

CHAPTER 14

Perish the Forethought: Premeditation Engenders Misperceptions of Personal Control

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ABSTRACT

People are normally encouraged to engage in premeditation—to think about the potential consequences of their behavior before acting. Indeed, planning, considering, and studying can be important precursors to decision-making, and often seem essential for effective action. This view of premeditation is shared by most humans, a kind of universal ideal, and it carries an additional interesting implication: Even the *hint* that premeditation occurred can serve as a potent cue indicating voluntary action, both to actors and observers. In legal and moral contexts, for example, actors are seen as especially culpable for the consequences of their actions if those consequences were premeditated, whether or not the premeditation influenced the decision. In this chapter, we review evidence indicating that even irrelevant premeditation can lead people to believe that an action's consequences were under personal control. We present research exploring how various forms of premeditation—including foresight, effortful forethought, wishful thinking, and the consideration of multiple possible outcomes of action—may lead actors to prefer and to feel responsible for action outcomes even when this premeditation has no causal relation to the outcomes.

Keywords: Premeditation, rational action, actors' perceptions, decision-making, complete control, random control, no control, priority, prior knowledge, delayed knowledge, consistency, intention, choice blindness, exclusivity, situational constraints, external influences, obedience experiments, cognitive dissonance, facilitated communication, controlled effort, Eureka error, meta-desires, counterfactual blame, dispositionalism, unconscious deliberation

"Except only the defendant's intention to produce a given result, no other consideration has affected our feeling that it is or is not just to hold him responsible for the result as its foreseeable."

—Edgerton, (1929, p. 1134). *Legal Cause*. Harper and James, (cited by Hart & Honore, 1959/2002, pp. 254)

It feels necessary to think carefully before making important decisions. Whether buying a house, picking a spouse, or deciding to have children, it seems unwise to make a decision quickly or to simply pick the first option we considered. Even relatively inconsequential choices are preceded by significant forethought. When buying a new digital camera, we might read *Consumer*

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Reports, compare features such as lenses and weight, and try to imagine which would be better suited for our next family gathering or vacation. We engage in such forethought because premeditated decisions—choices guided by prior conscious deliberation of alternatives and their consequences—are considered superior to decisions made on the fly or in its absence.¹ Our parents, teachers, and peers continually advise us to "Look before you leap" and "Think before you speak," and when we make poor choices, they are often attributed to errors committed during premeditation ("What on Earth was I thinking?"). Premeditated decisions appear to determine the behavior most under our control, and behavior we control is presumed to be better than behavior we do not. Indeed, both the legal system and society at large view the presence of premeditation as the most important indicator of rational play (Denno, 2003).

Premeditation plays an important role in classic self-control dilemmas such as deciding whether to spend or to save, eat or diet, and engage in risky or safe behavior. Its presence suggests that not only were we aware of the consequences of our behavior, but we had the power to act rationally and control that behavior. Consequently, we blame ourselves more when lapses in self-control were premeditated than when they were not premeditated (Klimchuck, 1994). Buying a new car impulsively may seem rash, but doing so after considering whether to put the money aside for your child's college education seems both rash and shameful. Deciding to order steak tartare seems like a mild indulgence, whereas ordering that steak after considering healthier options seems both indulgent and irresponsible. This is also true when viewing the actions of others, as we sympathize less with those who are injured if they had consciously considered (and then ignored) ways to protect themselves in advance (e.g., wearing a helmet). No matter what the domain, it appears that the presence of premeditation is an important indicator of the extent to which people possess self-control.

Determining whether an act was premeditated is considered to be one of the principle tasks, if not the primary task, of modern legal

systems (Denno, 2003). When a person is tried for a crime, juries are asked to determine fulfillment of two criteria: *Actus reus* and *Mens rea*, or "guilty act," refers to what the defendant actually committed, and *Mens rea*, or "guilty mind," refers to what the defendant intentionally committed—usually synonymous with what was premeditated. In the legal setting, premeditation suggests that the defendant both foresaw the consequences of her action and had sufficient personal control to have prevented criminal act. Although a defendant may be held accountable for an unintended action, judging that a crime was premeditated dramatically increases ascriptions of blame and punishment. Murder and manslaughter both convictions for the same action (i.e., killing a person), but the differences in attribution of intention result in markedly different sentences: The recommended sentence for first degree murder (i.e., a premeditated killing) is 10 years in prison (United States Sentencing Commission, 2004). The difference in punishment for these otherwise identical actions highlights the importance society ascribes to premeditation when determining what actions were under personal control.

Despite frequently making premeditated decisions and making inferences about decisions made by other people were premeditated, we know little about what premeditation specifically entails. We may recognize an intuitive level when an action is premeditated (killing your boss after days of scheming), but what does it mean to premeditate (reflexively kicking your leg the doctor taps your knee), but what constitutes premeditation? One obvious criterion is that you have to think about something in advance for it to be a premeditated outcome, but what thought do? This chapter examines the nature of premeditation—how it is perceived and what it is a reliable indicator of self-control. We explore the five requirements for an outcome to be premeditated, and investigate the effectiveness of premeditation. As phenomenal experience

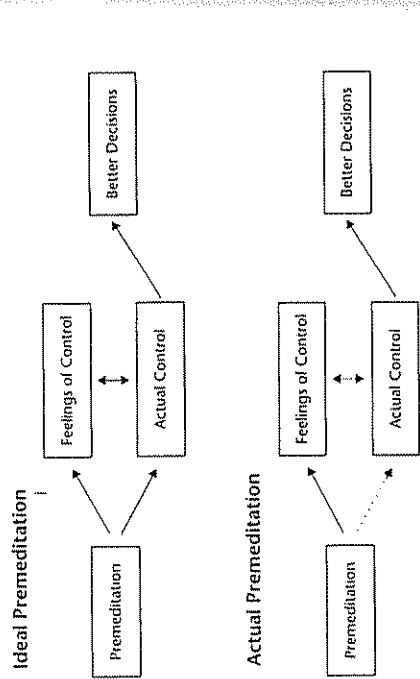


Figure 14-1. The diagram above depicts ideal premeditation, as conceived of by society and the law; it assumes that premeditation influences both feelings of control and actual control to a similar degree, resulting in better decisions. An alternative, actual premeditation, is presented in the diagram beneath it. It suggests that premeditation influences feelings of control, but may not influence one's actual control over decision or lead to better decisions.

the law suggest, premeditation may influence both our feelings of control and actual control over our actions and the outcomes they produce (illustrated in the top half of Fig. 14-1).

Alternatively, in spite of the importance placed upon premeditation, it may often be incidental. In other words, premeditation may fail to influence our decision making, even when we feel certain that it determined the outcome we chose. Like superstitious fans who believe they can influence the outcome of a football game by crossing their fingers or wearing the jersey of their favorite player, premeditation may be an ineffectual ritual. We suggest that although premeditation may increase feelings of self-control, it may not serve as a reliable indicator of actual control. Conscious thought may often only be tenuously linked to our actual behavior, and in such situations, the presence of premeditation may trick us into feeling that we controlled an outcome (as illustrated by the bottom half of Fig. 14-1). Consequently, if premeditation leads to the experience of self-control without providing authentic control, then the increased

guilt and self-loathing we experience after succumbing to the vices we tried to resist may be largely unwarranted.

ACTORS' PERCEPTIONS

Each of us has experienced what it feels like to have successfully made a decision—we desired some outcome and persevered until it was produced. We also know what it feels like to have done something without thinking about it in advance or consciously making a decision ("How did I end up with this bowl of chocolate pudding and a ladle?"). What distinguishes between such "premeditated" decisions and "unmediated" behavior—what leads us to feel that outcomes were intentionally chosen or unintentionally produced? Drawing from Apparent Mental Causation theory (Wegner, 2002, 2003; Wegner & Wheatley, 1999) and Rational Choice theory (e.g., von Neumann & Morgenstern, 1944), we suggest that there are five basic requirements that reflect the general structure of premeditated decisions.

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Premeditated decisions begin with the identification of a problem or an unfulfilled goal, whether minor ("What should I eat for lunch?") or major ("Should I have surgery or try physical therapy?"). Once a problem or goal has been identified, information is gathered about the alternatives that are available ("Peanut butter and jelly again, or pizza?") such as each alternative's positive and negative consequences. After identifying an alternative as satisfactory or the best available (Schwartz et al., 2002; Simon, 1957), controlled effort is applied in an attempt to bring about the outcome one desires (e.g., spreading preserves, putting a plate in the microwave, or consulting a second physician). Whether evaluating the choice of a meal or medical procedure, we may thus consider the fulfillment of five criteria to determine if an outcome was premeditated. Premeditation appears to be thought that (1) is used to identify a preferred option from a set consisting of multiple alternatives, (2) occurs prior to the outcome produced, (3) is consistent with the outcome produced, (4) is exclusively related to the outcome, and (5) leads to the application of effort to bring about the outcome.

Although thought that fulfills each of these criteria will lead us to feel that an outcome was premeditated and under our control, all of these need not necessarily be fulfilled for us to feel that we are in control. Rather than a strict checklist, these factors appear to represent a set of rough guidelines. The presence of some of these factors in situations in which we lack control may erroneously suggest that we possessed control over an outcome that we did not. In other words, purely incidental thoughts may lead us to experience the feeling of control, fooling us into believing those outcomes were produced by our premeditation.

Requirement 1: Multiple Potential Courses of Action

The first guideline indicating that an outcome was premeditated and under our control is the existence of multiple alternatives, whether they are real or illusory. This can include having considered two or more alternatives, having considered whether to produce a single outcome,

or having the potential to have considered natives. When deciding what to eat for dinner, leftover pizza may be the only food left in the refrigerator. You may have eaten it 99% of the time in similar past instances, but you still feel like you have control over your dinner selection because you know that you can order delivery from a neighborhood restaurant. You may be just as likely to eat the leftover pizza at home as you would be if captors gave it to you while in solitary confinement, but in the latter case you would attribute pizza-eating to your decision, whereas the lack of alternatives in the former case would lead you to feel that you have little control over the content of your dinner. In many cases we may select an option that is dictated by our habits or preferences (e.g., to leave a tip), and only perceive that we have been intentionally chosen if we also consider its alternatives (Fiske, 1989).

The availability of multiple possible outcomes may be a legitimate requirement for a premeditated decision, yet there are instances in which alternatives to the outcome produced were realistic or feasible, and still their presence or absence did not influence our feelings of control. One outcome may be so preferable that its alternatives would be selected (e.g., "Hm... looks like the pizza or dog food," and "Honey, would you like to watch *Dr. Strangelove* or a documentary about root canals tonight?"). Desirable alternatives may exist but may not be feasible economically ("Should we buy the Ford or the Maserati?"). Socially ("Should we have beef brisket or chicken?"), or temporally ("Sorry, I'm busy tonight"). And we may only realize that alternatives existed after an outcome was selected ("The chocolate *and* strawberry?"). In short, there are a host of situations in life where actors may not consciously believe that alternatives were available at the time of a decision.

Conversely, we often feel no control over premeditated decisions when alternatives to the course of action we select are ignored. Deciding not to act or simply discontinuing a current course of action (i.e., maintaining the status quo), are often not perceived to be premeditated decisions. Avoiding or delaying a decision, or a decision to make a decision for us, are

not usually perceived to be decisions (Anderson, 2003). Perhaps this is why we generally consider ourselves and others less responsible for outcomes that result from a decision not to act (i.e., acts of omission) than for identical outcomes produced by an action (i.e., acts of commission; Spranca, Minsk, & Baron, 1991).

As we believe that a decision was premediated when alternatives to the chosen outcome were unfeasible and that no decision was made when nonobvious alternatives were present, the mere presence of alternatives may engender the feeling of control—whether we could have chosen those alternatives or not. A series of art selection experiments (Morewedge, Wegner, & Vosgerau, 2009) explored this possibility by testing whether we are more likely to consider outcomes to be under our control when alternative outcomes are present at the time of selection, but cannot actually be selected.

Participants randomly “selected” one of two works of art to see for 20s on each trial in a three-trial experiment by pressing a key on the right or left of their keyboard. The term “selected” is used because participants had no real control; there was no consistent relation between the button they pushed and the artwork they saw. Sometimes the right and left keys corresponded to the work on the right and left, respectively. Other times those keys corresponded to the works on the left and right, respectively. Thus, in a sense they were randomly hitting keys, and the computer was randomly presenting photographs and paintings. Importantly, participants were informed of the lack of consistent correspondence between the keys and artworks at the beginning of the experiment.

Before randomly selecting a photograph or painting, participants saw thumbnail-sized previews of both, one, or none of the artworks they could see in that trial (see Fig. 14–2). At the end of each trial, participants reported the extent to which they felt they controlled the outcome of the selection, and whether the artwork selected was the artwork they intended to see. These reports were averaged to create an index of participants’ perceived control over the selection of outcomes. Although people often claim to control outcomes that are purely random (Langer,

1975), notice that these selections were equally random, regardless of the number of previews participants saw in the beginning of each trial. If participants reported feeling more control over the selection of artwork in trials when they saw more rather than fewer previews, it would appear that participants used the mere presence of alternatives to infer the extent to which they controlled the artwork selected. They did just that. Participants were more likely to report feeling control over the works selected when both of the artworks were previewed than when only one work was previewed. And they were more likely to report feeling control over works selected when only one work was previewed—more than when neither work was previewed—even when the work previewed was inconsistent with the work selected. In short, the greater the number of previews seen before a selection was displayed, the more control participants felt over the selection, whether or not the preview matched the randomly selected outcome (Morewedge et al., 2009, Experiment 1).

A second experiment manipulated the number of alternatives previewed and whether participants could actually control the selection (Morewedge et al., 2009, Experiment 2). As before, participants saw two, one, or no preview of the works of art they could see in each trial (within subjects). Control over selections varied between subjects: Participants in a *true control* condition could control the painting they selected (the left and right keys consistently referred to the left and right artworks on all trials). Participants in a *random control* condition randomly selected paintings as described in the previous experiment, and participants in a *random assignment* condition simply pressed a spacebar to have the computer program randomly select a work for them.

If participants were simply confused about the extent to which they controlled the selection process in the previous experiment, we would expect that those in the *true control* and *random control* conditions would report similar feelings of control, but both groups would report more control than participants in the *random assignment* condition (whose lack of control should be fairly clear). Participants did

not appear to be confused, as they were sensitive to the amount of actual control they possessed in the experiment. Those with *true control* reported feeling greater control than participants with *random control*, and both groups of participants reported feeling more control than participants with no control—participants in the *random assignment* condition.

As in the first experiment, those in the *true control* and *random control* conditions reported feeling more control over selections when they saw more rather than fewer previews. Interestingly, participants in the *random assignment* condition reported feeling no more control over outcomes whether they were presented with more or fewer previews. The appearance that we have a choice of alternatives seems necessary for premeditation to feel effective—it is not enough to simply see alternative potential outcomes. Important to note is that the perception of possible alternatives influences judgments of control, independent of a person’s actual ability to control the alternative selected. What follows is an examination of additional indicators of premeditation, and whether those indicators can lead to spurious inferences of personal control.

Requirement 2: Temporal Priority

A second requirement for premeditated outcomes is that they were considered before the action producing those outcomes was executed. Thinking about outcomes after executing the critical action can hardly be considered a premeditated decision, since that thought could have had no causal impact on the action or its consequences (e.g., Radin, 2006). This priority principle is demonstrated by an experiment (Wegner & Wheatley, 1999) in which each participant and a confederate placed their hands upon a *planchette*—an object used to spell out messages and select responses on a Ouija board—to move a computer mouse beneath the planchette across a computer display. The display consisted of objects such as a house, duck, and rowboat. The participant and confederate moved the planchette together to select an object while listening to audio tracks (played over headphones). Unbeknownst to participants, on

pre- and post-views, only participants who

critical trials a certain object was preselected and the confederate subtly pushed the planchette so that it rested upon the preselected object. On these critical trials, the participants who hear the name of the preselected object in headphones. Whether the participant is the name of the preselected object before the selection was varied within subjects. Participants reported feeling more control than after the selection. In other words, thoughts occurring prior to an outcome were perceived to produce it.

Perhaps prior knowledge of our alternative also crucial for an outcome to be considered result of one’s premeditated decision. An art selection experiment examined this possibility (Morewedge et al., 2009). Participants in a *prior knowledge* condition and a *delayed knowledge* condition randomly selected works of art to see in a paradigm similar to the art selection experiment. In the *prior knowledge* condition, participants saw two, one, or no thumbnail previews of works of art before they randomly selected a work to see for 20s. In the *delayed knowledge* condition, participants saw two, one, or no thumbnail post-views of works of art after they randomly selected a work, before they saw the work they selected. In both groups of participants received the same information about the options available in the trial, but only those in the *prior knowledge* condition knew those options before making selection.

As in the other experiment (where all participants had prior knowledge), participants in the *prior knowledge* condition reported feeling more control over their selection when they saw more rather than fewer previews. Participants in the *delayed knowledge* condition, however, reported feeling equivalent control over selections irrespective of the number of post-views they saw in trials, and also reported feeling control than participants in the *prior knowledge* condition. Although participants in the *prior knowledge* condition had the same amount of control over the works of art selected in this experiment and saw the same number of pre- and post-views, only participants who

saw the alternatives in advance felt they personally controlled outcomes. In other words, even though all works were randomly selected, participants felt control over selections only when the priority requirement was fulfilled. Thus, people appear to consider outcomes to be result of their decisions only when their alternatives were considered beforehand, even when that consideration was purely incidental.

Requirement 3: Consistency

For an outcome to be considered the product of a premeditated decision, it must presumably be consistent with the thoughts preceding it. If we think about eating hamburgers all day and find turkey on our dinner plate, we may question how it got there. We expect outcomes to conform to our thoughts and use the consistency between the two to determine which outcomes we controlled. In a laboratory experiment, people examine their thoughts just before an outcome to determine if they consciously willed it (Wegner, 2002, 2003). In a legal domain, people examine the thoughts of defendants to assess how much punishment they deserve for the crime they committed. If a killer said, "I thought about how I could kill Roger with a blow to the head," she would presumably be incarcerated for a long time. On the other hand, if she said, "I thought about how I could hit a nail and discovered that I had hit Roger instead," the inconsistency between her thought and the outcome suggests that she did not plan to kill Roger or control the action that did (Hart & Honoré, 1959/2002).

Even when outcomes are produced by chance, consistency between intention and outcome may give rise to the feeling of personal control. The repeated production of intended events—such as successfully flipping a coin so it turns up heads five times in a row—may give rise to the feeling that we controlled those events through skill rather than chance (Langer, 1975, 1983; Langer & Roth, 1975). One implication of the consistency requirement is that people should take more credit for their triumphs (which they are likely to imagine) than their failures (which they would prefer to ignore), a tendency that has been demonstrated to be robust (for a review, see

Miller & Ross, 1975). Indeed, this tendency is so robust that people even take credit for the outcomes they merely intended to produce. People praise themselves for simply intending to help the needy, for example, whether or not they actually did (Kruger & Gilovich, 2004). Depressed people appear to be one of the few exceptions to this pervasive tendency (Alloy & Abramson, 1979), as they claim less responsibility for successes than do nondepressed people.

Not only can the consistency principle lead us to feel control over the things we did not cause, it can lead even those of us who are said to believe we possess supernatural powers. In one study, participants were asked to stick pins into the head of a voodoo doll made to resemble a confederate of the experimenter. Participants were more likely to report feeling personally responsible for the confederate suddenly experiencing a headache if they were previously led to dislike the confederate (i.e., when he showed up late to the study wearing a trucker hat emblazoned with the motto, "Stupid People Shouldn't Breathe"), than if they were not previously led to dislike the confederate (i.e., when he showed up on time and was dressed innocently; Pronin et al., 2006).

It seems that thoughts only need to appear consistent with outcomes for us to claim that outcomes were intentionally produced. Indeed, decision makers can be led to believe they chose an option they actually rejected. Such *choice blindness* is typically produced by having people pick between two similar alternatives and then tricking them into believing they selected the unchosen alternative. In one demonstration, men were shown pairs of cards depicting similar women and were asked to choose which woman was more attractive (Johansson et al., 2005). They then explained why they preferred the woman they chose. On choice blindness trials, the experimenter (who was a magician) used sleight of hand to switch the cards and show each man his unchosen alternative—acting as if he had preferred the woman he said was less attractive. Thirty percent of the men completely missed the switch! Even more surprising was their readiness to give reasons for having "chosen" the woman they had actually rejected:

"She's radiant. I would rather have approached her at a bar than the other one" (Johansson et al., 2006, p. 118). Participants apparently forgot which woman they chose, and inferred from the similarity between their choice and the outcome that they preferred the less attractive woman. In hindsight we seem to overestimate the consistency between our original intentions and the outcomes of our decisions (Peters, Baumgartner, & Dagozzi, 2006).

Sometimes rather than forgetting which option we chose, we entirely forget all of our options. Chance and Norton (2007) showed research participants pairs of colors and asked them to identify which color they preferred in each pair. Although the behavior of participants demonstrated they had seen the color pairs before—they performed above chance when later distinguishing between old and new pairs—on average participants falsely reported having never seen 25% of the original color pairs. Interestingly, participants were especially likely to forget the original color pairs that were most difficult to choose from.

People may forget which alternatives they originally chose or were available, but there are likely to be limits to their forgetfulness. With an art selection experiment, we investigated the extent to which participants used false feelings of consistency to infer that they made a decision. Using a paradigm similar to the previously described art selection experiments, participants randomly selected one of two works of art to see by pressing one of two keys after seeing two, one, or no previews of the works. In this experiment, however, previews could either be accurate previews of the works of art (as before), inaccurate previews of the works of art, or accurate previews of the works of art that were distorted beyond recognition (see Fig. 14–2).

As in previous experiments, participants felt more control when they saw a greater number of accurate previews. More important, feelings of control were not affected by the number of inaccurate and distorted previews that participants saw (Morewedge et al., 2009). Experiment 4) When the previews represented possible outcomes, participants felt more responsible with more previews, but when previews provided

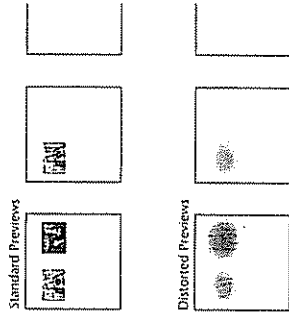


Figure 14–2. Examples of previews and views depicting two, one, and no works of art were used in art selection experiments in the top row. Examples of distorted previews in the bottom row. Each preview was 100 wide and presented 25 pixels from the center of a 17" monitor with a resolution of 1028 × 76

information that was irrelevant or uninformative, perceived control was unrelated to the number of previews they saw. It appears that outcomes need not be consistent with the preferred choice. Rather, the outcome of choice must be consistent with at least some possible alternatives. These findings suggest that when examining the consistency between intentions and outcomes, we reconstruct the original outcome we originally intended to produce.

Requirement 4: Exclusivity

For an outcome to feel like the result of a premeditated decision, it must appear to have been produced exclusively by one's intentions. If Bobby's mother tells him to eat his peas and he decides to eat them, who gets credit for that eating? Bobby's pea-loving mother. When situational constraints are strong or subtle, people are quick to deny responsibility for undesired outcomes produced by our behavior when we are quick to deny responsibility for undesired outcomes produced by our behavior when we are quick to deny responsibility for undesired outcomes—those endangering the lives of another human being—may be abnegated

we receive direction from an authority figure. The suggestions of an authority led teachers in Milgram's experiments to believe that they were forced to, rather than decided to, expose a learner to levels of electric shock that could prove fatal, even though teachers had full control over the fate of learners and had the option to disobey the authority figure.

Like the other requirements for premeditation, it appears that perceived rather than actual exclusivity is crucial when determining personal control over outcomes. We can be easily led to ignore real exclusivity: Cognitive dissonance experiments show that we are quick to attribute the discomfort arising from our decisions to placebos such as a sugar pill (Harrison & Mills, 1999; Zanna & Cooper, 1974). Conversely, we sometimes claim exclusivity for outcomes caused by external forces. For example, we take full responsibility for and generate reasons why we produced actions that were performed because they were suggested by a hypnotist (Wheatley & Haidt, 2005), or why we made decisions that were due to irrelevant contextual influences such as the order in which options were presented (Nisbett & Wilson, 1977).

The tendency to confuse exclusivity has important implications, as in the case of facilitated communication—a technique in which a facilitator (usually a therapist) lays their hands atop the hands of a patient (e.g., an autistic child), and interprets their slight movements as meaningful responses to questions posed to the patient. Although it sounds like a good idea in theory, in practice facilitators answer the questions themselves and attribute their answers to the patients (Wegner, Fuller, & Sparrow, 2003).

Requirement 5: Effort

Once an outcome has been chosen, the transition of that thought into action requires controlled effort (James, 1890/1955), which appears to be the final requirement for an outcome to be perceived as premeditated. As a result, outcomes chosen out of habit or that are easy to perform feel less controlled than those that are unusual or difficult (Fiske, 1989).

Perhaps this is because effort is usually exerted during the process of decision-making, as evidenced by a decreased ability to perform effortful tasks after having made a decision. Like the performance of tasks requiring self-control, making judgments and decisions appears to deplete a limited resource that some have suggested is will-power (Mascampo & Baumeister, 2008; Vohs & Faber, 2007). In perhaps the best illustration, participants were placed in a room for five minutes with a plate of freshly baked chocolate chip cookies and a plate of radishes. Participants instructed to eat only radishes quit subsequent (impossible) task more quickly than controls and those allowed to eat only cookies (Baumeister et al., 1998). Presumably, suppressing one's desire to eat the cookies taxed participants' ability to persist in the subsequent task.

Expenditure of effort while an outcome is produced, however, may mistakenly lead us to feel responsible for producing it. These *Eureka errors* are particularly likely when we expend mental or physical effort during the generation of a solution than during the presentation of a solution. In one study, participants were paired with a partner and asked to solve anagrams together (Preston & Wegner, 2007). When participants were asked to squeeze a handgrip while thinking of solutions, they claimed credit for the solution, regardless of whether they or their partner solved it. Similar effects were found in other experiments; participants were more likely to falsely claim credit for solutions to anagrams when the anagrams were displayed in difficult-to-read font than an easier-to-read font. Participants were thus likely to feel responsible for an outcome when they engaged in effortful thinking during its production.

Indeed, merely engaging in effortful thinking about *anything* before producing an outcome may lead us to claim more control on that outcome, even when it was randomly produced. In another art selection task, participants saw thumbnail previews of the two with art that could be selected in each trial. On two-thirds of trials, participants performed one of two other tasks before selecting artwork. At the time, participants answered a relevant question—what they were thinking and feeling

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Half of the time, participants answered irrelevant questions such as, "What word do you associate with *blue socks*?" and "What's a fair price for a *banana cream pie*?"

Although participants reported more control over trials in which they performed an additional task, the results of this study indicate that the content of the task did not matter. Relative to no-task trials, participants reported feeling greater, but equal amounts of control over the trials in which they answered relevant and irrelevant questions. Regardless of whether their thoughts were relevant to the task at hand, participants felt more control over outcomes after having thought about something—anything—before the outcome was produced (Morewedge et al., 2009, Experiment 5).

Summary

These five sections outline the necessary components of premeditation, which give rise to the experience of control over the outcomes of decisions, and suggest that their presence often fools us into believing we controlled them. Multiple alternatives need merely be present, not possible, to make outcomes feel like the product of our decisions. These alternatives must appear in advance of the decision, regardless of whether they can actually be chosen, to make the outcome feel like it was under our control. Even when we have no real choice, we feel that we determined outcomes when they appear consistent with our intentions and free of external influence. Finally, any kind of thinking before a decision, whether related or not, appears to lead to the perception that an outcome was the result of a premeditated decision—that our thoughts and actions controlled it. Although premeditation may indicate that we considered our options before making a decision, we appear to have difficulty determining when it did and did not lead to the production of the outcomes we intended.

OBSERVERS' PERCEPTIONS

When determining whether an outcome was the result of a premeditated decision, actors have the privilege of knowing the thoughts

and alternatives they considered prior to production. Observers have a more difficult task, as they must infer which thoughts and alternatives actors considered. Although actors and observers differ in the way the timeliness attribute responsibility for outcomes (Gibbert & Malone, 1995; Jones & Harris, Kelley, 1973; Ross & Nisbett, 1991), observers who believe they possess knowledge of the prior thoughts and alternatives available to actors judge premeditation according to criteria similar to the criteria that actors use. Observers examine whether actors had multiple options to consider or choose from, whether they have foreseen and desired to produce the outcome, whether actors' intentions appear to be the sole cause of the outcome, and the extent to which actors expended effort toward creating the outcome (Pizarro, Uhlmann, & Bloom, 2002; Shaver, 1985; Weiner, 1995). Like actors, however, observers may merely examine whether these requirements appear to have been satisfied. Observers who do not believe they possess such knowledge judge premeditation making more general inferences about actor and the apparent goal of the outcome produced. In both cases, however, these judgments are made under uncertainty. Observers may thus substitute their own intentions and emotions for evidence when no available (Haidt, 2001; Kahneman & Frederick, 2002; Kahneman, Schkade, & Sunstein, 1998).

Furthermore, observers may be motivated to infer that the requirements have been satisfied to validate their feelings and intuitions that someone should be praised or blamed for the outcome (Alicke, 2000; Haidt, 2001; Jones & Wegner, in press; Kahneman, Schkade, & Sunstein, 1998). Indeed, such intuitions unlikely to be corrected, as people generally believe their judgments are veridical assessments of the world (Nisbett & Wilson, 1999; Pronin, Gilovich & Ross, 2004). Although observers may examine whether actors met the five requirements actors use to assess premeditation, observers' examination of these requirements is often cursory, merely a ruse used to justify the ascription of praise or blame.

REQUIREMENT 1: MULTIPLE POTENTIAL COURSES OF ACTION

Observers are most likely to consider an outcome the result of a premeditated decision and thus controlled when actors appear to have had multiple alternatives from which to choose. In some ways, observers are more likely than actors to believe that alternatives were possible, as they tend to perceive that actors could have produced an alternative outcome even when actors were unaware that alternative existed. Wells and Gavanski (1989), for example, asked people to assess an employer's responsibility for indirectly killing his employee by ordering an entrée containing an ingredient to which she was highly allergic. In one version of the scenario, the employer selected between two entrées for the employee, both containing the lethal ingredient. In the other version, only one of the two entrées contained the lethal ingredient. Although the employer was unaware of her allergy in both scenarios, he was seen as having greater control over her life and death when only one entrée was fatal than when both were fatal. Of course, the employer had no real control over her fate in either scenario—in both cases he did not know that either entrée would kill his employee. Yet, observers inferred that because the employer could have chosen a nonfatal entrée, the employer was more responsible for choosing an entrée that killed her.

Requirement 2: Priority

Retrospectively discerning whether outcomes were foreseeable at the time of judgment is a challenging task for observers. A *curse of knowledge*—knowing with certainty the events that occurred—hinders observers' ability to imagine actors' thoughts when faced with a decision (Camerer, Loewenstein, & Weber, 1989). Knowledgeable observers may have difficulty conceiving of a situation in which actors were not aware of all of the consequences of the outcome chosen. Children have particular difficulty accounting for knowledge that they possess when predicting naive actors' behavior (Wimmer & Perner, 1983). Although adults are influenced to a lesser degree by prior knowledge than children, they are still likely

the sequence of events producing his uncle's death were consistent with the sequence he planned to execute.

When observers are unsure of actors' prior intentions, they may base judgments of premeditation on the consistency between outcomes and their lay theories of actors' general inclinations or *meta-desires*. People are considered less blameworthy for moral transgressions that appear to have been committed impulsively than moral transgressions that appear to involve premeditation ("She doesn't really dislike me—she only chewed me out because she was drunk"), because most people have a meta-desire to avoid doing bad. Conversely, people are not considered less praiseworthy for good behaviors committed impulsively than good behaviors that appear premeditated, because most people have a meta-desire to do good (Pizarro, Bloom, & Salovey, 2003). Interestingly, this suggests that actors who are generally perceived to desire to do evil are not excused from impulsive immoral acts because those acts are considered consistent with their meta-desires.

Finally, observers occasionally engage in attribute substitution (Kahneman & Frederick, 2002), overextending consistency to include unintended side effects of the outcome produced. In the Wells and Gavanski (1989) case mentioned before, observers overextended the consistency between an employer's intention (i.e., to select an entrée for his employee) and action (i.e., ordering an entrée for his employee) to include an unintentional side effect (i.e., his employee's death). People are held similarly accountable by the law for unintended consequences of their actions, if the actions themselves were premeditated (Hart & Honoré, 1959/2002). In a celebrated case, a man and an exotic dancer conspired to rob a rich client. The dancer entered the car door and pointed a gun at the client. Although her accomplice had no desire to shoot the client, he slipped on a patch of ice and pulled the trigger. The client was killed by the stray bullet and the accomplice was convicted of felony murder because he was engaging in an intentional illegal act (Alicke, 2000). Observers are especially likely to attribute unintended side

effects to actors' intentions when the outcome and original intention are similar. A per considered more culpable for having a car accident while speeding, for example, than to have a car accident while driving slowly. In this case, the actor's intentions to speed and the original intention to have an anniversary gift. In this case, the actor's intentions to speed and the original intention to have an anniversary gift. In this case, the actor's intentions to speed and the original intention to have an anniversary gift.

Requirement 4: Exclusivity

Under ordinary circumstances, for a variety of reasons, observers tend to assume that a behavior was due to their intentions and conditions (Gilbert & Malone, 1995; Ichheiser, Jones & Davis, 1965; Jones & Harris, 1967; Krull, 1993). For example, observers are generally less sensitive than actors to the presence of external influences when inferring what actors to behave and choose as they do. A notable demonstration by Jones and Harris (1967) asked participants to read an essay supporting or opposing Fidel Castro's governance of Cuba and then infer the essay writer's opinion. Readers were told that writers were free to choose a position to endorse, whereas other readers were told that writers were assigned to endorse a position. Despite knowing that essay writers were forced to support or oppose Castro in the condition, essay readers inferred that the writers' attitudes toward Castro were reflected in their position participants (unwillingly) espouse. One notable exception to this correspondence bias is observers' tendency to attribute counterfactual blame (Miller, Visser, & Sussman, 2005). When the constraints of the situation are so severe that there are no possible alternative courses of action available, observers' dispositionalism is sometimes so strong that they assume actors' intentions were consistent with their behavior. Miller and colleagues (2005) showed a person taking a test with or without strict supervision to observers and then asked observers to assess the test taker's character. When the test taker was under strict supervision, observers considered her less trustworthy than when the test taker was under no supervision. Observers assumed that she would

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cheated in the latter case if there were weaker situational constraints. In short, observers appear to consider exclusivity quite differently than do actors. They generally perceive actors to have controlled actions that were performed as a result of substantial coercion and believe they can infer actors' intentions even when actors are forced to perform the actions they do.

Requirement 5: Effort

Although observers often discount the influence of the situation in attributing responsibility, certain outcomes appear premeditated because of the substantial effort required to enact them. In any situation, there is usually a course of action that is normative, and when a counter-normative or unusual action is observed, it is thought to have been consciously chosen. For example, most people buy groceries at the supermarket, so learning that a person only purchases groceries from a farm co-op may lead you to believe that she really cares about where her broccoli comes from. Similarly, most people drive at or above the speed-limit, so we may infer that a person driving more slowly than the limit intends to do so, assuming we do not simply infer that the driver is incompetent (Morewedge, Preston, & Wegner, 2007). Choosing such nondominant alternatives is often called making the "hard choice" (Fiske, 1989), a term implying that the decision maker was not only aware of the alternative but possessed both the cognitive resources and sufficient control over her situation to reject the modal response (Gilbert, 1991; Shiv & Fedorikhin, 1999).

Summary

Observers appear to evaluate the same requirements actors do when discerning whether an outcome was due to a premeditated decision, and like actors, they often evaluate those requirements in a cursory manner. Observers' inability to know actors' desires, whether alternatives were recognized or considered, and the difficulty of disentangling the person from the situation, leads observers to more often attribute premeditation of and control over outcomes to

if they were asked if they intended to buy one in the near or distant future (Morwitz, Johnson, & Schmittlenn, 1993).

One way premeditation may affect the production of an outcome is through the formation of implementation intentions, which cue goal-directed responses when presented with specific situations (Gollwitzer, 1999). For example, you may wish to finish some home renovations by the end of the week, and thus plan to decline the after-work invitations of your colleagues so you can get home early to renovate. By deciding beforehand how to respond when a relevant situation presents itself, you can work towards your goals and avoid getting sidetrained by distractions and procrastination (DeLariosa & Bourne, 1984). Furthermore, preemptively deciding how to behave may lead to the eventual automatization of the intended goal-directed behavior (Bargh, 1997; Gollwitzer, 1993, 1996).

Although premeditation can help us work toward goals by increasing the probability that an intended outcome will be produced, the effects of premeditation are not always beneficial. Wilson and Schooler (1991) found that novice jam-tasters asked to rate jams after introspecting about their opinions were less accurate in their taste ratings than novice jam-tasters in a control condition. Similarly, students who introspected about their artistic preferences before choosing one of two posters to adorn their dorm room were less likely than controls to choose a high-quality art poster rather than a lower-quality humorous poster (e.g., *Starry Night* by Van Gogh rather than *Garfield* by Jim Davis). Furthermore, those introspectors reported feeling less satisfied with their decision 3 weeks later than did controls, suggesting that premeditation can impair the stability of preferences used to inform judgments and decisions (Wilson et al., 1993).

Dijksterhuis (2004) examined effect of premeditation on the quality of decisions and found its usefulness depends on the complexity of the decision and the kind of deliberation used to make it. He suggests that conscious deliberation improves the quality of simple decisions such as which shampoo or oven to buy, as it is possible to simultaneously

compare a few dimensions or features consciously. Dijksterhuis also suggests, however, that conscious deliberation reduces the quality of complex decisions such as which to marry or house to buy, because we can simultaneously compare a large number of dimensions or features consciously. In dimensions we can consider and underweighting the few features we end up overweighing the few features we considered features when making complex decisions.

To test this detrimental effect of conscious deliberation, he asked participants to choose the best apartment out of a set of four, which varied across 12 attributes (e.g., amount of sun, attractiveness of the location, size). One apartment was clearly better than the other because it possessed more positive and more negative attributes, although the descriptions were complex enough that comparing between apartments was difficult. Once all of the features of the apartments had been presented, participants indicated the apartment they preferred either (a) immediately; (b) after conscious deliberation about the choice for five minutes; after performing an unrelated task for five minutes. Conscious deliberation did not improve the quality of decisions, as participants spent five minutes deliberating before choosing were as likely to choose the best apartment as participants who chose immediately. More important, participants who performed an unrelated task for 5 minutes before choosing were most likely to pick the best apartment, a finding Dijksterhuis and colleagues (2005; Dijksterhuis & Nordgren, 2006) attribute to the suppression of unconscious deliberation. They propose that unconscious deliberation possesses a great capacity to simultaneously compare complex multidimensional stimuli and more accurately weigh their attributes when making judgments and decisions (e.g., Payne, Samper, Bettman & Luce, 2008).

In sum, the effects of premeditation appear to depend on the decision at hand. Premeditation increases the likelihood that actors will produce the premeditated outcomes and desired goal-directed behavior, which can be good or bad (committing one's life to justice vs. committing

actors than actors attribute to themselves. This is exacerbated by observers' tendency to generalize actors' intentions and a failure to discount knowledge gained from hindsight.

EFFECTS OF PREMEDITATION

The evidence presented suggests that the presence of premeditation does not serve as a reliable index of personal control. If premeditation is present before outcomes that we did not cause and absent before outcomes that we did, it is questionable whether premeditation deserves to be considered an indicator of intentional action. In a broad sense, judgments and decisions are influenced by information that is cognitively accessible when they are made (Kahneman & Frederick, 2002; Morewedge, Gilbert, & Wilson, 2005; Morewedge, Holzmann, & Eppey, 2007; Tversky & Kahneman, 1973; Winkielman & Schwarz, 2001), so it would be surprising if information considered during premeditation had no effect on outcomes produced by the premeditator. Given the serious social and legal consequences of considering an outcome to have been caused by a premeditated decision (Denno, 2003; Federal Sentencing Guidelines, 2004; Kadish & Schulhofer, 1995; Weiner, 1993), it is natural to wonder: What are the effects of premeditation on decision making?

It is clear that merely thinking about a desired action makes us more likely to produce it, particularly when that action is easy to imagine (Levay & Fitzsimmons, 2006). Indeed, we are more likely to perform pro-social actions and less likely to perform antisocial actions if we think about them in advance (Sherman, 1990). Registered voters asked if they intended to vote in an election were 25% more likely to vote than that election than voters who were not asked (Greenwald et al., 1987). M.B.A. students frequently thought about flossing their teeth more often than those who did not think about flossing for pleasure (Levay & Fitzsimmons, 2006). Perhaps most surprising, participants in a nationally representative sample of more than 40,000 American households were 35% more likely to make a purchase costing thousands of dollars—a car—within 6 months of the survey

murder). Whether premeditation improves or impairs decisions appears to depend on the alternatives considered. Premeditation appears to improve the quality of decisions involving alternatives that are relatively simple, but sometimes impairs the quality of decisions involving alternatives that are more complex.

IMPLICATIONS FOR SELF-CONTROL

The findings presented in this chapter suggest that premeditation may not reliably indicate when we possess control over a decision or outcome. Disturbingly, these findings not only imply that premeditation may not deserve the importance afforded it by society and the law, but also that we should reconsider and carefully examine the extent to which our conscious thoughts actually enable us to exert self-control. If the link between premeditation and control is spurious for unimportant decisions (such as art selection), it is possible that conscious forethought also has little influence on more important decisions, such as those made when we are confronted with the choice to consume or abstain from the consumption of unhealthy foods, alcohol, cigarettes, and drugs.

We may lament "Why didn't I think this through?" after succumbing to temptation, but it may be that even with significant premeditation we would have woken to find our shirts covered in powdered sugar and donut crumbs, our breath reeking of whiskey, the only difference being the greater sting of guilt caused by considering our gluttonous behavior before we engaged in it. Indeed, much of our behavior is affected by unconscious goals and motivations (Dijksterhuis, Chartrand, & Aarts, 2007; Förster, Liberman, & Friedman, 2007). On the other hand, when we are able to resist our impulses and make the appropriate choice, having consciously rebuffed temptation may make us feel empowered. The experience of conscious conflict may have the additional benefit of making us more satisfied with our choice to behave well (Brehm, 1956; Festinger, 1957).

We are not, however, advocating the embrace of the belief that we are all self-indulgent automatons, powerless to avoid our impulses

to eat fattening foods and wash them down with stiff drinks, particularly as advocating such a belief may have profoundly negative consequences (Vohs & Schooler, 2008). Rather, evidence suggests that the conscious struggle we engage in when faced with self-control dilemmas does actually have some influence over our behavior. We appear to have a limited resource of self-control that we can allocate toward specific tasks (Baumeister et al., 1998; Wegner, 1994). The key puzzle appears to be determining what role conscious thought plays in the theater of self-control. Perhaps conscious thought determines the impulses that we should regulate with this limited resource and the impulses that are not worth attempting to control. We may thus decide to apply our limited resource of self-control to the dilemmas we consider most important, or to prevent the lapses that would reflect most poorly upon ourselves, just as people are able to selectively inhibit the forms of prejudice that are frowned upon by their society (Francis & Maass, 1999). Alternatively, conscious thought may allow us to create automatic behavioral scripts—implementation intentions—that are carried out when we must exert self-control (Gollwitzer, 1999). Ironically, then, premeditation may influence decisions indirectly by automatizing the behaviors we consciously intend to produce.

CONCLUSION

Actors, observers, society, and the law place faith in premeditation as a principle indicator of personal control. The findings presented in this chapter illustrate many instances in which these faith-based judgments are misleading. Actors have difficulty discerning the efficacy of their premeditation, and rely on the apparatus rather than the actual fulfillment of the five criteria we reviewed: (1) having considered or ability or consider *multiple alternatives*; (2) if the meditation they engaged in occurred *prior* to the action or outcome produced; (3) if outcomes were *consistent* with the alternatives they considered; (4) if outcomes were *exclusively* due to internal causation on the part of the actor.

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and (5) if outcomes occurred as a result of the actor's controlled effort.

Observers more superficially assess the fulfillment of these five requirements to determine whether outcomes were caused by an actor's premeditation, and exhibit a general tendency to over-attribute outcomes to actors' premeditated decisions. The cursory examination of alternatives, priority, consistency, exclusivity, and effort by observers is largely due to their lack of first-hand knowledge, which is often inferred from their own intuitions, emotions, and beliefs about actors' meta-desires.

Although premeditation increases the likelihood that we will produce the outcome we intend to perform, its benefits are questionable. Given the serious nature of its social and legal consequences, it may thus be time to re-examine the privileged position of this often ineffective behavior. Premeditation appears to often be no more than ritual: incidental cognition that engenders false feelings of personal control. In spite of this, there may be hope for self-control if we can premeditate far enough in advance to form automatic action plans. Nevertheless, these findings suggest it may be time to seriously question whether premeditation deserves the importance granted to it by society and the law, and whether it should continue to serve as a primary indicator of personal control.

NOTE

1. In this chapter, the terms premeditation, deliberation, and making decisions are distinct. We define premeditation as conscious thought corresponding to the performance of an action or decision before it is produced or determined. We define deliberation as conscious or unconscious consideration of a stimulus, potential action, etc., that may occur before, during, or after the performance of an action or decision. We define making decisions as the process of selecting a course of action to pursue or stimulus when faced with multiple alternatives, whether those alternatives are multiple courses of action and stimuli, or those alternatives involve either selecting an action or stimulus or not selecting that particular action or stimulus.

REFERENCES

- Alicke, M. D. Culpable causation. *J Pers Psychol* 1992; 63(3): 368–378.
- Alicke, M. D. Culpable control and the psychology of blame. *Psychol Bull* 2000; 126(4): 556–571.
- Alloy, L. B., & Abramson, L. Y. Judgment of tendency in depressed and nondepressed clients: sadder but wiser? *J Exper Psychol* 1979; 108: 441–485.
- Anderson, C. J. The psychology of doing not Forms of decision avoidance result from risk and emotion. *Psychol Bull* 2003; 129: 139–152.
- Baumeister, R. F., Bratslavsky, E., Muraven, J., Tice, D. M. Ego depletion: Is the active limited resource? *J Pers Soc Psychol* 1998; 74: 1252–1265.
- Baumeister, R. F., & Heatherton, T. F. Regulation failure: An overview. *Psychol* 1996; 7: 1–15.
- Bem, D. J., & McConnell, H. K. Testing the perception explanation of dissonance phenomena: On the salience of premanipulation attitudes. *J Pers Soc Psychol* 1970; 14: 23–31.
- Brehm, J. W. Postdecision changes in the desirability of alternatives. *J Abnorm Soc Psych* 1956; 52: 384–389.
- Camerer, C., Loewenstein, G., & Weber, M. The curse of knowledge in economic settings: experimental analysis. *J Polit Econ* 1985; 93: 1232–1254.
- Chance, Z., & Norton, M. I. Decision and Why taking your time leads to forget Unpublished manuscript, Harvard Business School, 2007.
- Denno, D. W. A mind to blame: New view on involuntary acts. *Behav Sci Law* 2003; 21: 608–618.
- Dijksterhuis, A. Think different: The merits of conscious thought in preference development and decision making. *J Pers Soc Psychol* 2007; 92: 586–598.
- Dijksterhuis, A., Chartrand, T., & Aarts, H. Effort of priming and perception on social behavior and goal pursuit. In: Bargh, J. A. (Ed.), *The automaticity of thought and the unconscious: The automaticity of thought and the unconscious*. New York, Psychology Press, 2007; pp. 51–132.
- Dijksterhuis, A., & Nordgren, L. F. A theory of unconscious thought. *Perspect Psychol Sci* 2006; 1: 95–109.
- Epley, N., Morewedge, C. K., & Keysar, R. Perspective taking in children and ad

- Equivalent egocentrism but differential correction. *J Exp Soc Psychol* 2004; 40(6): 760-768. United States Sentencing Commission. *Federal sentencing guidelines*, 2004. Available at: <http://www.uscourts.gov/2004guid/2a1.htm> (accessed December 8, 2007).
- Fenichel, T. E. *Altered egos: How the brain creates the self*. New York, NY: Oxford University Press, 2001.
- Festinger, L. A. *Theory of cognitive dissonance*. Stanford, CA: Stanford University Press, 1957.
- Fischhoff, B. Hindsight does not equal foresight: The effect of outcome knowledge on judgment under uncertainty. *J Exp Psychol Hum Percept Perform* 1975; 1: 288-299.
- Fiske, S. Examining the role of intent: Toward understanding its role in stereotyping and prejudice. In: Uleman, J. S., & Bargh, J. A. (Eds.), *Unintended thought*. New York, NY: Guilford Press, 1989; pp. 253-286.
- Förster, J., Liberman, N., & Friedman, R. S. Seven principles of goal activation: A systematic approach to distinguishing goal priming from priming of non-goal constructs. *Pers Soc Psychol Rev* 2007; 11: 211-233.
- Francis, F. M., & Massis, A. Intentional control over prejudice: When the choice of the measure matters. *Euro J Soc Psychol* 1999; 29: 469-477.
- Gilbert, D. T. How mental systems believe. *Am Psychol* 1991; 46: 107-119.
- Gilbert, D. T., & Malone, P. S. The correspondence bias. *Psychol Bull* 1995; 117: 21-38.
- Goethals, G. R., & Reckman, R. F. The perception of consistency in attitudes. *J Exp Soc Psychol* 1973; 9: 491-501.
- Golwitzer, P. M. Implementation intentions: Strong effects of simple plans. *Am Psychol* 1999; 54: 493-503.
- Gray, K., & Wegner, D. M. Blaming God for our pain: Human suffering and the divine mind. *Pers Soc Psychol Rev* in press.
- Greenwald, A. G., Carnot, C. G., Beach, R., & Young, B. Increasing voting behavior by asking people if they expect to vote. *J App Psychol* 1987; 72: 315-318.
- Haidt, J. The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychol Rev* 2001; 108(4): 814-834.
- Harmon-Jones, E., & Mills, J. (Eds.). *Cognitive dissonance: Progress on a pivotal theory in social psychology*. Washington, DC: American Psychological Association, 1999.
- Hart, H. L. A., & Honore, T. *Causation and the law*. New York, NY: Oxford University Press, 1959/2002.
- Ichheiser, G. *Misunderstandings in human relations: A study in false social perception*. Chicago, IL: University of Chicago Press, 1946.
- James, W. *The principles of psychology*. Mineola, New York: Dover, 1890/1955.
- Johansson, P., Haill, L., Sikström, S., & Olsson, A. Failure to detect mismatches between memory and outcome in a simple decision task. *Science* 2005; 310(7): 116-119.
- Jones, E. E., & Davis, K. E. From acts to dispositions: the attribution process in person perception. In: Berkowitz, L. (Ed.), *Advances in experimental social psychology*. Vol. 2. New York, NY: Academic Press, 1965; pp. 219-266.
- Jones, E. E., & Harris, V. A. The attribution of attitudes. *J Exp Soc Psychol* 1967; 3: 1-24.
- Kadish, S. H., & Schulhofer, S. J. *Criminal law and its process: Cases and materials*. New York, NY: Aspen Law & Business, 1995.
- Kahneman, D., & Frederick, S. Representativeness revisited: Attribute substitution in intuitive judgment. In: Gilovich, T., Griffin, D., & Kahneman, D. (Eds.), *Heuristics & biases: The psychology of intuitive judgment*. New York, NY: Cambridge University Press, 2002; pp. 49-81.
- Kahneman, D., Schkade, D., & Sunstein, C. R. Shared outrage and erratic awards: The psychology of punitive damages. *J Risk Uncertain* 1998; 16: 49-86.
- Kelley, H. H. The processes of causal attribution. *Am Psychol* 1973; 28: 107-128.
- Klinckhuck, D. Review: *Outrage, self-control and culpability*. *U Toronto Law J* 1994; 44: 441-463.
- Kruger, J., & Gilovich, T. Actions and intentions in self-assessments: The road to self-enhancement is paved with good intentions. *Pers Soc Psychol Bull* 2004; 30: 328-339.
- Krull, D. S. Does the grist change the mill? The effect of the perceiver's interventional goal in the process of social inference. *Pers Soc Psychol Bull* 1993; 19: 340-348.
- Langer, E. J. The illusion of control. *J Pers Soc Psychol* 1975; 32: 311-328.
- Langer, E. J. *The psychology of control*. Beverly Hills, CA: Sage, 1983.
- Langer, E. J., & Roth, J. Heads I win, tails it's chance: The illusion of control as a function of the influence of outcomes in a purely chance task. *Pers Soc Psychol* 1975; 32: 951-955.
- Mascampo, E. J., & Baumeister, R. F. Toward a physiology of dual-process reasoning and judgment: Lemonade, willpower, and expensive rule-based analysis. *Psychol Sci* 2008; 19: 255-260.
- McFarland, C., Ross, M., & DeCourville, N. Women's theories of menstruation and biases in recall of menstrual symptoms. *J Pers Soc Psychol* 1989; 57: 522-531.
- Milgram, S. *Obedience to authority: An experimental view*. New York, NY: HarperCollins, 1974.
- Miller, D. T., & Ross, M. Self-serving biases in the attribution of causality: Fact or fiction? *Psychol Bull* 1975; 82: 213-225.
- Miller, D. T., Visser, P. S., & Staub, B. D. How surveillance biases perceptions of dishonesty: The case of the counterfactual sinner. *J Pers Soc Psychol* 2005; 89: 117-128.
- Morawetz, C. K., Gilbert, D. T., & Wilson, T. D. The least likely of times: How remembering the past biases forecasts of the future. *Psychol Sci* 2005; 16(8): 626-630.
- Morawetz, C. K., Holtzman, L., & Epley, N. Unfixed resources: Perceived costs, consumption, and the accessible account effect. *J Consum Res* 2007; 34: 459-467.
- Morawetz, C. K., Presson, J., & Wegner, D. M. Timescale bias in the attribution of mind. *J Pers Soc Psychol* 2007; 93: 1-11.
- The *premeditation ritual: Going through the motions of thinking ahead*. Manuscript in preparation, Carnegie Mellon University, 2009.
- Morwitz, V. G., Johnson, E. J., & Schmittlein, D. Does measuring intent change behavior? *J Consum Res* 1993; 20: 46-61.
- Nisbett, R. E., & Wilson, T. D. Telling more than we can know: Verbal reports on mental processes. *Psychol Rev* 1977; 84(3): 231-259.
- Payne, J. W., Samper, A., Bettman, J. R., & Luce, M. F. Unconscious thought in complex decision making. *Psychol Sci* 2008; 19(11): 1118-1123.
- Peters, R., Baumgartner, H., & Bagozzi, R. Biased memory for prior decision making: Evidence from a longitudinal field study. *Organ Behav Hum Decis Process* 2006; 99: 34-48.
- Pharro, D. A., Uhlmann, E., & Bloom, P. Causal deviance and the attribution of moral responsibility. *J Exp Soc Psychol* 2003; 39: 653-660.
- Pharro, D. A., Uhlmann, E., & Sabovey, P. Asymmetry in judgments of moral blame
- and praise: The role of perceived intent. *Psychol Sci* 2003; 14(3): 267-272.
- Presson, J., & Wegner, D. M. The eureka error. *Pers Soc Psychol* 2007; 92: 575-584.
- Pronin, E., Gilovich, T., & Ross, L. Objective of bias in self versus others. *Psychol Rev* 2011(3): 781-799.
- Pronin, E., Wegner, D. M., McCarthy, K., Rodriguez, S. Everyday magical powers: The role of apparent mental causation in the estimation of personal influence. *J Pers Psychol* 2006; 91: 218-231.
- Radin, D. I. Psychophysical evidence of postretrosausal effects in humans. In: Sheehy, D. P. (Ed.), *Frontiers of time, retrosaualism, experiment and theory*. New York: Springer Verlag, 2006; pp. 193-213.
- Ross, L. D., & Nisbett, R. E. *The person and the situation: Perspectives of social psychology*. New York, NY: McGraw-Hill, 1991.
- Schacter, D. L., & Addis, D. R. The cognitive neuroscience of constructive memory: Remembering the past and imagining the future. *Philos Trans R Soc Lond B Biol Sci* 2002; 362: 773-786.
- Schwartz, B., Ward, A., Manton, Lyubomirsky, S., White, K., & Lehman, I. Maximizing versus satisficing: Happiness matter of choice. *J Pers Soc Psychol* 2003; 178-1197.
- Shaver, K. G. *The attribution of blame: Causality, responsibility, and blameworthiness*. New York: Springer-Verlag, 1985.
- Shiv, B., & Fedorikhin, A. Heart and mind in conflict: Interplay of affect and cognition in consumer decision making. *J Consum Res* 2005; 26: 278-282.
- Simon, H. A. *Models of man, social and rational behavior*. New York, NY: Wiley, 1957.
- Spranca, M., Minsk, E., & Baron, J. Omission commission in judgment and choice. *J Exp Psychol* 1991; 27(1): 76-105.
- Tversky, A., & Kahneman, D. Availability: A heuristic for judging frequency and probability. *Cog Psychol* 1973; 5: 207-232.
- Volks, K. D., & Fabur, R. I. Spent resource: Self-regulatory resource availability affects impulse buying. *J Consum Res* 2007; 34: 537-547.
- Volks, K. D., & Schooler, J. W. The value of believing in free will: Encouraging a belief

- determinism increases cheating. *Psychol Sci* 2008; 19: 49-54.
- von Neumann, J., & Morgenstern, O. *Theory of games and economic behavior*. Princeton: Princeton University Press, 1944.
- Wegner, D. M. Ironic processes of mental control. *Psychol Rev* 1994; 101: 34-52.
- Wegner, D. M. *The illusion of conscious will*. Cambridge, MA: MIT Press, 2002.
- Wegner, D. M. The mind's best trick: How we experience conscious will. *Trends Cogn Sci* 2003; 7: 65-69.
- Wegner, D. M., Fuller, V. A., & Sparrow, B. Clever hands: Uncontrolled intelligence in facilitated communication. *J Pers Soc Psychol* 2003; 85: 5-19.
- Wegner, D. M., & Wheatley, T. P. Apparent mental causation: Sources of the experience of will. *Am Psychol* 1999; 54: 480-492.
- Wheatley, T., & Haidt, J. Hypnotic disgust makes moral judgments more severe. *Psychol Sci* 2005; 16: 780-784.
- Weiner, B. *Judgments of responsibility: A foundation for a theory of social conduct*. New York, NY: Guilford Press, 1995.
- Wells, G. L., & Givinsky, I. Mental simulation of causality. *J Pers Soc Psychol* 1989; 56: 161-169.
- Wimmer, H., & Penner, J. Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition* 1983; 11: 103-128.
- Winkielman, P., & Schwarz, N. How pleasant was your childhood? Beliefs about memory shape inferences from experienced difficulty of recall. *Psychol Sci* 2001; 12: 176-179.
- Woolfolk, R. L., Dorris, I. M., & Darley, J. M. Identification, situational constraint and social cognition: Studies in the attribution of moral responsibility. *Cognition* 2006; 100: 283-301.
- Zanna, M. P., & Cooper, J. Dissonance and the pill: An attribution approach to studying the arousal properties of dissonance. *J Pers Soc Psychol* 1974; 29: 703-709.

CHAPTER 15

The Power of Planning: Self-Control by Effective Goal-striving

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ABSTRACT

As highlighted by Kurt Lewin, goal attainment is not yet secured solely by forming strong commitments to highly desirable and feasible goals. There is always the subsequent issue of implementation goal, and one wonders what people can do to enhance their chances of being successful at this phase of goal pursuit. A promising answer seems to be the following: People may plan out in at least four problems that stand out. These problems include getting started with goal striving, stay track, calling a halt, and not overextending oneself. We will describe research showing that making then plans (i.e., form implementation intentions) on how to deal with these problems indeed facilitates solving the crucial problems of goal implementation. Thereafter, we will ask whether implementation fosters goal attainment even under conditions that are commonly viewed as not amenable to self-regulation attempts, such as succeeding on an intelligence test or overcoming spider phobia. Finally, we will report research showing that implementation intentions can even foster goal-striving in those samples (e.g., children with ADHD) that are known to suffer from impaired action control

Keywords: Implementation intentions, Goal intentions, Medial/lateral pre-frontal cortex, Action initiation, Goal shielding, Disengagement, Overextension, Academic test performance, Negotiation performance, Winning competitions, Overcoming habitual responses, Simon effect, Spider phobia, Weapon identification task, Behavior change interventions, Children with ADHD, Response inhibition, Delay of gratification, Set-shifting, Multi-tasking

Research on self-regulation and self-control has defined its object of interest by emphasizing different phenomena and processes. The many targeted phenomena include overriding unwanted thoughts (e.g., related to distractions, temptations, stereotyping, self-inflation), feelings (e.g., anger, disgust, fear, sadness, preparation) and behaviors (e.g., aggressive, immoral, risky, health-damaging, underachieving). The various processes that are assumed to promote self-regulation and self-control pertain to altering the wanted over the unwanted and/or actively inhibiting the unwanted and/or activating the wanted, or by modifying one's current anticipated emotions so that the wanted be executed more easily, and the unwanted be more easily halted or prevented. Often assumed that effective self-regulation and