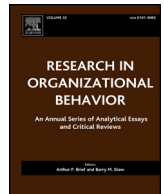




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Moral Utility Theory: Understanding the motivation to behave (un)ethically

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ABSTRACT

Moral Utility Theory provides an integrative framework for understanding the motivational basis of ethical decision making by modeling it as a process of subjective expected utility (SEU) maximization. The SEUs of ethical and unethical behavioral options are proposed to be assessed intuitively during goal pursuit, with unethical conduct emerging when the expected benefits of moral transgressions outweigh the expected costs. A key insight of the model is that any factors that increase the value of a goal—including incentives, framings, and mindsets—can motivate misbehavior by increasing the SEU of unethical conduct. Although Moral Utility Theory emphasizes the automatic and habitual nature of most SEU appraisals, it also describes a mechanism for initiating the deliberative moral reasoning process: the experience of moral uncertainty. Moral uncertainty is proposed to occur when the SEUs of ethical and unethical behaviors are similar in magnitude, thereby activating the behavioral inhibition system and motivating the allocation of attentional resources toward the decision process. This framework bridges the gap between affective and cognitive perspectives on ethical decision making by identifying automatic evaluations as a central driver of moral decisions while also specifying when and how moral reasoning processes are initiated. By combining dual-process models of morality with well-validated principles from the science of motivation, Moral Utility Theory provides theoretical parsimony and formal modeling potential to the study of ethical decision making. The framework also suggests practical strategies—from employee selection and training to goal setting and compensation systems—for encouraging ethical behavior in organizations.

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The importance of business ethics as a field of study is underscored by the many high-profile transgressions of top managers, including accounting fraud, insider trading, misuse of public funds, and neglect of environmental regulations (Adler, 2002). In September 2016, for example, Wells Fargo was fined \$185 million by the Consumer Financial Protection Bureau for opening millions of fraudulent accounts without authorization (Cohan, 2016). In 2017, the US Department of Justice launched a criminal investigation into Uber's "Greyball" software, which was used to identify and deceive government officials attempting to regulate the service (Isaac, 2017). In 2018, the medical diagnostics company Theranos was dissolved after its top executives were found to have been lying about the effectiveness of their products and were indicted for defrauding investors of nearly \$1 billion (Carreyrou, 2018). Although these prominent cases evoke public outcry and demands for reform, less visible moral transgressions pervade all aspects of business operation (Ackroyd & Thompson, 2016).

We present Moral Utility Theory as an integrative framework for understanding the motivational basis of ethical decision making. Drawing upon ideas from psychology, economics, organizational behavior, and neuroscience, our framework outlines the motivational roots of unethical acts by using the principle of expected utility maximization. The core propositions of our theory are: (1) the brain intuitively estimates the utilities of potential actions based on their predicted effects on current goals, and people choose between ethical and unethical actions by implicitly comparing the SEUs of each option; (2) actions that violate proscriptive moral norms are devalued based on the amount of guilt and/or punishment that they are expected to elicit; (3) actions that satisfy prescriptive moral norms are increased in value based on the amount of warm-glow altruism and/or pride that they are expected to elicit; (4) unethical behavior emerges when the expected utilities of behaving unethically are greater than the expected utilities of behaving ethically; this most often occurs when the unethical behavior offers an easier path to achieving a valued goal; (5) factors that increase the value of a goal—including incentives, framings, and mindsets—can motivate misbehavior by increasing the SEU of unethical conduct; (6) moral reasoning about ethical decisions emerges during states of moral uncertainty, where no single behavior can be identified as appropriate from intuition alone (i.e., the expected utilities of ethical and unethical behaviors are similar).

Bringing together the literatures on ethical decision making and motivation provides a number of benefits to both fields. While many factors have been identified as influencing ethical decision making (Bartels, Bauman, Cushman, Pizarro, & McGraw, 2015; Bazerman & Gino, 2012; Moore & Gino, 2013; Tenbrunsel & Smith-Crowe, 2008; Treviño, den Nieuwenboer, & Kish-Gephart, 2014; Treviño, Weaver, & Reynolds, 2006), the sheer number of relevant variables has led to a relatively fragmented understanding of the field; most theoretical models and empirical studies focus on only a small subset of the variables that influence the ethical decision-making process, such as codes of conduct, presence of sanctions, or

ethical climate (Craft, 2012; Ford & Richardson, 1994; Kouchaki, Smith-Crowe, Brief, & Sousa, 2013; Loe, Ferrell, & Mansfield, 2000; Lu, Lee, Gino, & Galinsky, 2018; Lu, Quoidbach, et al., 2017; O'Fallon & Butterfield, 2005). Against this backdrop, we propose that the diverse factors that influence the adoption of ethical choices can be integrated through the parameters of a motivational framework based on *expected utility maximization* for currently held goals. A major benefit of this approach is that it renders the ethical decision-making process much more amenable to formal modeling (Crockett, 2016).

Moral Utility Theory differs from and integrates current models of ethical decision making. Moving beyond purely cognitive approaches (Kohlberg, 1969; Rest, 1986), we provide a detailed motivational framework for modeling the automatic evaluation of ethical and unethical behavioral options. In contrast to sentimental-ist or intuitionist models (Haidt, 2001), we describe the moral reasoning process as a mechanism for eliminating moral uncertainty, rather than as a means of post-hoc rationalization of intuitive moral impulses. Moral Utility Theory builds upon and extends the dual-process models of Reynolds (2006), Cushman (2013), and Crockett (2013) by outlining the motivational basis of deliberative moral reasoning and specifying the conditions under which automatic or controlled processes are likely to have a stronger influence on behavior. Finally, our framework integrates individual differences into all stages of the ethical decision-making process.

Adopting a focus on ethical issues can also benefit the study of motivation. As will be explored below, our theoretical integration emphasizes that motivating employees by increasing rewards for high performance will often incentivize unethical behavior. Understanding this process is critical for encouraging high levels of motivation while minimizing unintended moral consequences. Whereas existing motivational theories are largely silent about the impact of employee motivation on ethical conduct, our framework affords a number of concrete suggestions for enhancing employee motivation in an ethical manner.

We begin by reviewing theories of ethical decision making, including moral reasoning, social intuitionist, and dual-process models. Next, we introduce expected utility maximization as a unifying principle for both motivation and decision making. We then review the neurocognitive foundations of action selection, describing how the brain automatically estimates the utilities of potential actions based on previous experiences of reward and punishment. Building on these literatures, we introduce Moral Utility Theory, which describes the dynamics of ethical decision making within a dual-process framework for expected utility maximization. Finally, we use the new theory to provide practical advice for reducing unethical behavior in organizations.

Theories of ethical decision making

Theories of ethical decision making can be organized into three major categories: rationalist theories that emphasize the

importance of explicit reasoning about moral principles; sentimental theories that emphasize the importance of emotional intuitions; and dual-process theories that attempt to integrate both types of ethical decision making.

The origin of the first theory category is attributed to Kant (1785), who argued that humans should use reason as the basis for judging moral conduct. For Kant and the rationalist school, the apparent rightness of an action is determined by the extent to which it upholds a set of moral rules or principles. This idea was extended by the cognitive-developmental approach to moral reasoning of Kohlberg (1963), who argued that judging right or wrong using universal principles reflects the peak of moral development. Rest (1979, 1986) built on Kohlberg's research by describing ethical decision making as a deliberate process that involves four steps. The first step is moral awareness, which refers to an individual's recognition that an issue is a moral one. The second step is moral judgment, whereby the individual reasons through possible courses of action to decide which ones are morally sound. The third step is moral intention, whereby individuals plan to act in accordance with rules and principles. In the last step, the individual follows through with the moral intention and engages in ethical behavior.

Although influential, these rationalist theories have been criticized for omitting *non-reasoning* components of the ethical decision-making process, such as "gut-feelings" and "intuitions" (e.g., Petrinovich, O'Neill, & Jorgensen, 1993). As a result, scholars have looked to other theories to identify the emotional foundations of ethical decision making.

As the antithesis of the rationalist school, Hume (1739) and the sentimentalists argue that moral judgments are not arrived at through a process of deliberate reasoning, but are instead evident in our automatic emotional reactions to events. That is, the apparent rightness or wrongness of an action derives primarily from the emotional response that accompanies it. Building on this idea, Haidt (2001) in his social intuitionist model of moral judgment contends that "moral intuitions (including moral emotions) come first and directly cause moral judgments" (p. 814), which are then justified and defended by the *post-hoc* process of moral reasoning.

In an effort to reconcile the tension between rationalist and sentimental approaches, Reynolds (2006) portrayed ethical decision making as a two-cycle process of reflective pattern matching and conscious reasoning. This model is based on the discovery of two neurocognitive systems, commonly known as System 1 and System 2 (Evans, 2003; Kahneman, 2011; Smith & DeCoster, 2000). System 1 is a reflexive pattern matching system responsible for automatic processing, implicit learning, and intuition. Following Hume, this system uses associative learning to generate automatic moral intuitions about appropriate and inappropriate conduct, based on whether a situation matches existing prototypes or schemas. In cases where no prototype exists for a given situation, moral reasoning in the tradition of Kant, Kohlberg, and Rest is initiated. The conscious reasoning process is supported by System 2, which involves logical analysis, perspective-taking, and the adoption of behavioral rules. Importantly, Reynolds (2006) argues that the reasoning process supported by System 2 restructures and updates the prototypes that are used automatically by System 1 when making reflexive moral decisions.

More recent dual-process models of ethical decision making have attempted to clarify the underlying dynamics of System 1 and System 2 by characterizing them as model-free and model-based decision-making systems, respectively (Crockett, 2013; Cushman, 2013). This distinction emerged from the study of two distinct neural systems that support learning and decision making (Dolan & Dayan, 2013). Model-free decision making is equivalent to Reynolds' (2006) reflexive pattern matching cycle, in that it

involves the habitual selection of previously rewarded actions in response to a given situation. In contrast, model-based decision making involves the mental simulation of an action and its expected outcomes, enabling a more cognitively demanding but potentially more accurate assessment of an action's appropriateness. Model-based decision making is thus equivalent to Reynolds' (2006) conscious reasoning cycle.

Existing research strongly supports these dual-process models of ethical decision making, recognizing that both unconscious and conscious dynamics play a role in ethical conduct. In line with Hume, intuitive emotional appraisals of harmful actions show a marked influence on ethical decision making. At the same time, however, conscious reasoning about ethical dilemmas can shift response patterns to be more in line with abstract ethical principles, as advocated by Kant. A variety of innovative study designs have emphasized that both of these processing dynamics can simultaneously influence the ethical decision-making process (Bartels et al., 2015; Conway & Gawronski, 2013; Greene, Nystrom, Engell, Darley, & Cohen, 2004).

Moral Utility Theory builds upon these dual-process models by integrating them with motivational theory and the process of expected utility maximization. In doing so, we provide a clearer view of the motivational dynamics that govern reflexive action selection (System 1) and the engagement of the conscious reflection process (System 2) during ethical-decision making, along with the role of individual differences at each stage of the process. We turn next to a discussion of utility maximization and its central role in motivational theory.

Utility maximization in motivation and decision making

One of the most influential models of decision making is the principle of subjective expected utility (SEU) maximization (Savage, 1954; Schoemaker, 1982; Von Neumann & Morgenstern, 1944). As a key substrate of modern decision theory, this principle asserts that people select behaviors that are expected to result in the greatest subjective utility, an economic term reflecting the value or satisfaction that an individual receives from an event. An action's SEU is calculated as the product of (1) the expectation (also known as expectancy or subjective probability) that it will lead to an outcome and (2) the subjective utility of that outcome. This can be described by the multiplicative formula: **SEU = Expectation × Subjective Utility**.

The principle of SEU maximization was applied to the study of motivation in expectancy theory (Vroom, 1964) and expectancy-value theory (Atkinson, 1964). These theories posit that people choose behaviors that are expected to produce the most valued outcomes. In effect, people are proposed to make SEU judgments about how much effort they should expend in their tasks. When people believe that their actions will lead to desired outcomes, they become engaged and productive. If they do not perceive any relationship between their actions and the attainment of desired outcomes, however, motivation will plummet. Many theories have incorporated the idea that behavioral choice is driven by subjective calculations of the expectations and utilities associated with each action, making the principle of SEU maximization a key aspect of motivational theory (Ajzen, 1991; Bandura, 1977; Kanfer & Ackerman, 1989; Klein, 1991; Locke, Latham, & Smith, 1990; Naylor, Pritchard, & Ilgen, 1980; Staw, 1977; Wigfield & Eccles, 2000).

Despite the widespread influence of SEU maximization approaches, they have been criticized on a number of grounds. Early work in expectancy theory, for example, suffered from methodological limitations (e.g., Heneman & Schwab, 1972). The axiomatic underpinnings of the SEU approach have also been criticized for inadequately reflecting the empirical findings about

human decision making (Luce, 1992; Wabba & House, 1974). Modern theories of SEU maximization address these limitations by incorporating ideas from behavioral economics that better reflect actual choice behavior (Steel & König, 2006). Many of these insights are derived from Cumulative Prospective Theory (CPT; Tversky & Kahneman, 1992). For instance, CPT's asymmetry between gains and losses requires that expectations and utilities be calculated separately for positive and negative outcomes. Incremental gains and losses also tend to have less subjective impact as they deviate from the status quo or reference point (i.e., diminishing sensitivity), with steeper changes in utilities for marginal losses compared to marginal gains (i.e., loss aversion). Finally, CPT alters the expectation parameters of traditional utility models, such that high probabilities become underweighted and low probabilities become overweighted.

SEU maximization models have also incorporated the principle of temporal discounting, such that the utility or disutility of an outcome decreases as a hyperbolic function of the delay to experiencing that outcome (Frederick, Loewenstein, & O'donoghue, 2002). Mathematically, this means that the product of the expectation and utility terms as derived from CPT is divided by the product of (1) the delay to experiencing an action's consequences and (2) the rate at which the individual discounts losses and gains over time (Steel & König, 2006). Thus, if the consequences of an action are not expected to occur until the distant future, their motivational impact will decrease. For instance, the dangers associated with smoking or unhealthy eating can take years to manifest, such that the delayed costs are less salient when engaging these actions.

The principle of SEU maximization has also been linked to theories of motivation that emphasize the self-regulation of behavior through the pursuit of goals (Austin & Vancouver, 1996; Bandura, 1989; Carver & Scheier, 1998; Kruglanski et al., 2002; Latham & Locke, 1991). Goals are well known for their ability to regulate effort, persistence, and performance (Locke & Latham, 2002; Staw, 1984). They can vary in their levels of abstraction, ranging from concrete behaviors (e.g., drive to work) to higher-order life goals (e.g., be a good father). In a hierarchical goal structure, the utility of attaining a sub-goal is derived from the higher-order goals that it is nested within (Austin & Vancouver, 1996; Carver & Scheier, 1998; Cropanzano, James, & Citera, 1993; Kruglanski et al., 2002; Miller, Galanter, & Pribram, 1971; Peterson, 1999; Powers, 1973; Trope & Liberman, 2010; Vallacher & Wegner, 1985). The utility of meeting a sales goal, for example, depends upon the utility of performing well at one's job, which may depend on the utility of having a high income or being perceived as competent. Higher-order goals, meanwhile, derive their utilities from the basic psychological needs that motivate behavior (Deci & Ryan, 2000; Deshon & Gillespie, 2005; Dweck, 2017; Murray, 1938). Although there is not yet a consensus on the full taxonomy of these needs, there is broad support for the existence of needs related to affiliation, competence, and autonomy. The personal importance of these basic psychological needs is strongly related to personality characteristics (Barrick, Mount, & Li, 2013; Costa & McCrae, 1988), allowing individual differences in need strength to impact the SEU of possible actions. As will be elaborated upon later, we regard differences in the needs for affiliation and competence to be particularly relevant for ethical decision making.

In the context of SEU maximization, goals define the reference point around which positive and negative utilities are calculated (Heath, Larrick, & Wu, 1999). When a difficult goal is set, the reference point against which outcome utilities are evaluated becomes much higher than it was without the goal. As a result, the individual's current state is evaluated as having a negative utility relative to the new goal (a highly aversive state in the context of CPT's loss aversion). The discrepancy between the current and

desired states motivates behavior by imbuing goal-directed actions with positive SEU values. In contrast, setting easy goals adjusts the reference point to be only slightly higher than the initial state, such that there is less incentive to exert effort and persistence. Goals that are too difficult, however, can have a demotivating effect because the expectation for success is low, reducing the SEU of associated actions.

Overall, the SEU maximization approach provides an integrative foundation for decision-making and motivational theories. People will be motivated to engage in actions with large positive SEUs and avoid actions with large negative SEUs. As the SEU of an action approaches zero, its motivational relevance disappears. Moral Utility Theory argues that the SEU approach can help integrate the study of motivation and ethical decision making. Before applying these ideas to the moral domain, however, we first review the neural basis of SEU maximization to emphasize its compatibility with intuitionist models of ethical decision making.

Neurocognitive perspectives on action selection

Although the principle of SEU maximization plays a central role in decision theory (as well as theories of motivation), it has been criticized for requiring too much cognitive effort (Lord, Hanges, & Godfrey, 2003). This critique is based on the assumption that the SEU of all salient behavioral options must be calculated *consciously* before a decision can be made, a task that would overwhelm our limited cognitive capacities. Recent advances in cognitive neuroscience, however, describe how the calculation of action utilities can be handled *unconsciously* without requiring attentional resources (Cisek & Kalaska, 2010; Todorov, 2004). In this section, we describe the neurocognitive foundations of the SEU framework, which we propose underlie the dynamics of both motivation and ethical decision making.

From an evolutionary perspective, a key task of the brain is to identify adaptive responses to sensory information (Swanson, 2003). In other words, the brain must choose actions that maximize rewards and minimize costs, given informational limits and processing biases (Friston, 2009; Körding, 2007). According to the hierarchical predictive processing approach (Clark, 2013; Friston, 2005), the brain accomplishes this by constantly predicting what will happen in the future (across timescales and levels of abstraction) based on statistical regularities in previous experience. These predictions are used as the basis of action choices, such that every action a person takes is the brain's "best guess" about how to most efficiently achieve its goals.

Specifically, the activation of a goal (e.g., a desire for affiliation) involves a discrepancy between desired and perceived states of the world (Carver & Scheier, 1998; Miller et al., 1971). An array of behavioral options are then activated automatically, based on previous experiences and beliefs about how best to achieve the goal state (Cisek & Kalaska, 2010; Hirsh, Mar, & Peterson, 2012). These behavioral options are evaluated based on their expected utilities in the current situation, as calculated by the brain's dopaminergic reward network (Glimcher, 2004; Rolls, 2000; Schultz, 1998). The firing patterns of dopamine neurons in a variety of decision-making tasks are consistent with formal economic utility estimates (Schultz, Stauffer, & Lak, 2017), suggesting that they provide a common neural currency for comparing the SEUs of different behavioral options (Levy & Glimcher, 2012). The behaviors that are ultimately selected are the ones that are predicted to most efficiently bring about the desired goal state and thus have the highest SEU (Todorov, 2004). If a behavior is associated with a high SEU, as reflected in the dopamine signal, the individual experiences a high level of incentive motivation, compelling action (Berridge, 2007). Indeed, parts of the dopamine network have direct outputs to the brain's

motor systems, selectively potentiating behavioral responses that are associated with predicted rewards (Floresco, 2015). Behavioral options with low SEU are not imbued with the same motivational force and will likely not be engaged.

The predictive processing approach also explains the process of behavioral learning. When an action is executed, a representation of the expected outcome is compared with sensory input (Vinogradova, 2001). Any discrepancies between expectations and experience are then used as the basis of learning, refining the predictive accuracy of the cognitive system (Holroyd & Coles, 2002). Much of this learning occurs through the processing of reward prediction errors in the brain's dopamine system, which updates the SEU associated with various actions in response to actual outcomes (Schultz, 1998). The same learning process can unfold when imagining an action, such as stealing from work, and updating its SEU based on the results that are predicted to occur, such as getting fired (Jahn, Nee, & Brown, 2011). As a result of this imagined outcome, the SEU of the behavioral option will be lower when making the actual decision.

Importantly, action selection occurs unconsciously, with the most promising behavioral options (those with the highest SEU) leaping into consciousness automatically. This is equivalent to the reflexive pattern matching cycle identified by Reynolds (2006), in which situational prototypes are automatically associated with habitual behavioral responses. Reframing this process in motivational terms emphasizes that habitual responses to familiar situations are precisely those that were previously found to have the highest SEU, based on an individual's reinforcement history.

Building on this idea, our basic framework proposes that people choose between ethical and unethical actions by implicitly comparing their SEUs. These SEUs reflect an individual's intuitive predictions based on prior experiences of reward and punishment in similar situations, incorporating common processing biases such as temporal discounting and the overweighting of small probabilities (Steel & König, 2006). Although these intuitive predictions are the brain's best guess about the utilities of different behaviors, it should be noted that the SEU estimates produced by System 1 can easily be influenced by factors that alter the salience of different actions, outcomes, or situational characteristics (Tversky & Kahneman, 1974).

Proposition 1. The brain intuitively estimates the utilities of potential actions based on their predicted effects on current goals, and people choose between ethical and unethical actions by implicitly comparing their SEUs.

Ethical decision making as SEU maximization

Given that the principle of SEU maximization is such a powerful framework for studying behavioral choice, we use it to help understand the process of ethical decision making. In the early days of modern philosophy, utility maximization was associated with the moral question of proper behavioral conduct. In fact, the term “expected utility” was originally described as “moral expectation” in reference to the positive or negative outcomes that were predicted to result from a given choice (Bernoulli, 1954). The philosophy of utilitarianism builds on this by arguing that the ethically “right” thing to do in any given situation is to initiate the action with the highest expected utility for the largest number of people (Bentham, 1878).

Fig. 1 highlights how Moral Utility Theory applies SEU maximization to the ethical decision-making process. Behavior is proposed to be goal-directed, with action possibilities being evaluated for their ability to achieve current goals. In any moment, a variety of ethical and unethical behaviors are available as possible means to goal achievement. Each ethical and unethical action is proposed to have a distinct expectation for successfully producing desired outcomes. The SEU of an action is obtained by multiplying this expectation by the outcome's utility, defined in relation to currently active goals. Consistent with the bounded rationality framework (Simon, 1982), an individual's expectations and utility estimates are subject to the attentional limitations and processing biases inherent within the human cognitive system. The SEUs for different actions are continuously updated in response to experienced and imagined outcomes through the process of reinforcement learning, with the automatic retrieval of stored SEUs serving as the basis for intuitive decision making in subsequent situations. We propose that the process of ethical decision making involves an implicit comparison of the SEUs for ethical behaviors and unethical behaviors (i.e., those that violate moral norms). If an unethical behavior evokes a higher SEU and thus a greater

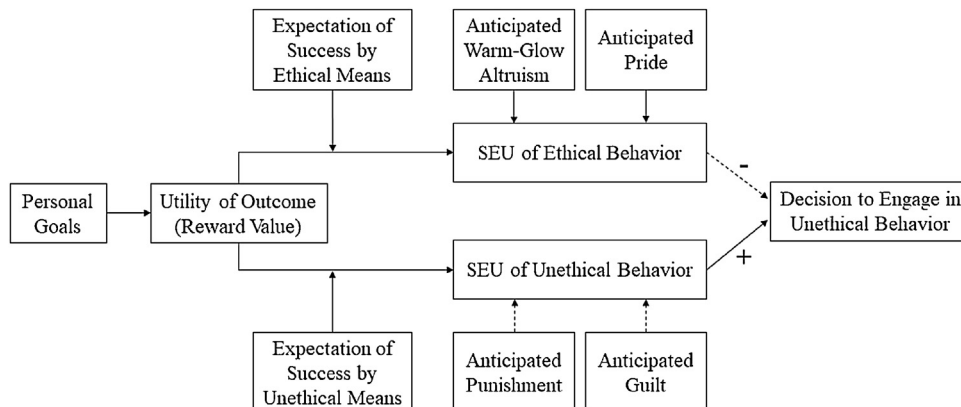


Fig. 1. Intuitive comparison of expected utilities for ethical and unethical actions*.

*Ethical decision making is proposed to involve an intuitive comparison of the subjective expected utility (SEU) of ethical and unethical behaviors. This intuitive comparison is based on previous experiences of reward and punishment. The model highlights that there are different expectations for success attached to ethical and unethical behavioral strategies for attaining the same goal. Anticipated guilt and punishment reduce the SEU of the unethical strategy and anticipated pride and feelings of warm-glow altruism increase the SEU of the ethical strategy. Higher outcome utilities for a desired goal increase the SEUs of both ethical and unethical behaviors. Although anticipated punishment, guilt, warm-glow altruism, and pride can all be conceptualized as outcome utilities and thus lumped in with reward value, they are modeled separately to reflect their differential associations with ethical and unethical behavior. Unethical behaviors are tempting when they promise an easier path to achieving a valued reward; ethical strategies, in contrast, are often associated with a more difficult and less certain path to desired outcomes. The utility of outcome parameter accordingly reflects the value of the goal that is desired, regardless of whether it is achieved by ethical or unethical means. Variables that increase motivation by increasing the value of an outcome run the risk of increasing unethical behavior, effectively motivating people to misbehave.

motivational force, it will be pursued. If an ethical behavior has a higher SEU, transgressions will be avoided.

Critically, we suggest that any factors that influence unethical behavior will be mediated by changes in the SEU parameters of our model, reflecting changes in the expectancies or utilities associated with ethical or unethical actions. As outlined below, we propose that the SEU of unethical behavior can be reduced by anticipated guilt and punishment, which reflect the intrinsic and extrinsic costs of moral violations, respectively (Brief & Aldag, 1977). Conversely, we propose that the SEU of ethical behavior can be increased by anticipated feelings of warm-glow altruism and pride in one's accomplishments, which reflect the intrinsic benefits that can accompany ethical conduct. Both intrinsic and extrinsic utilities are thus proposed to influence the choice between ethical and unethical actions (see Staw, 1977 for a similar approach to employee motivation that accounts for the impact of both intrinsic and extrinsic utilities).

Negative utilities of unethical conduct

Given that unethical short-cuts are often more effective than ethical behaviors at bringing about desired outcomes (i.e., they have higher expectancies and thus higher SEUs), why would anyone restrict themselves to ethical actions in these situations? From the perspective of Moral Utility Theory, the answer has to do with the anticipation of negative outcomes. In particular, we propose that the prospects of guilt (i.e., intrinsic cost) and punishment (i.e., extrinsic cost) are strong disincentives that uniquely lower the SEU of unethical actions.

Guilt

Guilt is a self-conscious emotion that emerges when people believe they have failed to live up to a moral standard (Tangney, 1999), especially as a result of interpersonal transgressions (Baumeister, Stillwell, & Heatherton, 1994). The experience of guilt is highly aversive and has powerful effects on behavior, reducing the appeal of guilt-inducing actions (Amodio, Devine, & Harmon-Jones, 2007) and decreasing their chance of being repeated in the future (Baumeister, Vohs, DeWall, & Zhang, 2007). Feelings of guilt also motivate conciliatory behaviors that help compensate for interpersonal transgressions, thus preserving social integrity (Baumeister et al., 1994). Similarly, anticipated guilt helps regulate behavior by encouraging the avoidance of guilt-inducing actions (Kaiser, 2006; Lindsey, 2005) and facilitating the adoption of other people's perspectives during social interactions (Leith & Baumeister, 1998).

Guilt has long been recognized for supporting social regulation (Dodds, 1951). It is classified as a "moral emotion" (Tangney, Stuewig, & Mashek, 2007) because feelings of guilt are linked to the intuitive sense of something being morally wrong (Haidt, 2001). Because guilt is an aversive emotional state, behaviors that increase guilt can be conceptualized as having an emotional cost that reduces their incidence. People who are less prone to guilt are more likely to commit a variety of moral transgressions (Cohen, Panter, & Turan, 2013; Cohen, Wolf, Panter, & Insko, 2011; Tibbetts, 2003). Extreme insensitivity to guilt, as reflected in psychopathy, is likewise associated with severe transgressions (Babiak & Hare, 2006; Hare, 1999). Individuals who are less prone to guilt thus experience a lower psychological cost when committing moral transgressions, and are less concerned about the well-being of others when pursuing their own interests (Krajbich, Adolphs, Tranel, Denburg, & Camerer, 2009).

On the other end of the spectrum, guilt proneness is associated with higher levels of Agreeableness and Conscientiousness (Cohen et al., 2011; Fayard, Roberts, Robins, & Watson, 2012), the same traits that reduce counterproductive work behaviors (e.g., theft

and sabotage) (Salgado, 2002). Indeed, so-called "integrity" tests, which are designed to screen out job applicants with a high likelihood of unethical conduct, are strongly associated with Agreeableness and Conscientiousness (Sackett & Wanek, 1996). These traits also predict stronger moral concern (Hirsh, DeYoung, Xu, & Peterson, 2010) and attentiveness to moral issues (Reynolds, 2008). Individual differences in guilt sensitivity, as partially reflected in Agreeableness and Conscientiousness, thus play a central role in ethical decision making.

In the context of SEU maximization, we suggest that guilt reflects the intrinsic costs associated with violating a moral norm or rule. In support of this notion, the magnitude of the guilt response to moral transgressions is moderated by the perceived utility of the relationship that is threatened (Nelissen, 2014). In other words, people are most likely to experience guilt when they violate the normative expectations of other individuals who are instrumental to one's own goal pursuit (including affiliative goals in the context of close relationships). Guilt thus appears to facilitate SEU maximization by helping people to avoid actions that could damage important relationships, which could in turn damage their ability to achieve valued goals. Although unethical behavior may lead to desired outcomes, the experience of guilt is strongly aversive and will decrease the SEU associated with unethical acts.

Punishment

Whereas guilt reflects the intrinsic costs of unethical behavior, we must also account for the extrinsic costs, as reflected in the potential for punishment. Punishment is the application of an aversive stimulus or removal of an appetitive one (Skinner, 1971). Behaviorist theories emphasize that punishment decreases the occurrence of the actions that come to be associated with it. Anticipated punishment accordingly serves as a warning about the external costs of a transgression. People who are less sensitive to the negative consequences of their actions are thus more likely to behave unethically (Damasio, Tranel, & Damasio, 1990).

Punishment also plays a role in regulating ethical behavior within organizations (Arvey & Ivancevich, 1980; Treviño, 1986). The threat of punishment is a powerful mechanism of social control, with power-holders selectively applying punishment in order to maintain desired forms of social conduct (Garland, 1993). Groups that provide avenues for punishing deviants are better able to sustain cooperative behavior for mutual gain, while those without such avenues tend to be dominated by more selfish actors (Fehr & Gächter, 2000). Moral transgressions that go unpunished are likely to continue occurring, as people learn that there are no costs associated with such transgressions. Punishing transgressions sends an important message that such behavior will not be tolerated, thus helping to reduce its incidence (Treviño & Ball, 1992).

External sanctions can also trigger feelings of shame, adding to the subjective magnitude of experienced punishment (Warren & Smith-Crowe, 2008). Shame, although related to guilt, is differentiated by its public character. Whereas guilt reflects the feeling that one has not lived up to a personal standard, shame reflects the social recognition of this failure (Tangney, Miller, Flicker, & Barlow, 1996). Shame-prone individuals would thus not only experience the objective costs associated with a social sanction, but also the subjective costs associated with the shame of the transgression. Because shame depends upon the social recognition of a transgression (e.g., being caught), we subsume it within the external sanction or punishment variable of our model.

It is also important to note that sensitivity to punishment varies substantially from one person to the next, and is linked to the personality trait of Neuroticism (Corr, 2004; Gray, 1982). A greater sensitivity to punishment leads neurotic individuals to be more

highly motivated to avoid aversive outcomes (Corr, Pickering, & Gray, 1995). At the opposite end of the spectrum, an extreme insensitivity to punishment is associated with psychopathy and antisocial behavior, reflecting an indifference to negative outcomes (Patterson & Newman, 1993). Punishment sensitivity can also vary with situational factors, thereby altering the SEUs associated with aversive outcomes. Temporary increases in testosterone levels, for example, can encourage aggressive and antisocial behavior by reducing punishment sensitivity (van Honk et al., 2004).

The potential for punishment decreases the SEU of a behavioral strategy.¹ These heightened costs are a function of the likelihood and severity of a punishment resulting from the behavior (Tittle, 1980). If, for example, the individual perceives a miniscule chance of getting caught, then the external punishment is unlikely to have a strong impact on the decision process. An individual's sensitivity to negative outcomes, meanwhile, will affect the perceived severity of a potential punishment, influencing the extent to which it affects the SEU of an unethical action.

Proposition 2. Actions that violate proscriptive moral norms are devalued based on the amount of guilt and/or punishment that they are expected to elicit.

Positive utilities of ethical conduct

While anticipated guilt and punishment serve as the key negative utilities associated with unethical conduct, it is also important to consider the positive utilities associated only with ethical behaviors. These positive utilities reflect the intrinsic value of engaging in ethical actions and thus tend to make such actions relatively more appealing when making moral decisions. We propose two primary sources of positive utility that can emerge from ethical conduct: warm-glow altruism when helping others and pride when successfully completing a difficult task. These are particularly likely to emerge when conforming to prescriptive moral norms that emphasize the engagement of virtuous actions such as helping others, but not when conforming to proscriptive moral norms that emphasize the avoidance of unethical actions such as harming others (Janoff-Bulman, Sheikh, & Hepp, 2009). In other words, people are unlikely to feel a sense of warm-glow altruism or pride simply by refraining from bad behavior.

The warm-glow of altruism

The theory of warm-glow altruism states that humans display altruistic behaviors because doing so provides a personal sense of satisfaction (Andreoni, 1990). In other words, there is an intrinsic positive utility associated with helping others, such that apparently "selfless" behaviors can be rooted in the "selfish" desire to maximize one's SEU (De Waal, 2008; Lu, Zhang, Rucker, & Galinsky, 2018). Neurocognitive models support this contention, demonstrating that acts of charitable giving are associated with a release of dopamine in the brain, reflecting the experience of reward (Mayr, Harbaugh, & Tankersley, 2008). The "warm glow" feeling that results from acts of compassion has been conceptualized as a positive emotion that encourages subsequent giving behavior (Goetz, Keltner, & Simon-Thomas, 2010). This feeling can be so positive, in fact, that doing kind things for others is one of the best ways to ensure personal happiness (Dunn, Aknin, & Norton, 2008). Tendencies toward prosocial acts can be traced back to the need for affiliation, reflecting the positive utility of forming social bonds with others (Baumeister & Leary, 1995), or the related need to

maintain a positive self-image (Leary & Baumeister, 2000). Interestingly, both the need for affiliation and the tendency to care for others are associated with the personality trait of Agreeableness (Habashi, Graziano, & Hoover, 2016). This suggests that highly agreeable individuals are more likely to perceive positive utility in ethical conduct as well as negative utility in unethical conduct, contributing to their prosocial orientation.

Pride

Ethical behavioral strategies may also be associated with positive utilities because they generate a sense of accomplishment. The need for achievement, competence, or mastery has been identified as one of the basic human needs, varying to different degrees in different people (McClelland, Atkinson, Clark, & Lowell, 1976; White, 1959). Successful completion of a challenging task tends to increase feelings of mastery and achievement, which are reflected in the emotion of pride (Weiner, 1985). Pride is considered to be a moral emotion inasmuch as it encourages people to face difficult challenges with integrity and without compromising one's honor or personal values (Tangney et al., 2007).² Taking pride in one's work, for instance, is a facet of the Protestant work ethic, reflecting a positive sense of accomplishment in one's efforts (Furnham, 1990). Importantly, pride is less likely to emerge from work that is completed through unethical means. Although taking unethical short-cuts at work can result in the same positive extrinsic utilities as an ethical strategy (e.g., taking credit for someone else's contributions in order to gain status), they will not provide the same intrinsic benefits associated with pride-worthy achievements.

Proposition 3. Actions that satisfy prescriptive moral norms are increased in value based on the amount of warm-glow altruism and/or pride that they are expected to elicit.

Comparing the utilities of ethical and unethical actions: understanding when people are motivated to misbehave

Moral Utility Theory predicts that people will behave unethically when the SEU of an unethical behavior is greater than that of an ethical alternative. Within the SEU maximization framework, positive incentives for unethical behaviors are rooted in the belief that they will be highly effective for the attainment of valued goals. Putting aside the incentives provided by anticipated guilt, punishment, warm-glow altruism, and pride, unethical conduct is only appealing when it provides an easier path to a desired outcome or goal. Negotiators would not feel tempted by the use of deceptive tactics if they did not believe that doing so provided them with a strategic advantage compared to a more honest approach. Unethical behaviors such as lying, cheating, and stealing can be tempting precisely because they promise an easier path to valued rewards. Limiting one's self to ethical strategies, in contrast, may be associated with a more difficult and less certain path to desired outcomes. If an unethical action does not provide an easier path to a desired outcome or goal (i.e., higher expectation levels), it will be no more appealing than an ethical action. Our model further suggests that any expectancy-driven gains in positive SEU from an unethical act must be large enough to offset the accompanying increases in negative SEU (anticipated guilt and punishment) or the loss of positive SEU for ethical actions (warm-glow altruism and pride).

¹ Unless the punishment is perceived as unjust (Treviño, 1992). When a punishment is perceived as a moral violation, it can stimulate hostile attempts at retributive justice (Darley & Pittman, 2003).

² Although pride can lead to undesirable outcomes when it is associated with feelings of superiority and hubris (Tracy & Robins, 2007), expressions of pride are generally associated with a positive evaluation of one's actions and abilities in the eyes of others (Cheng, Tracy, & Henrich, 2010).

Proposition 4. Unethical behavior emerges when the expected utilities of behaving unethically are greater than the expected utilities of behaving ethically; this most often occurs when the unethical behavior offers an easier path to achieving a valued goal.

A key implication of our model is that increasing the desire to attain a goal can increase the prevalence of moral transgressions, especially when the expectancies of ethical strategies and unethical strategies differ considerably. That is, variables that make the outcome more valuable (reflecting a higher SEU) will increase motivation and the use of unethical behavior to attain that outcome. We use the phrase “motivated to misbehave” to capture this relationship between motivation and unethical behavior.

Imagine, for example, that an employee is working to meet quarterly sales targets at a furniture store. In attempting to close each sale, the employee will evaluate potential actions (i.e., sales tactics) based upon their expected utilities (i.e., whether they will lead to a successful sale). Some of these actions (such as using deception) might be considered unethical, even though they have a higher probability of success (e.g., 30% chance of success for ethical and 60% chance of success for unethical sales tactics). Assuming a subjective outcome utility of 100 for completing the sale, the ethical and unethical actions have SEUs of 30 and 60, respectively. Because the employee intuitively feels that he will feel guilty about lying, with a negative utility of 40, however, the total SEU for the unethical tactic is lowered to 20, making it less appealing than the ethical approach. But what might happen if the company changes its policy and increases the commission rate, doubling the utility of a successful sale to 200? The ethical and unethical actions now have SEUs of 60 and 120, respectively. Factoring in the same amount of anticipated guilt, the deceptive sales tactic now has an SEU of $120 - 40 = 80$, making it more appealing than the ethical approach. Based on the logic of SEU maximization, our framework proposes that even small differences in expectations for success of ethical and unethical behavioral strategies will be amplified in proportion to the desirability of the outcome. Highly valued outcomes that present difficult ethical paths to goal achievement, but which can be readily attained by an unethical path, will evoke unethical responses.

Proposition 5. Factors that increase the value of a goal—including incentives, framings, and mindsets—can motivate misbehavior by increasing the SEU of unethical conduct.

Existing research suggests that motivation-enhancing factors can indeed increase unethical behavior. For instance, higher levels of time pressure have been shown to heighten task focus, motivation, and productivity (Karau & Kelly, 1992). Time pressure is also, however, a risk factor in ethical decision making (Moberg, 2000). Similar effects are observed in rivalry situations, which involve intense competition between parties. Although competitive situations can mobilize greater motivation and desire to succeed (Kilduff, 2014; Kilduff, Elfenbein, & Staw, 2010), they also increase unethical behavior such as employing unethical negotiation tactics and over-reporting performance (Kilduff & Galinsky, 2017; Kilduff, Galinsky, Gallo, & Reade, 2016). Adopting a loss frame, in which people focus on avoiding an imminent failure, similarly boosts motivation to perform well (Berger & Pope, 2011; Pope & Schweitzer, 2011), but increases the misuse of insider information and interpersonal deception (Kern & Chugh, 2009). Finally, setting clear and difficult goals is one of the most effective ways to increase motivation and persistence at a task (Locke & Latham, 2002), yet the increased motivation to achieve well-defined performance targets may also lead to unethical behavior (Ordóñez, Schweitzer, Galinsky, & Bazerman, 2009; Schweitzer, Ordóñez, & Douma, 2004).

What is common to these examples is that unethical behavior increases when a reward is highly valued; in many cases the high-value reward seems more easily attainable by an unethical strategy. Our integration of motivational theory with ethical decision making suggests that unethical behavior is more likely when the utility of a desired outcome is high, and the probability of achieving it is larger for an unethical behavioral strategy than an ethical one. In particular, the marginal increase in SEU associated with the unethical strategy over the ethical one must be large enough to outweigh the accompanying negative SEU associated with anticipated guilt and punishment.

Our framework also helps to explain why observing colleagues succeed via unethical routes can greatly increase the likelihood of one's own moral transgressions. As emphasized in previous research, the observation of unethical behavior by an in-group member can alter the perception of group norms about moral conduct, thereby reducing the amount of guilt that is anticipated from an unethical act (Gino, Gu, & Zhong, 2009). According to our framework, watching someone else succeed via unethical means should also boost the SEU of unethical conduct for two additional reasons. In particular, the observed success of another's moral transgression will increase the expectancy that unethical conduct will lead to desired outcomes. Assuming that the observed transgression is not reprimanded, the anticipated punishment associated with the unethical act will likewise decrease. In effect, observing unethical conduct from one's group members can simultaneously increase the positive SEU and decrease the negative SEU associated with unethical behavior.

Building on findings from the study of motivation and decision making, we have argued that people engage in actions, whether ethical or unethical, that are expected to result in the largest SEU. These SEU values are calculated automatically based on past experience, and can be considered equivalent to one's intuition about how best to respond. The emphasis on affective responses (e.g., guilt, pride, warm-glow altruism), in alignment with the affective revolution in organizational behavior (Barsade, Brief, Spataro, & Greenberg, 2003), places the first part of our theory in the tradition of Hume's sentimentalism, such that emotional intuitions are regarded as the source of moral judgments (Haidt, 2001; Hume, 1739). In the following section, we add a dual-process extension of the basic SEU model, outlining a role for moral reasoning in the Kantian tradition.

Moral uncertainty and the emergence of reason

Our model thus far has relied on unconscious associative processes (System 1) and has not yet included a role for conscious controlled processing (System 2). As detailed above, automatic calculations of expected utility play a central role in action selection. In line with the broader SEU maximization framework, those actions that are intuitively anticipated to result in the greatest apparent utility are likely to be selected (although these intuitions are subject to a variety of processing biases; Tversky & Kahneman, 1974). The conscious, deliberative system is also known to have an important role in ethical decision making, however (Kohlberg, 1969; Rest, 1986). Accordingly, Moral Utility Theory offers a dual-process extension of the basic SEU framework detailed above. In particular, we incorporate a motivated resource allocation model, in which limited attentional resources are deployed during states of moral uncertainty.

Resource allocation models recognize that attentional resources are finite (Miller, 1956) and must be allocated strategically during goal pursuit. Models of decision making have long recognized the idea that humans are “cognitive misers”, with a tendency to allocate the minimum attention necessary to adequately complete a task (Fiske & Taylor, 2013; Simon, 1982).

Given the option, people tend to prefer activities that are less cognitively demanding, reflecting an intrinsic cost to mental effort (Kool, McGuire, Rosen, & Botvinick, 2010). Such behavior can be explained from an evolutionary perspective by considering the many opportunity costs associated with attentional engagement in a particular task; as working memory becomes preoccupied by one problem, it becomes unavailable to deal with any others that may emerge (Kurzban, Duckworth, Kable, & Myers, 2013). Accordingly, the allocation of the attentional resources associated with System 2 is a strategic concern.

Recent work in cognitive neuroscience has begun to reveal the motivational bases of these attentional allocation decisions (Botvinick & Braver, 2015; Inzlicht, Schmeichel, & Macrae, 2014; Shenhav, Botvinick, & Cohen, 2013; Shenhav et al., 2017; Westbrook & Braver, 2015). These models emphasize the role that dopamine plays in motivating mental effort. In particular, the dopamine system has outputs into areas of the brain that are known to be associated with working memory, and has long been recognized for its role in supporting cognitive control and executive attention (Sawaguchi & Goldman-Rakic, 1991). Higher levels of dopamine release are associated with improved attentional focus, and a greater ability to sustain System 2 activity in the face of a challenging task (Westbrook & Braver, 2016). When dopamine levels drop, reflecting reduced expectations of reward, cognitive performance tends to decrease as attention drifts toward other (potentially more valuable) concerns. In effect, motivated resource allocation models propose that executive attention is deployed only when doing so is predicted to be worthwhile for the achievement of valued goals.

Attentional resources are particularly likely to be deployed during states of uncertainty (Braver, 2012; Feldman & Friston, 2010), which occur whenever the brain's automatic action evaluation and selection process is unable to settle on a single optimal response (Hirsh, Galinsky, & Zhong, 2011; Hirsh, Mar et al., 2012). Uncertainty triggers the Behavioral Inhibition System (BIS), the neural substrate of anxiety and uncertainty-reduction motives (Gray & McNaughton, 2000). Once activated, the BIS serves as a link between System 1 and System 2 by summoning attentional resources so that the actions with the highest SEU can be more readily discovered and executed (Kerns et al., 2004). Individual differences in BIS responsivity are reflected in trait Neuroticism, such that neurotic individuals feel a stronger aversion to uncertainty and are more highly motivated to reduce it (Berenbaum, Bredemeier, & Thompson, 2008; Hirsh & Inzlicht, 2008). The amount of cognitive resources allocated to uncertainty reduction are proportional to the degree of anxiety that accompanies the experience of uncertainty (Inzlicht, Bartholow, & Hirsh, 2015). We accordingly propose that states of uncertainty serve as the linking mechanism between automatic and controlled processes in ethical decision making.

When people lack the incentive for attentional engagement with a decision process, they rely on habitual patterns of action that are rooted in the unconscious associative dynamics of System 1. This is captured in Reynolds' (2006) reflexive pattern matching cycle, in which situations are compared to mental prototypes (i.e., previously stored associations between perceptions and behavioral responses) so that the most appropriate action can be automatically retrieved from memory. This is also equivalent to the automatic engagement of habitual responses to a situation based on previously rewarded actions (Crockett, 2013; Cushman, 2013). In other words, familiar situations that lack the incentive for extensive attentional engagement automatically trigger those behaviors that were previously learned as having the highest SEU in that context. During states of moral uncertainty, however, there is no single desirable behavior that can be identified.

In terms of Moral Utility Theory, there are at least three situations in which people will experience a state of moral uncertainty, such that System 1 is unable to identify the optimal or "right" behavior based on past experience. The first of these was described by Reynolds (2006) and involves unfamiliar situations in which no mental prototypes or schemas are available. For example, a newly promoted purchasing manager may be offered a large personal gift from a potential vendor. Because the manager lacks previous experience with the ethical dimensions of her new role, she is more likely to engage in an ethical reasoning process to determine the appropriate response to such offers.

A second situation involves the simultaneous activation of incompatible ethical impulses or principles, such as conflicting desires between maximizing efficiency for achievement purposes versus maximizing social harmony for affiliative purposes. These situations reflect the experience of a moral dilemma, involving the competition between two or more moral principles or impulses that must be reconciled (Treviño, 1986). Similarly, states of moral uncertainty can emerge when the moral expectations of key stakeholders appear to be in conflict with each other (Reynolds, Owens, & Rubenstein, 2012). These situations require an analysis of competing perspectives in order to identify the appropriate course of action (Lerner & Tetlock, 1999).

A third situation occurs when the action that appeared to have the highest SEU during the moment of choice ends up producing unforeseen negative consequences for oneself and others. This may occur when only a limited subset of the expected outcomes of an action were accessible during the reflexive action selection process. For example, a person may believe that occasionally stealing from his employer is a victimless crime, providing positive utility with minimal consequences to himself or others. If one of his co-workers is later blamed and fired for similar types of theft, however, the individual is likely to recognize that his initial actions were worse than previously thought. Similarly, an accountant may consider it to be relatively harmless to occasionally make small changes to various accounts or some reallocation of expenses and revenues in order to help his company meet performance expectations. As these small changes add up over time, however, it may become evident that the scope of the numbers being fudged poses a serious threat to the company's financial integrity.

Experiences of moral error are highly aversive, compelling regret and negative self-focused attention (Roese, 1997). In any of these situations, the reflexive pattern matching cycle is unable to correctly identify the behavior with greatest SEU maximization, compelling the engagement of attentional resources via the conscious moral reasoning process.³

Once engaged, the attentional resources associated with System 2 support the reasoning cycle. This process generates new codes of conduct that can then be followed automatically by System 1 (Reynolds, 2006). A moral analysis of an unfamiliar situation using the reasoning cycle will reduce behavioral uncertainty by specifying the most appropriate action (i.e., the one with the highest SEU). This often involves taking other people's perspectives in a situation (Ku, Wang, & Galinsky, 2015) to ensure that one's actions are not causing unintentional harm (Rest, 1986). The process of moral reasoning can also vary substantially in its time course. In simple cases, the best option may be identified with minimal reflection, while more complex cases of moral uncertainty could take days, weeks, or even months of deliberation to fully resolve. Individual differences in cognitive resources will be critical

³ It should be noted that perceptions of moral uncertainty are less common among high-power individuals (Wiltermuth & Flynn, 2013), owing to their overconfidence and narrowed attention toward goal-congruent information (Hirsh, Galinsky, & Zhong, 2011; Lammers, Galinsky, Dubois, & Rucker, 2015).

moderators of the reasoning process, whether reflected in intelligence (Sanders, Lubinski, & Benbow, 1995) or temporary depletion (Barnes, Schaubroeck, Huth, & Ghumman, 2011; Gino, Schweitzer, Mead, & Ariely, 2011).

From the perspective of Moral Utility Theory's dual-process framework, the engagement of System 2 enables self-regulatory processes that strategically increase or decrease the SEU of actions based on their compatibility with long-term goals (e.g., exercising self-control to inhibit actions that produce short-term rewards but long-term costs; Hofmann, Schmeichel, & Baddeley, 2012). System 2 is associated with lower temporal discounting rates than System 1, promoting a future-oriented perspective (McClure, Laibson, Loewenstein, & Cohen, 2004). This means that the engagement of System 2 will allow delayed utilities to have a greater impact when estimating the SEU of current actions. System 2 also facilitates uncertainty reduction through the effortful prioritization of competing behavioral impulses and the scheduling of actions within a higher-order behavioral plan that will unfold over time (Miller & Cohen, 2001). The allocation of attentional resources in response to moral uncertainty likewise enables a much broader search through System 1's associative network (Baars, 2005). In the context of action selection, this means that attending to possible outcomes associated with a given action will result in a more accurate probabilistic representation of its SEU and thus reduce the likelihood of moral error.

Because the logical operations supported by System 2 rely on verbal representations (Kahneman, 2011), the moral rules that are developed during the reasoning cycle will often be coded linguistically (e.g., "be kind to others"). The advantage of such verbal representations is that they enable simple principles to guide behavior across many situations. These moral rules can serve as useful heuristics that provide effective behavioral guidance in many contexts, eliminating the need for a detailed moral analysis of every novel situation (Bennis, Medin, & Bartels, 2010). Verbally encoded ethical principles can also be transmitted socially, supporting socialization efforts that promote group coordination (Durkheim, 1893; Haidt, 2001; Parsons, 1951). From a self-regulatory perspective, these principles serve as goals for directing behavior (Carver & Scheier, 1998).

It should be noted, however, that the involvement of System 2 does not guarantee more ethical behavior. Indeed, it is possible that the engagement of System 2 will result in more unethical behavior. For instance, an individual may engage in extensive moral deliberation only to conclude that the benefits of unethical conduct outweigh the potential costs. Similarly, an analytic focus on easily quantifiable outcomes may make the intrinsic costs of moral transgressions less salient, reducing their influence on behavior (Zhong, 2011).

Once behavioral uncertainty has been eliminated by the effortful allocation of attentional resources, the BIS becomes disengaged and the person returns to the reflexive pattern matching cycle. According to Reynolds' (2006) framework, rules developed through the conscious moral reasoning cycle can subsequently provide behavioral and moral guidance in similar situations. Adopting a motivational lens on ethical decision making requires an additional step, however, as actions are proposed to be selected based on their SEU. Accordingly, any consciously-developed moral rules will only have motivational force if they can influence the implicit SEU estimates made by System 1 during the reflexive pattern matching cycle. In other words, the automatic action selection process must anticipate greater utility for compliance rather than deviance from a rule; otherwise the rule will be ignored as soon as attentional resources are disengaged.

Moral Utility Theory proposes that the motivational force of a proscriptive rule derives from the negative SEU associated with rule violation. In particular, moral principles will be automatically

enforced by System 1 when the thought of violating them triggers expectations of guilt, anxiety, or punishment. Extending the classic distinction between affiliative and epistemic motives for rule compliance (Deutsch & Gerard, 1955), anticipated guilt warns that violating a rule may damage a valued relationship or self-image (Nelissen, 2014), while anticipated anxiety warns that the violation will lead to an aversive state of behavioral uncertainty (Hirsh, Mar et al., 2012). In the latter case, disregarding a moral rule can trigger the same state of moral uncertainty that the moral reasoning process was trying to resolve in the first place. Anticipated punishment, meanwhile, warns of other sanctions or negative outcomes that might result. Collectively, these factors are proposed to influence the negative SEU associated with rule violation and thus reflect the positive SEU of compliance with that rule.

Our proposition that moral rules can have their own SEUs also enables a motivational perspective on the effortful inhibition of unethical temptations. In particular, newly specified moral rules will require effortful self-control to inhibit salient rule-violating actions. Building on the motivated resource allocation models of executive attention described above, Moral Utility Theory proposes that effortful inhibition of unethical actions will occur only when the SEU of rule compliance surpasses the negative SEU that is intrinsic to self-control efforts. Because self-control is difficult, it is engaged only when there is sufficient incentive to do so (Inzlicht et al., 2014; Shenhav et al., 2017). When a non-habitual rule has a low SEU, or when the attentional resources of System 2 are scarce (i.e., increasing the negative SEU of self-control efforts), the rule is likely to be ignored in favor of a salient but rule-violating action. In other words, previously rewarded habits are likely to dominate behavior unless there is sufficient incentive to override them in favor of an alternative behavioral strategy (Carden & Wood, 2018). It is only after extended practice with effortful self-control that the negative SEU of rule-violating actions will be automatically and habitually assessed by System 1, as the costs of rule-violation become evident over time. At this point, the moral rule itself will have effectively become a habit that can guide behavior without System 2 engagement.

Fig. 2 depicts the process model of moral uncertainty and attentional elaboration. When no action clearly has the highest SEU, a state of moral uncertainty occurs, activating the BIS. When attentional resources are available, this BIS activation will initiate the moral reasoning process, allowing the specification of moral rules that identify the best course of action. Moral rules can also derive from the social community, rather than being developed personally. These rules decrease the SEU of unethical actions by associating them with increased guilt, punishment, and uncertainty. Until rule-compliance becomes automated, the effortful inhibition of otherwise appealing rule-violating actions will require the motivated allocation of attentional resources.

Taken together, the dual-process component of Moral Utility Theory provides an account of ethical decision making that incorporates emotional intuitions (Haidt, 2001; Hume, 1739) and reasoning about moral rules (Kohlberg, 1969; Rest, 1986). In combining these research streams, we expand Reynolds' (2006) model by (a) specifying the BIS as the key mechanism for engaging System 2 during states of moral uncertainty, (b) emphasizing the motivational underpinnings of both reflexive pattern matching and the moral reasoning process, and (c) highlighting the role of anticipated guilt, anxiety, and punishment in providing motivational force to the rules that emerge from the reasoning process.

Proposition 6. Moral reasoning about ethical decisions emerges during states of moral uncertainty, where no single behavior can be identified as appropriate from intuition alone (i.e., the expected utilities of ethical and unethical behaviors are similar).

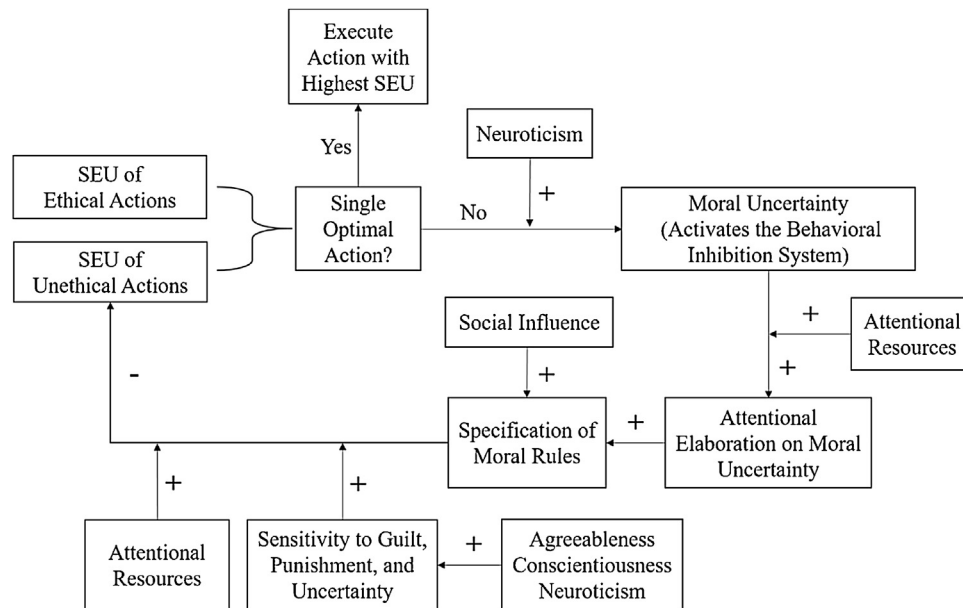


Fig. 2. Process model of moral uncertainty and attentional elaboration*.

*States of moral uncertainty arise when no single action with the highest SEU can be identified intuitively based on previous experience. This state of uncertainty triggers activity in the Behavioral Inhibition System (BIS). The BIS is dispositionally more sensitive among neurotic individuals. The BIS summons attentional resources to elaborate on the moral uncertainty, but only when such resources are available. Attentional elaboration underlies the conscious moral reasoning process, in which moral rules are clarified or developed. These rules in turn make unethical actions less appealing by associating rule violation with feelings of guilt, punishment, and uncertainty. Attentional resources will be needed to actively inhibit salient unethical behaviors until compliance with moral rules becomes automated as habit.

Theoretical contributions: integrating motivation and ethical decision making

Drawing upon frameworks from psychology, neuroscience, organizational behavior, and behavioral economics to integrate motivation and behavioral ethics, Moral Utility Theory proposes that ethical decision making involves a process of motivated action selection, such that behaviors with the largest SEUs, whether ethical or unethical, are ultimately chosen. Our theory represents a dual-process framework: While SEU calculations can be estimated automatically by System 1, the experience of moral uncertainty is proposed to summon attentional resources from System 2. This attentional elaboration is the essence of the moral reasoning process, eliminating behavioral uncertainty by prioritizing valued goals and developing rules for subsequent behavior. Once developed, these rules influence subsequent choices automatically by associating negative emotions with any action that violates them, thus decreasing the SEUs of these options.

A number of important theoretical points can be derived from our framework. First, it emphasizes the common substrate of motivation and ethical decision making. Although these two fields are generally studied in isolation, Moral Utility Theory proposes that they share the same mechanism of SEU maximization. Adopting this perspective brings theoretical parsimony to the study of ethical decision making by suggesting that changes in the relative SEUs of ethical and unethical behaviors are the proximal mediators of the many factors that influence unethical conduct. Second, our framework encourages an examination of the motivational basis of unethical actions, emphasizing that they are undertaken with the aim of maximizing SEU in some personally valued domain. Rather than simply condemning unethical behavior as inherently wrong, our model enables a greater focus on the incentives that lead people down unethical paths. Third, our framework helps to bridge the gap between the affective and cognitive perspectives on ethical decision making that were articulated by Hume and Kant. In particular, our framework aligns with Hume in suggesting that automatic evaluations drive many of our motivated action selections

and moral decisions. We also, however, provide a mechanism for the engagement of the moral reasoning process and obedience to any resulting moral rules.

Our framework differs considerably from current models of ethical decision making. Moral Utility Theory is distinguished from purely cognitive approaches (Kohlberg, 1969; Rest, 1986) inasmuch as it allows for moral choices in the absence of moral awareness. By invoking the unconscious evaluation of potential actions in an SEU framework, our model accounts for automatic and often affective influences on moral behavior. Our framework is also distinct from sentimentalist or social intuitionist models (Haidt, 2001) in a number of ways. First, we provide a detailed motivational framework for understanding the automatic evaluation of different behavioral options, integrated within a broader theory of decision making. Second, we describe the moral reasoning process as a key mechanism for eliminating moral uncertainty, rather than as a means of post-hoc rationalization of one's moral impulses.

Moral Utility Theory builds upon and extends the dual-process models of Reynolds (2006), Cushman (2013), and Crockett (2013). First, we outline the motivational basis of the conscious reflection process, linking it to the aversive experience of uncertainty and the accompanying activation of the BIS. Although existing dual-process models emphasize the contributions of both System 1 and System 2 to ethical decision making, our framework integrates motivated resource allocation models to specify the conditions under which each is likely to have a stronger influence on behavior. Second, we identify the role of anticipated negative affect in motivating adherence to consciously reasoned moral principles once they are articulated. In other words, the mere presence of a moral rule is not sufficient to guarantee behavioral compliance. Instead, we propose that anticipated guilt, anxiety, and punishment for rule violation allow System 1 to automatically enforce the principles developed by System 2. Any factors that mitigate these associations should accordingly weaken the behavioral impact of the associated moral rules (e.g., psychopathy). Third, our framework allows individual differences to play a well-specified role in all stages of the ethical

decision-making process. In particular, each of the SEU parameters specified within the framework is moderated by individual differences, reflecting dispositional biases in utility estimation.

More generally, Moral Utility Theory helps to further integrate the study of ethical decision making within a framework that is amenable to formal modeling (Crockett, 2016). By unifying behavioral ethics research within a utility framework, our theory enables future researchers to employ SEU-based modeling techniques that reveal the underlying dynamics of context-specific ethical challenges and dilemmas via specific utility calculations. Such techniques would also enable researchers and organizations alike to predict the ethical consequences of various policies and interventions. Just as decision theory provides a useful framework for analyzing strategic tradeoffs in general, Moral Utility Theory provides a useful framework for analyzing the ethical tradeoffs that must be negotiated in a complex organizational environment.

It is worth contrasting our framework with other utility-based approaches to ethical decision making. Although not focused explicitly on ethics, the Theory of Planned Behavior (TPB; Ajzen, 1991) is a popular theory of action selection. TPB argues that behavioral intentions are formed from attitudes, subjective norms, and perceived behavioral control. Consistent with our approach, adding a moral obligation component to the model (partially reflecting the anticipated guilt from violating a moral norm) tends to improve its ability to predict intentions and behavioral self-reports, including those for unethical actions (Beck & Ajzen, 1991; Kaiser, 2006; Sparks & Shepherd, 2002). One key factor that differentiates our model is the recognition that the SEU of an action is calculated automatically and thus may not be fully amenable to self-report methodologies, which provide the empirical foundation of TPB research. We have presented a dynamic dual-process model, outlining the distinct contributions of automatic and deliberative control systems during ethical decision making. Similarly, the role of individual differences is unspecified in TPB, but well-elaborated in our model.

Our framework enables a deeper integration of individual differences and the study of moral character into the study of ethical decision making (Cohen, Panter, Turan, Morse, & Kim, 2014). In particular, individual differences are accounted for at each stage of the ethical decision-making process. First, the SEUs of different behavioral options will depend on the relative importance of the individual's goals, much of which is related to broad personality characteristics such as Agreeableness and Neuroticism (Costa & McCrae, 1988; Roberts & Robins, 2000). Second, the amount of behavioral uncertainty that can be tolerated prior to engaging the conscious moral reasoning process will depend upon individual differences in uncertainty aversion. Third, the capacity to direct cognitive resources toward a moral dilemma will depend upon dispositional cognitive abilities (especially verbal ability; Kahneman, 2011). Fourth, the extent to which the moral principles developed during the moral reasoning process are automatically enforced by System 1 will depend upon the individual's aversion to guilt, uncertainty, and punishment.

Practical implications for managing ethics

Boosting motivation is one of the central goals of effective managerial practice. Our model suggests, however, that increasing the subjective utility of a goal incentivizes both ethical and unethical actions. If unethical paths to a valued goal are more easily accessible or seen as more effective than ethical ones, efforts to motivate employees can promote misconduct. Using Moral Utility Theory as a platform, here we offer several practical strategies for increasing the SEUs for ethical behaviors and decreasing the SEUs for unethical behaviors.

Ethical caution under high-stakes performance

A key implication of our model is that moral transgressions will become more tempting as the incentives for achieving a desired outcome become stronger. Although stronger incentives are usually regarded as conducive to employee motivation and productivity, our framework cautions against the ethical risks that accompany them. A variety of organizational factors can lead to sudden surges in performance expectations, often accompanied by increased incentives. The quarterly reporting of revenue, for instance, creates cyclical periods of high-pressure performance expectations, in which the success of individual employees, work teams, departments, and even entire organizations becomes a central focus of executive and shareholder attention. Other important business deadlines, such as rushing to launch a product before the holiday shopping season, can result in a single-minded focus on performance that implicitly incentivizes unethical conduct so long as it helps to achieve the desired outcome. Organizations that wish to reduce the chance of moral transgressions need to be particularly careful about ethical conduct during these periods of high-stakes performance, as they could incentivize various forms of moral hazard. Increasing attention to ethical concerns during these periods may be necessary to balance the otherwise prevalent incentives to hit performance targets at all costs.

Ethical audits of goal-setting practices

Goal-setting is a powerful technique for boosting motivation and work performance and is widely used throughout all levels of organizational function (Hollenbeck & Brief, 1987; Locke & Latham, 2002). Once a performance goal is set, attentional resources become allocated toward goal-relevant information, becoming imbued with greater utility. Despite their ability to increase performance-related outcomes, goal-setting practices can also incentivize unethical routes to goal attainment (Ordóñez et al., 2009; Schweitzer et al., 2004). In effect, a narrow focus on goal achievement can lead to a neglect of the ethical concerns involved in the process. Directing employee attention toward a particular set of performance goals can thus limit the attentional resources that are available to consider the ethical implications of their actions, especially when the goals themselves do not fully capture the stated values of an organization. An organization may, for instance, declare a commitment to social and environmental sustainability, but fail to integrate these values into the strategic goal-setting and performance management process (Kaplan & Norton, 1996). Incorporating ethical principles into the goal-setting process, such as by specifying the ethical parameters necessary for goal success, would reduce the chance of ethical negligence. Monitoring changes in the incidence of moral transgressions following the adoption of a new set of performance goals could help to identify areas where increased ethical scrutiny is needed. By incorporating moral principles into the goal evaluation process, organizations can both tip automatic processes towards the ethical path and motivate the conscious deliberation of those moral principles.

Opening ethical channels and closing unethical channels to goals

Based on the multiplicative formula, $SEU = \text{Expectation} \times \text{Subjective Utility}$, one way to thwart unethical behavior is to increase the likelihood of success for ethical actions and decrease the likelihood of success for unethical ones. In other words, it is important to open the ethical channels and close the unethical channels to a desired outcome. For example, organizations should provide the necessary resources for task accomplishment and train

employees for ethical success (Fortney, 2003; Moberg, 2000; Staw & Szwejkowski, 1975; Smith-Crowe et al., 2015). When given a performance objective without adequate training and guidance, employees are left searching for any strategy to achieve their targets, regardless of its moral implications. At the same time, organizations should increase the probability of detection through monitoring systems (e.g., video surveillance in the office supply room) that make it harder for employees to engage in unethical behaviors (Lu, Brockner, Vardi, & Weitz, 2017). These practices can enable organizations to capture the benefits of motivational techniques without the cost of unethical behavior.

Appropriate framing of ethical issues

The SEU maximization framework highlights the importance of framing as a strategy for incentivizing ethical behavior. According to our model, ethical and unethical behavioral options are evaluated based on their ability to satisfy personal goals. Because goal contents vary from one person to another, every employee will have a unique set of goals and utilities that direct their behaviors. Ethics-related training programs will accordingly benefit from discussing the positive utilities of ethical behavior in addition to the dangers of unethical behavior. In addition, the benefits of ethical behavior should be framed in terms of employees' unique personal goals. It has been shown, for example, that pro-environmental attitudes can be increased by framing the issue to be congruent with personal values (Baldwin & Lammers, 2016; Feinberg & Willer, 2013). Similarly, advertisements that are tailored to the distinct needs of different personality profiles tend to be rated more favorably (Hirsh, Kang, & Bodenhausen, 2012). Framing ethical behaviors as advancing and unethical behaviors as hindering the satisfaction of personally valued goals will help to motivate ethically appropriate conduct. Many people, for instance, desire to view themselves as morally good individuals (Aquino & Reed, 2002). Enhancing the salience of this moral self-concept, such as by emphasizing the positive impact of an organization's mission, should in turn increase the perceived value of ethical behavior.

An awareness of employees' most frustrated needs will likewise highlight areas where there may be increased risks of unethical behavior. For example, if an employee feels particularly frustrated in his need for social status, any outcomes that are expected to enhance his self-image will be more highly valued. Following our model, the frustrated employee will be more tempted by unethical actions that promise to bring about these status-enhancing outcomes.

Ethics of attentional prioritization

As described above, the allocation of conscious reasoning to an ethical decision enables a future-oriented mindset, incorporating a broader range of social perspectives and a more accurate assessment of the consequences of an action. The allocation of individual and organizational attention toward a given decision thus has important ethical implications. Those decisions that are made with minimal deliberation are more likely to produce unintended negative consequences. If managers wish to decrease the chance of unethical action, they should actively encourage employees to engage in an ethical reasoning process prior to any decision that has the potential to negatively impact the lives of others. Systematically encouraging greater attention to the ethical dimensions of a decision should help to make these concerns more salient when evaluating the potential consequences of an action. Essentially, managers would be increasing the SEU of engaging in moral reasoning. The discussion of moral scenarios to stimulate the moral reasoning process about personally-relevant moral dilemmas could likewise have a positive impact.

Self-awareness of moral emotions

Our framework emphasizes that ethical decisions are often rooted in affective evaluations of behavioral options (which we propose are reflected in unconscious SEU estimates). This perspective suggests that emotional intelligence will play an important role in guiding one's actions down moral paths (Sivanathan & Fekken, 2002). Indeed, a calculative mindset in which emotional responses are ignored in favor of rational analysis tends to result in a greater likelihood of unethical behaviors (Zhong, 2011). Such mindsets effectively eliminate the use of affective information when evaluating the SEUs of different actions (Bartels & Pizarro, 2011). The result is often a narrow focus on easily quantifiable factors, such as monetary costs and benefits, while ignoring the ethical dimensions of a decision (Gioia, 1992). Encouraging employees to become more aware of their emotions when making decisions may accordingly help to support ethical conduct. Ethical training programs may thus benefit from getting employees to articulate their emotional reactions to imagined moral dilemmas, thereby promoting an increased awareness of their own moral emotions. While it is nearly impossible to detect and appropriately sanction every unethical act, encouraging employees to become more aware of their moral emotions (especially guilt) will support the selection of ethical choices.

Employee selection

Moral Utility Theory extends prior models by incorporating individual differences deeply into every stage of the process. This incorporation has practical implications, especially for employee selection. Our analysis has highlighted how high levels of Agreeableness and Conscientiousness increase the SEU of ethical actions and decrease the SEU of unethical actions. As a result, companies that hope to increase the probability of ethical behavior can select for these traits. Importantly, these traits are associated with higher levels of guilt proneness, which has been found to have motivational benefits in organizations (Flynn & Schaumberg, 2012). In particular, more guilt-prone individuals tend to display higher levels of work effort and affective commitment to their organizations. Higher levels of guilt-proneness have also been associated with greater leadership potential due to the heightened sense of responsibility for others that often accompanies it (Schaumberg & Flynn, 2012). Our model suggests that Agreeableness and Conscientiousness can produce high levels of motivation with low levels of unethical behavior. Employees with these dispositions are motivated to behave rather than misbehave.

Promoting ethics-focused compensation systems

Another step toward encouraging ethical behavior is to incorporate moral standards directly into performance appraisal systems. While concerns about ethics are often touted as an important part of an organization's culture, they are not always directly integrated into daily practice (Weaver, Treviño, & Cochran, 1999). In such cases, employees are incentivized to regard ethics as a secondary concern that does not affect their performance evaluation. Therefore, it is important to promote an ethics-focused performance appraisal system. For example, organizations could reward ethical processes that produce an outcome rather than just the outcome itself. It is noteworthy that rewarding ethical behavior need not take the form of monetary compensation. Symbolic rewards have been shown to increase performance (Kosfeld & Neckermann, 2011), and Moral Utility Theory suggests that symbolic recognition of ethical behavior may provide similar benefits for ethical conduct. By incorporating ethical values into the performance appraisal process, companies will increase the

intuitive appeal of ethical conduct while also boosting the motivation to engage in conscious deliberation about an organization's values.

Conclusion

The current article presented Moral Utility Theory, which integrates theories of motivation and ethical decision making. In particular, Moral Utility Theory argues that the principle of SEU maximization can serve as a common foundation for both fields, providing a motivational basis for theories of ethical decision making and simultaneously emphasizing the importance of ethics-related concerns when motivating employees. Moral Utility Theory suggests that ethical decision making involves a comparison of the SEUs of ethical and unethical paths to a desired outcome. It also predicts that unethical behavior is likely to emerge when the gains in SEU of an unethical behavior over an ethical one are greater than the anticipated costs of the unethical behavior, as reflected in guilt and punishment. This framework has enabled us to synthesize a broad diversity of factors known to influence moral conduct into a parsimonious theory that describes the contexts in which employees will be motivated to misbehave. By understanding the important role that SEU maximization plays in both motivation and unethical decisions, we offer managers practical tools for increasing motivation—without unleashing unethical behavior.

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