal consequences, as found by Savani and colleagues (Savani et al., 2011). However, a deterministic view focusing on underlying causes could moderate such negative judgments. Just as understanding more about an individual's personal hardships that lead to an action can decrease blame (Ogletree & Archer, 2011, 2012), understanding that all choices are determined could affect interactions with others. According to Nichols (2007), additional information regarding an individual may interfere with "reactive attitudes" that include "resentment, indignation, guilt, and gratitude which are tied up with blaming and praising others" (p. 410). Langdridge and Butt (2004) also suggested that providing information related to situational and cultural factors could reduce the harshness of personal judgments. For example, Clark (2006) argued that providing jurists with information about terrorist Zacarias Moussauoi's abusive childhood increased sympathy towards him.

Believing that one's choices are "free" may lead to negative judgments of others, if individuals could easily have chosen a different outcome. However, believing that choices are determined, understanding a person's reasons/background resulting in that choice, could promote more tolerance towards others.

6. Conclusion

From a deterministic perspective, one's behaviors, attitudes, and thoughts are ultimately fully shaped by genes, environment, and the interactions between them, leaving only one possible outcome of a decision-making process. However, this does not preclude moral responsibility, self-control, or agency. Simply put, a deterministic perspective means that only one outcome, rather than multiple outcomes, is possible in any given decision a person makes since the outcome is a result of nature/nurture factors impacting the choice. Sauvayre (2005) discusses "psychic determinism" as a variation of soft determinism but ultimately concludes that the person is still in the end reduced to the "biochemical reactions, or computer-like neuronal connections" (p. 147). The tension between the cold, objective view and the subjective, agentic view can be coalesced; they are interconnected and related to each other.

If unconscious, illusory priming can increase perception of agency (Aarts & van den Bos, 2011), we can view the decision-making process as a combination of the more objective, neuroscientific processes as well as our experiential, subjective decision-making process. Even though our own behavior is ultimately caused, we still choose and still impact both ourselves and others with the choices that we make.

Determinism does not negate moral responsibility or agency. Determinists fully recognize that we go through a decision-making process, phenomenologically experiencing making a choice. The argument is that only one outcome is possible. The effort made and the types of factors being considered may be determined, but the process of choosing is still crucial to any outcome. Rather than determinism being a pessimistic, "why bother" approach to choice, determinism could be considered a positive philosophy that promotes choice, with the decision-making process becoming even more important as our past decisions create our future.

References

- Aarts, H., & van den Bos, K. (2011). On the foundations of beliefs in free will: Intentional bidding and unconscious priming in self-agency. *Psychological Science*, 22(4), 532-537.
- Ayer, A. J. (1954). *Philosophical essays*. London: MacMillan.
- Bandura, A. (2006) Toward a psychology of human agency, *Perspectives on Psychological Science*, 1 (2), pp. 164-180.
- Baumeister, R. F. (2008). Free will in scientific psychology, *Perspectives on Psychological Science*, 3 (1), 14-19.
- Baumeister, R. F., Masicampo, E. J., & DeWall, C.N. (2009). Prosocial benefits of feeling free: Disbelief in free will increases aggression and reduces helpfulness. *Personality and Social Psychology Bulletin*, 35, 260-268.
- Bernstein, M. (2005). Can we ever be really, truly, ultimately, free? *Midwest Studies in Philosophy*, 29, 1-2.
- Carey, J. M., & Paulhus, D. L. (2013). Worldview implications of believing in free will and/or determinism: Politics, morality, and punitiveness. *Journal of Personality*, 81, 130-141.
- Clark, T. W. (2006, May). Explaining Moussaoui. June 7, 2006, from <http://www.naturalism.org/moussaoui.htm>
- Coffman, E. J., & Warfield, T. A. (2005). Deliberation and metaphysical freedom. *Midwest Studies in Philosophy*, 29, 25-44.
- Escher, M. C. (1981). 29 master prints. Harry N. Abrams, Inc. Publishers: New York.
- Frankfurt, H. G. (1971). Freedom of the will and the concept of a person. *The Journal of Philosophy*, 68, 5-20.
- Hodgson, D. (2005). A plain person's free will. *Journal of Consciousness Studies*, 12, 3-19.
- Horgan, T., & Timmons, M. (2011) Introspection and the phenomenology of free will: Problems and prospects, *Journal of Consciousness Studies*, 18 (1), pp. 180-205.
- Kane, R. (2002). Introduction: The contours of contemporary free will debates. In R. Kane (Ed.), *The Oxford handbook of free will*, pp. 3-41. Oxford: Oxford University Press.
- Kane, R. (2009). Libertarianism. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*. 144, 35-44. Doi : 10.1007/s11098-009-9365-y
- Langdridge, D., & Butt, T. (2004). The fundamental attribution error: A phenomenological critique. *British Journal of Social Psychology*, 43, 357-369.
- MacIntyre, A. (1999). Social structures and their threats to moral agency. *Philosophy*, 74, 311- 329.
- Monroe, A. E. & Malle, B.F. (2010) From uncaused will to conscious choice: The need to study, not speculate about people's folk concept of free will, *The Review of Philosophy and Psychology*, 1, pp. 211-224.
- Nahmias, E. (2006). Folk fears about freedom and responsibility: Determinism vs. reductionism. *Journal of Cognition and Culture*, 6 (1-2), 215-237.
- Nichols, S. (2007). After incompatibilism: A naturalistic defense of the reactive attitudes. *Philosophical Perspectives*, 21(1), 405-428.
- Ogletree, S. M. & Archer, R. A. (2011). Interpersonal judgments: Moral responsibility and blame. *Ethics and Behavior*, 21, 35-48.
- Ogletree, S. M., & Archer, R. (2012). Pats on the back or pointing the finger: Judgments of praise and blame. *E-Journal of Applied Psychology*, 8(1), 18-24.
- Paulhus, D. L., & Carey, J. M. (2011). The FAD-Plus: Measuring lay beliefs regarding free will and related constructs. *Journal of Personality Assessment*, 93, 96-104.
- Raskin, J. D. (2012). Evolutionary constructivism and humanistic psychology. *Journal of Theoretical and Philosophical Psychology*, 32(2), 119-133.
- Rigoni, D., Kühn, S., Sartori, G., & Brass, M. (2011). Inducing disbelief in free will alters brain correlates of preconscious motor preparation: The brain minds whether we believe in free will or not. *Psychological Science*, 22(5), 613-618.
- Roskies, A. (2006). Neuroscientific challenges to free will and responsibility. *TRENDS in Cognitive Sciences*, 10 (9), 419-423.
- Sauvayre, P. (1995) On the dialectics of agency. *Journal of Theoretical and Philosophical Psychology*, 15 (2), 144-160.
- Savani, K., Stephens, N. M., Markus, H. R. (2011). The unanticipated interpersonal and societal consequences of choice: Victim blaming and reduced support for the public good. *Psychological Science*, 22(6), 795-802.
- Skinner, B. F. (1948). *Walden two*. New York: MacMillan.
- Skinner, B. F. (1972). *Beyond freedom and dignity*. New York: Alfred A. Knopf.
- Smilansky, S. (2005). Free will and respect for persons. *Midwest Studies in Philosophy*, 29, 248-261.
- Stace, W. T. (1952). *Religion and the modern mind*. Philadelphia: Lippincott.
- Stillman, T. F., Baumeister, R. F., & Mele, A. R. (2011). Free will in everyday life: Autobiographical accounts of free and unfree actions. *Philosophical Psychology*, 24 (3), 381-394.
- Stillman, T. F., Baumeister, R. F., Vohs, K. D., Lambert, N. M., Fincham, F. D., & Brewer, L. E. (2010). Personal philosophy and personal achievement: Belief in free will predicts better job performance, *Social Psychological and Personality Science*, 1 (1), 43-50.
- Vohs, K. D., & Schooler, J. W. (2008). The value of believing in free will. *Psychological Science*, 19 (1), 49-54.
- Watson, G. (1987). Free action and free will. *Mind*, 96, 145-72.
- Wegner, D. M. (2004). Précis of the illusion of conscious will. *Behavioral and Brain Sciences*, 27, 649-692.