

1 Introduction: Psychology and Free Will

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People generally act as if they possess free will, and they certainly act as though they believe in their own free will. People don't feel like automatons, and they don't treat one another as they might treat robots. And although people may acknowledge many external and internal factors that help shape their behavior and that of others, it seems that the buck must stop somewhere, and that somewhere is necessarily an important part of each person (whether one calls it a soul, or a personal identity, or a sense of personal responsibility). Humans may not be *totally* responsible for their behavior—if a gun is being held to someone's head and he or she is commanded to take certain actions, most people would agree that the person is not as responsible for those actions were there no gun and no command. In general, however, people implicitly assign a sense of agency, and of free will, to themselves and others.

Looked at closely, however, free will can be difficult to understand or to explain. Psychologists have tended to avoid the topic. As Roediger, Goode, and Zaromb write in their chapter of this book, the term *free will* didn't even merit an entry in the recent eight-volume *Encyclopedia of Psychology*; in fact, it didn't even appear in the index. Sometimes it's like a six-ton elephant sitting in the room, however—a thing very hard to ignore. In recent years, a number of psychologists have tried to solve one or more of the puzzles of free will (because free will raises not one, but many, tough questions). This book looks both at recent experimental and theoretical work directly related to free will and at ways psychologists deal with the philosophical problems long associated with

the question of free will, such as the relationship between determinism and free will.

Does determinism rule out free will? On the surface, at least, it may seem to. But some philosophers have argued that determinism and free will are compatible. The problem may be that our intuitive concepts of free will simply don't make sense. Free will can't really mean that at any moment a person's behavior is totally unpredictable (and therefore entirely unconstrained). Such a universe would be, from psychology's perspective at least, the same as one governed entirely by chance, which is just another way of saying it is not governed at all. For psychology to make any sense, the universe must be, to some degree at least, predictable. A psychology that doesn't accept causes of behavior or the possibility of prediction is no psychology at all.

For those who accept free will as something real—whether that belief is based on determinism or not—how does free will work? What cognitive processes or mental structures underlie volition? What does it mean to choose, and how do people do it? And for those who believe it is an illusion, why does everyone believe in such an illusion? What evidence is there for either position? And is consciousness a requirement for free will? If so, how must we construe consciousness in order to understand free will? If conscious cognition is part of volition, but if (as some claim) that conscious cognition is completely determined by unconscious processes working in the background, does that still constitute conscious control of action? How can a psychology of conscious free will be tested and demonstrated experimentally?

It is the goal of this book to let psychologists from a variety of the discipline's subfields explain their beliefs about free will. Some of these psychologists are doing work that relates very directly to the questions raised by the puzzle of free will. Others do research that seems unrelated to questions about volition, and they therefore may not ordinarily write about free will, but they nonetheless think about it and about how our understanding of free will influences who we are. It has been our goal from the outset to include leading psychologists with a wide range of viewpoints, and we trust that readers will agree we have succeeded at least in doing that.

The question of free will is actually many questions, and the contributors to this volume have tried, in a variety of ways, to answer a variety of questions. We did not start with an outline or an agenda, but instead tried to include psychologists who come at free will from very different perspectives. Sometimes these perspectives are in direct disagreement, whereas in others they are simply addressing different questions. And sometimes there is even agreement.

We have book-ended the 15 chapters by psychologists and cognitive scientists with 2 chapters (2 and 18) that were written by philosophers. In chapter 2, Shaun Nichols suggests what philosophy might ask of psychology about free will. He outlines three distinct dimensions of the problem of free will about which psychology might make substantial contributions: a descriptive

dimension that endeavors to discern the nature of lay views about free will, a substantive dimension that evaluates those lay views in light of what we know about psychological reality, and a prescriptive dimension that suggests how we should act in light of what we find out about the existence of free will. Alfred Mele's summary comes at the end, in chapter 18. In between these philosophical contributions, psychologists and cognitive scientists from various areas have tried to address the question of free will based on their understanding of both the psychological and the philosophical issues they find most significant.

The discussion among the psychologists starts with a chapter by David Myers, whose overview frames some of the key philosophical issues, such as the relationship of determinism and free will, in a way that will surprise some (e.g., "determinism encourages us to action, not resignation" and "determinism does not compel people to act against their will, nor does it deny them their experience of choice and their freedom to shape the future"). He addresses a broad range of questions, such as whether psychological science challenges or affirms free will; can we hold people accountable for their behavior if determinism is true?; and what psychology can say to ideas of free will as encoded in religious traditions. Because his chapter touches on so many topics that will be considered in more detail in the chapters to follow, we thought it would be a good place to start the conversation.

Carol Dweck and Daniel Molden begin their chapter by noting that the "nature of free will is ultimately a philosophical question; whether people *believe* they have free will is a psychological one, and whether people actually have free will is in the terrain somewhere in between." Much of the determinism-free will debate has been about how the laws of physics, not the laws of human nature that psychologists study, might constrain behavior. Dweck and Molden demonstrate how the *self-theories* that people have, and in particular individual beliefs about human qualities as either fixed or malleable, lead to different psychological realities, and they argue that incremental theorists have a stronger belief in free will than entity theorists.

Roy Baumeister suggests that the debate regarding the existence of free will may be an unproductive one and instead focuses on (a) how we might explain the common belief in free will and the phenomena to which that belief refers and (b) how free will might emerge and function, even in a psyche that is run largely via unconscious processes. He rejects the idea of free will based on randomness but argues that just as many philosophers accept some form of compatibilism that allows both free will and determinism, psychologists need not "fret that they will lose credibility as scientists if they, too, accept free will." He shows how evolution might have valued a conscious dispute-settling mechanism that could adjudicate among different unconsciously produced alternate actions and decisions, "possibly setting up and altering response tendencies that guide the automatic responses that are the immediate, proximal causes of behavior."

Albert Bandura argues that “metaphysical analytic preoccupation with the incompatibility of free will and determinism diverted attention from more fruitful analysis of the capacity of humans to bring their influence to bear on events,” and he shows how thinking of free will in terms of the exercise of agency, which operates through a variety of cognitive and other self-regulatory processes, can help us understand how free choices are made. He concludes that nonagentic theories of behavior are simply a new incarnation of behaviorism, dismissing as they do such constructs as beliefs, goals, and expectations. It is precisely these (and other cognitive factors) that are needed for the cognitive control of behavior and for proactive moral agency.

John Bargh argues that historically, “free will has been the answer to the question of where our actions originate, where they come from in the first place. ... But ... there is no shortage of ideas or suggestions from our unconscious as to what to do in any given situation.” Given the evidence for unconscious decision making from a variety of research paradigms, he suggests that we should begin with the assumption of mainly unconscious instead of conscious causation of action. His review of this evidence leads him to conclude that “there is no need to posit the existence of free will in order to explain the generation of behavioral impulses, and there is no need to posit free will in order to explain how those (unconscious) impulses are sorted out and integrated to produce human behavior and the other higher mental processes.”

John Kihlstrom challenges the idea that we might be automatons in his chapter, “The Automaticity Juggernaut.” He argues that although the cognitive revolution once again allowed the study of consciousness, the topic of consciousness continues to make many psychologists nervous and it is granted little causative power, reduced instead in many theories to an epiphenomenalist role that grants it no causal role in behavior at all. Like Bandura, he thinks this undoes the cognitive revolution and brings us full circle back to Skinner. Should we simply “jettison the notion of free will as a sentimental component of folk psychology that must be abandoned”? Or we might instead “accept the experience of conscious will as valid, and try to explain how free will can enter into the causal scheme of things in a material world of neurons, synapses, and neurotransmitters”?

Azim Shariff, Jonathan Schooler, and Kathleen Vohs argue that there are both easy and hard problems of free will, using as their model an argument from studies of consciousness, and suggest that most psychological research to date addresses what they call the easy problems. “The hard problem of free will represents *the* core problem of conscious free will: Does conscious volition impact the material world, and can phenomenal experiences translate into a physical events? And if so, how?” They review three main approaches to the hard problem—the hard determinist, compatibilist, and libertarian positions—and present their own recent research evidence which shows that when subjects are induced to believe that free will is illusory they behave less ethically, at least in laboratory experiments.

Henry Roediger, Michael Goode, and Franklin Zaromb note that although psychology may not be able answer the ultimate question (Does free will exist?), it has much to say about the control of behavior. They focus on four experimental research paradigms: Libet's response-choice paradigm, Logan's stop-signal paradigm, Jacoby's process-dissociation procedure, and Koriat and Morris Goldsmith's free and forced reporting procedure. These cognitive approaches together tell us a great deal about whether, and to what degree, human beings exercise control over their actions and decisions. Their focus is on finding ways to separate conscious and automatic influences on behavior to provide a window on volitional control. Much of our volitional control is more "free won't" than "free will," because it is rooted in our ability to inhibit unconscious responses. They conclude that experimental research can provide substantial evidence for partial conscious control of behavior while acknowledging that this is not the same as evidence of actual free will in the strongest sense: "We have danced around the issue of whether conscious control is to be equated with free will; in fact, we suspect that at the most basic level, the answer must be no. Even behavior that subjects believe to be completely under conscious control is influenced by external factors."

Daniel Wegner presents a series of studies that suggest that conscious will is an illusion that is rooted, in part, in our incomplete self-knowledge ("the mind presents us with only a relatively impoverished account of its own operations, and our attempt to make sense of the evidence yields the impression that we are freely willing our actions"). He argues that this is a powerful illusion—in fact, "the self seems remarkably resistant to reports of its demise, cropping up again and again in most every living human"—so powerful that even a scientist like himself who is steeped in the evidence that it is an illusion is "every bit as susceptible to the experience of conscious will as the next person." He compares the illusion of free will to visual illusions that we continue to experience even when we know they are illusions, and because of this persistence, he argues that we needn't fear grave social or personal consequences of scientific explanations that show free will to be illusory. Wegner closes his chapter by suggesting possible evolutionary scenarios that might have led to the evolution not of free will, but of the illusion of free will.

Daniel Dennett suggests that "so many really intelligent people write such ill-considered stuff when the topic is free will" because it matters so much, and "they just don't want to contemplate the implications straightforwardly." But often the real problem is that their ideas of free will are still tied to an outdated concept of free will that is rooted in Cartesian dualism. At the heart of the concept of free will, he argues, is the idea of moral responsibility, and a thoroughly materialistic understanding of free will—without the illusion of "the inner puppeteer who pulls the body's strings"—can find all the free will we need, "distributing its tasks throughout not just the entire brain, but the body and the 'surrounding' cultural storehouse." He notes that recent research

raises important questions about the impact of holding varying beliefs in free will. He concludes that we “need to coordinate our investigations of the role of censure and punishment...with our investigations of the complexities of human motivation, and the role of beliefs—and beliefs in beliefs” to understand how new conceptions of free will might influence behavior and our sense of self and responsibility for our actions. “This is going to be a ticklish task, in which missteps might be painfully amplified. No wonder our hands shake when we get to work on it.”

George Howard also argues that the free will–determinism debate has been hindered by the way it has been framed. There are two related but different questions, or dimensions: the power of self-determination versus mechanistic or nonagentic determination, and complete determinism versus complete acausality. Regarding the latter, “If you want to be a scientist, you had better be a determinist.” But the former dichotomy, between self-determination and mechanistic determination, is a false one. A psychologist can believe in both. He reports a series of studies that measure degrees of self-control, showing that although in some areas “the amount of control they exhibit is vanishingly small,” in others it is “enormous.” He concludes that human behavior is partially self-determined and partially nonagentially controlled.

Like Howard, William Miller and David Atencio believe that questions of free will have “often been cast as a dichotomous choice between free will and determinism,” but in fact neither extreme view can be correct. They propose ways to measure what they call the “*volitionality* of behavior,” the degree to which some behavior is subject to willful control. Some behaviors have higher volitionality, and some people have greater degrees of volitional control. They conclude that psychology must find ways to understand volition as a significant determinant of both individual and group behavior.

Dean Simonton, one of the world’s leading creativity researchers, notes that “human creativity represents something of a paradox” because “few areas of human behavior require so much will power” and yet in “few areas is the will so powerless.” Creativity seems to be determined both by outside forces beyond the individual’s control, but at the same time the very act of creation seems like more than anything an act of will. This is especially true of creativity at the highest level.

In the final two chapters (prior to Alfred Mele’s summary and conclusions), John Baer and Steven Pinker examine specifically the connection between determinism and free will. Baer argues that, rather than choosing between determinism and free will, free will in fact requires determinism (as does psychology). To whatever extent behavior is due to chance, free will cannot exist; but a determinism that includes effects of differences in personality, cognitive abilities, beliefs, ideas, emotions, memories, wishes, and thinking styles on volition makes possible the kind of free will that most of us believe intuitively that we possess. Pinker confronts several fears that determinism engenders, such as the fear that “deep

down we are not in control of our own choices” and the fear that determinism makes it impossible to hold anyone accountable for their actions. Although the fear of biological determinism seems to many more frightening, environmental determinism must carry the same baggage. But “contrary to what is implied by critics of biological *and* environmental theories of the causes of behavior, to explain behavior is not to exonerate the behavior.” Pinker explains why this is so, concluding that “I do not claim to have solved the problem of free will, only to have shown that we don’t need to solve it to preserve personal responsibility in the face of an increasing understanding of the causes of behavior.”

In the final chapter of the book, Alfred Mele has distilled what the various contributors have told us about free will. It is impossible to summarize in one paragraph Mele’s commentary because his analysis covers so much territory—he is, after all, commenting on the full range of ideas presented elsewhere in the book. Among the points he makes, however, are some that tend to find agreement between viewpoints that were seemingly at odds. For example, differing views on the role of determinism in both psychology and free will may be rooted in different definitions of determinism; by clarifying definitions, some of the disagreements fall away. He also examines the connection between consciousness and free will and the implications of Libet’s studies, which many of the chapters discuss. He shows why this paradigm may have much less to say about free will than often claimed, and he also proposes some new studies that psychologists might wish to consider. He concludes that “One may find that some of the conceptions [that people have of free will] are self-contradictory, that others are hopelessly magical or mysterious, and that yet others suggest potentially fruitful research programs. One would expect most scientists with an experimental interest in free will to be attracted to conceptions of the third kind.”

There is, of course, no single and irrefutable answer to the many questions posed by free will. There is, however, evidence that makes possible both a better understanding of what free will is or might be and the construction of more psychologically sound theories of free will. We believe readers will find that the contributors to this book have made huge progress in defining key issues, marshaling relevant research findings, and explaining what psychology can contribute to this important conversation.