ORIGINAL PAPER

Individual Differences in Judgment and Decision-Making: Novel Predictors of Counterproductive Work Behavior

Balca Alaybek[1,2] · Reeshad S. Dalal[1] · Brynee Dade[1]

Abstract

The current paper proposed individual differences in judgment and decision-making (JDM)—namely, the skill associated with recognizing social norms, decision-making styles, and risk–benefit perceptions—as a novel set of predictors of counterproductive work behavior (CWB). We hypothesized that the skill associated with recognizing social norms, rational decision-making style, and perceived riskiness of unethical behavior would be related negatively to CWB, whereas the avoidant decision-making style, spontaneous decision-making style, and perceived benefits of unethical behavior would be related positively to CWB. Moreover, we hypothesized that JDM-focused individual differences would exhibit incremental validity above and beyond the traditional individual difference predictors of CWB (personality, trait affect, and cognitive ability). Results from three independent samples provided strong support for the hypotheses. The strongest predictor of CWB was individual differences in perceived benefits of unethical behavior (meta-analytic correlation across the three samples = .487). This result suggests a simple insight, yet one almost completely missing from the existing CWB literature: People who believe unethical behavior is likely to benefit them will tend to enact more CWB than those who do not. Additionally, across the three samples, the novel JDM-focused individual difference predictors performed well in comparison to the traditional individual difference predictors, suggesting their usefulness to research and practice. We therefore suggest several avenues for future research on JDM-focused individual differences as predictors of CWB. Additionally, vis-à-vis practical implications, we discuss the possibility of using JDM-focused individual differences in employee selection and organizational intervention contexts with the aim of reducing CWB.

Keywords Judgment and decision-making · Benefits · Risks · Social norms · Decision-making styles · Individual differences · Counterproductive work behavior

Researchers and practitioners alike have been interested in identifying a dispositional basis for counterproductive work behavior (CWB). This has led to a focus on individual difference antecedents to CWB. Traditionally, research on these individual difference antecedents has emphasized personality (e.g., Berry et al., 2007a), trait negative affect (e.g., Dalal, 2005), and, in some cases, cognitive ability (e.g., Dilchert et al., 2007) as important predictors of CWB. The current paper takes a different approach and, in so doing, proposes a novel set of individual difference antecedents to

CWB. Specifically, the current paper conceptualizes each instance of CWB as the outcome of a decision (i.e., whether or not to enact the behavior) and proposes a set of individual differences in judgment and decision-making (JDM)—namely, risk–benefit perceptions, decision-making styles, and the skill associated with recognizing social norms—as predictors of CWB.

CWB has long been described as a "*decision* to behave in such a way that is either intended specifically to harm or [that] harms by purposeful action even if unintentionally" (Spector & Fox, 2005, p. 152; emphasis added). If CWB is a decision, it seems appropriate to study it as such, using relevant individual difference predictors conceptualized in the JDM literature. It is therefore surprising that prior work on the predictors of CWB has neglected JDM perspectives in general and JDM-focused individual difference predictors in particular. To address this gap, we first build on theories of

✉ Balca Alaybek
  balaybek@mitre.org

1 Department of Psychology, George Mason University, 4400 University Drive, Fairfax, VA 22030, USA

2 Social and Behavioral Sciences Department, The MITRE Corporation, 7515 Colshire Drive, McLean, VA 22102, USA

ethical decision-making to examine JDM-focused individual difference predictors of CWB. Second, we examine the incremental validity of JDM-focused individual differences above and beyond traditional individual difference predictors of CWB (i.e., personality, trait affectivity, and cognitive ability). Overall, we contribute toward a theory of JDM-focused individual difference predictors of CWB. We test our ideas using three independent samples. Moreover, we introduce practitioners to a novel set of individual differences that have the potential to be used in applied contexts, for example in selecting employees for jobs.

Theoretical Background and Hypotheses

To examine JDM-focused individual difference predictors of CWB, we build on the integrated ethical decision-making model (Schwartz, 2016), which synthesizes earlier ethical decision-making theories (e.g., issue contingent model, Jones, 1991; four-stage model of ethical decision-making, Rest, 1984, 1986; neurocognitive model of ethical decision-making, Reynolds, 2006a) into a coherent framework.[1] Although we do not assume that all instances of all forms of CWB represent immoral or unethical behavior, we contend that an ethical decision-making approach is nonetheless relevant to the current paper for three reasons. First, some of the "foundations" of morality conceptualized by the moral foundations theory (Haidt & Graham, 2007) are exemplified by behaviors that characterize CWB. For example, the harm/care foundation is exemplified by purposely damaging the organization's property and wasting supplies, the fairness/cheating foundation is exemplified by stealing from the organization or coworkers, and the loyalty/betrayal foundation is exemplified by abusing the organization and its members (for a review of the foundations of morality, see Graham et al., 2013; for indicators of CWB, see Spector et al., 2006). Second, models of ethical decision-making (e.g., Moore & Gino, 2015; Reynolds, 2006a; Schwartz, 2016) acknowledge that automatic and fast as well as deliberate and slow thinking processes (also referred to as System 1 and System 2, respectively; Kahneman, 2003) can be involved in the decision to engage in unethical behavior. At the individual differences level, these processes are manifested as decision-making styles (e.g., Alaybek et al., 2021a, b; Wang et al., 2017). Based

on this perspective, forms of CWB that are seemingly automatic and fast (e.g., hostile or reactive aggression, Anderson & Bushman, 2002; hitting or pushing a coworker, Spector et al., 2006) as well as forms of CWB that are deliberate and slow (e.g., instrumental aggression, Anderson & Bushman, 2002; providing the organization with false information to obtain a job; Gruys & Sackett, 2003) could be conceptualized as outcomes of ethical workplace decisions. Third, ethical decision-making models (Moore & Gino, 2015; Schwartz, 2016; see also Reynolds, 2006b; Reynolds, 2008) suggest that relevant individual differences (e.g., moral capacity) are likely to influence the way people typically approach the ethical decision-making process and the resulting behaviors. We build on these arguments and suggest that employees' decisions regarding whether or not to enact CWB should additionally be influenced by individual (i.e., dispositional) differences in how employees typically approach their decisions—in other words, by JDM-focused individual differences.

Integrated Ethical Decision-Making Model

According to the integrated ethical decision-making model (Schwartz, 2016), ethical workplace decisions involve a four-stage process: awareness, judgment, intention, and behavior. The awareness stage occurs when an employee recognizes that there is a situation requiring a decision that can influence the well-being of oneself or others and when the employee identifies at least two potential actions (i.e., two ethically appropriate actions, two ethically inappropriate actions, or one ethically appropriate and one ethically inappropriate action) in consideration of the formal and informal norms in the environment (e.g., organizational policy, team charter). The judgment stage involves the evaluation of ethically appropriate and inappropriate actions and comprises several processes the employee enacts simultaneously (i.e., emotion, intuition, reason, rationalization, and active consultation to others regarding the ethical decision or reviewing organizational documentation for clarification). The intention stage involves the development of the motivation to take the (un)ethical action, in light of the judgment developed in the previous phase. These three stages are followed by behavior, which involves enacting the ethical or unethical behavior.

Schwartz (2016) posits that the ethical decision-making process is influenced by individual differences in "moral capacity," a broad construct that encompasses concepts such as "the ability of an individual to avoid moral temptations, engage in the proper resolution of ethical dilemmas, and ultimately engage in ethical behavior" (p. 761). Moral capacity, as Schwartz conceptualizes it, has not been studied in industrial and organizational psychology and organizational behavior (IOOB). However, a proxy that captures

---

[1] Some philosophers and theologians make a distinction between ethics and morality. However, as noted by Harper (2009), "the distinction between ethics and morality has been employed in so many different ways and in service of so many different ends that one might have doubts about whether it has any real meaning at all" (p. 1066). The putative distinction, moreover, is tangential to the aims of the current paper. We therefore use the two terms interchangeably.

some of the same construct space as moral capacity (while admittedly, as noted by an anonymous reviewer, falling short of capturing the complexity and nuance of Schwartz's conceptualization) is the IOOB construct of "integrity" (e.g., Catano et al., 2018). The dispositional basis for integrity involves the personality traits of conscientiousness, agreeableness, and neuroticism (Berry et al., 2007b)—all of which have commonly been studied, in IOOB, as antecedents to CWB (Berry et al., 2007a). Thus, Schwartz's concept of moral capacity is captured, albeit imperfectly, by the *traditional* individual difference predictors of CWB.

Interestingly, however, although Schwartz's (2016) model is a theory of ethical *decision-making*, the model does not specifically discuss *JDM-focused* individual differences as influences on the ethical decision-making process. As such, our paper expands Schwartz's work by introducing JDM-focused individual differences in the prediction of CWB.[2] Specifically, although Schwartz's (2016) model discusses the processes that lead to an individual enacting (or refraining from enacting) a specific instance of unethical behavior, we contend that multiple stages of this model are influenced by JDM-focused individual differences that are not captured by Schwartz's concept of moral capacity.

JDM-Focused Individual Difference Predictors of CWB

Drawing from the JDM and IOOB research that has focused on individual differences in JDM (e.g., Alaybek et al., 2021a, b; Bruine de Bruin et al., 2007; Dalal & Brooks, 2014; Mohammed & Schwall, 2009), we have identified three sets of JDM-related individual differences that likely predict CWB: the skill associated with recognizing social norms, decision-making styles, and risk–benefit perceptions.

Individual Differences in the JDM Skill Associated with Recognizing Social Norms This individual difference pertains to a person's ability to understand values held by peers (Parker & Fischhoff, 2005) and consequently the accuracy of the person's perceptions of social norms across situations

(Bruine de Bruin et al., 2007; Parker & Fischhoff, 2005). JDM researchers have studied this construct in the context of societal norms, but both the general concept and many of the specific behaviors studied (e.g., stealing) can be applied in straightforward fashion to the workplace and, in particular, to a person's skill at judging workplace norms related to CWB. As regards the Integrated Ethical Decision-Making model (Schwartz, 2016), the JDM skill associated with recognizing social norms can influence not only the awareness stage but also the judgment and intention stages. Specifically, possessing lower levels of this skill can lead to a lack of awareness of organizational norms pertaining to CWB. Possessing higher levels of this skill, on the other hand, should improve awareness. Although workplace norms may at times encourage the enactment of some forms of CWB (Robinson & O'Leary-Kelly, 1998; see also Heckert & Heckert, 2004), as a general matter, workplace norms are likely to be intolerant of CWB (Dalal et al., 2020). Thus, in general, skill at recognizing social norms is likely to be related positively to the adherence to social norms and, in turn, related negatively to CWB, given that workplace deviance—a construct closely related to CWB—is formally defined in terms of the violation of workplace norms (Bennett & Robinson, 2000).

Hypothesis 1: The judgment and decision-making skill associated with recognizing social norms is negatively related to counterproductive work behavior.

Decision-Making Styles Individual differences in decision-making styles pertain to the habitual ways in which people evaluate decision alternatives and choose a particular alternative (Harren, 1979; Scott & Bruce, 1995). We adopt Scott and Bruce's (1995) five-factor conceptualization of decision-making styles: rational, avoidant, spontaneous, intuitive, and dependent. As discussed subsequently, decision-making styles should influence all four stages of Schwartz's (2016) integrated ethical decision-making model by determining the amount of information employees gather about organizational norms (awareness stage), the way employees utilize information and plan actions when making decisions (judgment and intention stages), and the speed at which employees act on their choices (behavior stage).

Rational decision-making style is characterized by thorough information search and deliberation (Harren, 1979; Scott & Bruce, 1995) and has been shown to predict high-quality decisions (Phillips et al., 2016). In experimental settings, deliberation (or contemplation) about ethical issues (Gunia et al., 2012) and alternative ethical actions (Zhang et al., 2018) has been shown to improve the quality of ethical decisions. Thus, employees who habitually search for information and deliberate about decision options should be

---

[2] In addition to the ethical decision-making process and the role of individual differences, Schwartz (2016) discusses the influence of situational factors on the ethical decision-making process as well as negative feedback loops wherein (un)ethical behavior predicts subsequent awareness of ethical norms. These components of the model are beyond the scope of the current paper, because we are focusing on individual difference predictors. Needless to say, however, our focus on individual differences should not be construed as an indication that we believe situational factors to be unimportant in predicting CWB or that we do not believe in reciprocal causation. In fact, one of our suggested future research directions involves a potentially important situational factor and another involves the study of reciprocal causation.

more aware of organizational norms, more effectively evaluate potential ethical and unethical actions, and ultimately engage in less CWB, given that engaging in CWB despite its potential negative consequences (e.g., disciplinary action, termination from the job) can often represent low-quality decisions.

Hypothesis 2: Rational decision-making style is negatively related to counterproductive work behavior.

Avoidant decision-making style is characterized by procrastinating or postponing making important decisions often because of the discomfort associated with decision-making (Scott & Bruce, 1995). Delaying important ethical decisions might result in avoiding both ethical and unethical actions, thereby suggesting a null relationship between avoidant decision-making style and CWB. However, scholars describe decision avoidance as a "troubling behavior" that generates "high personal and societal costs" (Anderson, 2003, p. 139)—and they further associate decision avoidance with ethical decision biases (e.g., Watts et al., 2020). The rationale is that making a high-quality ethical decision often requires personal sacrifices and changing the status quo to take the right action (Watts et al., 2020). Accordingly, to the extent that the behavioral manifestations of avoiding an ethical decision and delaying the right action represent CWB (e.g., avoiding one's supervisor, keeping as much distance from one's supervisor as possible, Ferris et al., 2016; taking a longer than permitted break, purposely working slowly when things need to get done, Spector et al., 2006), avoidant decision-making should be positively related to CWB.

Hypothesis 3: Avoidant decision-making style is positively related to counterproductive work behavior.

Spontaneous decision-making style is characterized by a tendency to make quick and impulsive decisions (Scott & Bruce, 1995). Evidence suggests that spontaneous decision-making style is related to low-quality decisions (Bruine de Bruin et al., 2007; Dewberry et al., 2013; Wood & Highhouse, 2014) because people who make quick and impulsive decisions do not take the time to gather information and evaluate decision alternatives (Dalal & Bolunmez, 2016). Similarly, ethical decision-making scholars have theorized that making decisions too quickly can impede the ethical decision-making process (Jones, 1991), and these scholars too have emphasized the importance of taking the time necessary to deliberate on ethical issues (Moore & Loewenstein, 2004). Accordingly, employees who habitually make quick and impulsive decisions should engage in more CWB.

Hypothesis 4: Spontaneous decision-making style is positively related to counterproductive work behavior.

Intuitive decision-making style is characterized by making decisions based on instincts and intuitions (Harren, 1979; Scott & Bruce, 1995). The JDM literature offers two conflicting perspectives on the effectiveness of intuitive decision-making process. According to the heuristics and biases perspective (Kahneman, 2003, 2011), intuitive decision-making sometimes results in cognitive biases and decision errors because the conditions necessary for intuition to be useful (i.e., the environment is sufficiently regular and provides adequately valid clues to the nature of the situation, and the person has adequate opportunity to learn the relevant cues; Kahneman & Klein, 2009; see also Hogarth et al., 2015) are rarely present. According to the "fast and frugal" perspective, in contrast, intuitive (or heuristic) decision-making allows decision-makers to quickly gather relevant information and make effective decisions in most situations (Gigerenzer & Gaissmaier, 2011). Similarly, ethical decision-making studies that have primed intuitive thinking have reported mixed findings (see, e.g., Welsh & Ordóñez, 2014; Zhang et al., 2018). Due to the conflicting theoretical perspectives and mixed empirical findings, we examine the relation between intuitive decision-making style and CWB in an exploratory manner.

Dependent decision-making style is characterized by a search for advice while making decisions (Scott & Bruce, 1995) and a high need for social approval from others (Harren, 1979). Evidence suggests that advice taking often results in higher-quality decisions (Bonaccio & Dalal, 2006). Within the context of ethical decision-making, Gunia et al. (2012) demonstrated that social conversations on workplace ethics, which emphasize the right and wrong actions, help individuals to identify and choose appropriate ethical actions. Accordingly, dependent decision-making style could be negatively related to CWB. Conflicting evidence, however, comes from clinical psychology research, which demonstrated that the broader dependent personality construct is related to various negative outcomes including self-harm and interpersonal violence (Bornstein, 2012). We therefore examine the relation between dependent decision-making style and CWB in an exploratory manner.

Risk–benefit perceptions This last category of individual differences pertains to perceived levels of riskiness (or cost) and benefit (or return) associated with potentially unethical behavior (e.g., having an affair with a married man/woman; Blais & Weber, 2006; Weber et al., 2002).[3] Prior empirical

---

[3] The most commonly used conceptualization of risk–benefit perceptions (Blais & Weber, 2006) discusses five distinct domains—ethical, financial, health/safety, social, and recreational—and concludes that individual risk-taking differs appreciably across the five domains. Our focus, in the current research, is on ethical decision-making specifically. From a terminological standpoint, therefore, in this paper, we refer to the perceived risks and benefits of unethical behavior (rather than of potentially risky behavior more generally).

work has shown that individuals' risk–benefit perceptions are significantly related to their self-reported likelihood of risk taking: Higher levels of perceived riskiness decrease the likelihood of risk taking, whereas higher levels of perceived benefit increase the likelihood of risk taking (Blais & Weber, 2006; Weber et al., 2002). Self-reported likelihood of risk taking, in turn, has been found to be positively related to CWB (Highhouse et al., 2017). As regards the integrated ethical decision-making model (Schwartz, 2016), risk–benefit perceptions should influence employees' evaluations of appropriate versus inappropriate behavior alternatives (i.e., judgment stage) as well as the development of the motivation to engage in CWB (i.e., intention stage). Specifically, employees who tend to perceive that unethical behavior is high in risk and/or low in benefits should refrain from engaging in CWB. Conversely, employees who tend to perceive that unethical behavior is low in risk and/or high in benefits should engage in CWB. Interestingly, construct definitions of CWB (e.g., Gruys & Sackett, 2003; Spector et al., 2006) and closely related constructs such as workplace deviance (e.g., Bennett & Robinson, 2000) tend to take the organization's perspective, focusing on the harm (or intended harm) to the organization as a whole or to employees therein that results from such behavior. This focus on the organization's perspective may have led IOOB researchers to overlook the employee's perspective—in other words, the risks (harms) and benefits to the employee, as perceived by the employee himself or herself, as potentially important predictors to his or her level of enacted CWB.

> *Hypothesis 5a: Individual differences in perceived riskiness of unethical behavior are negatively related to counterproductive work behavior.*
> *Hypothesis 5b: Individual differences in perceived benefits of unethical behavior are positively related to counterproductive work behavior.*

Incremental Validity of JDM-Focused Individual Differences Above and Beyond Traditional Predictors of CWB

As alluded to earlier, research on the individual difference predictors of CWB has traditionally emphasized personality (e.g., Berry et al., 2007a), trait affectivity (e.g., Dalal, 2005; Spector & Fox, 2002), and, in some cases, cognitive ability (e.g., Dilchert et al., 2007) as important predictors of CWB. For JDM-focused individual differences to be considered important predictors of CWB, they should exhibit incremental validity above and beyond the traditional individual difference predictors of CWB. Two of the focal JDM-focused individual differences—namely, rational and intuitive decision-making styles—have received growing attention from

IOOB scholars. For instance, recent meta-analyses have demonstrated that these two JDM-focused individual differences are distinct from personality (Wang et al., 2017) and cognitive ability (Alaybek et al., 2021a). Another recent meta-analysis (Alaybek et al., 2021b) found that rational decision-making style exhibited incremental validity above and beyond conscientiousness and cognitive ability in predicting workplace task performance. Drawing from these prior works, we expect JDM-focused individual differences to explain unique variance in CWB above and beyond the traditional individual difference predictors of CWB.

> *Hypothesis 6: Individual differences in judgment and decision-making (i.e., the skill associated with recognizing social norms, decision-making styles, and risk-benefit perceptions) exhibit incremental validity above and beyond the traditional individual difference predictors (i.e., personality, trait affectivity, and cognitive ability) in the prediction of counterproductive work behavior.*

Method

Participants and Procedures

We tested our hypotheses using data from three independent samples, each containing participants with a variety of job types.[4] Sample 1 included employees who worked at least 20 h per week ($N = 211$, 71.80% female, 46.70% White, mean age = 27.40, mean job tenure = 1.24 years), and who were recruited from the subject pool of a university located in the mid-Atlantic United States (U.S.) to participate in a cross-sectional survey for research credit. To ensure that participants reported their employment status honestly, we provided those students who did not hold jobs or who worked fewer than 20 h per week with another opportunity (not described in this paper) to earn research credit. In addition, Sample 1 included data from only those participants who passed three attention check questions.

Sample 2 included full-time employees who resided in the U.S. and were recruited through Amazon's Mechanical Turk (MTurk; $N = 250$, 57.20% female, 80.80% White, mean age = 33.66, mean job tenure = 3.74 years). Sample

---

[4] Sample 2 data were actually collected before Sample 1 data, but we arranged the paper in the current order to present the cross-sectional, part-time employee sample before the two longitudinal, full-time employee samples. Additionally, Sample 2 data were collected as part of a larger data collection, some findings from which have previously been reported in a separate publication. During the review process, we provided the editor and reviewers with a data transparency statement describing the different foci of the two papers emerging from this data collection as well as enumerating the minimal overlap in variables measured in the two papers.

2 participants completed a longitudinal survey, including two waves that were 3 weeks apart.[5] The first wave included measures of the JDM-focused individual differences and the second wave included measures of the traditional predictors and CWB. This sample therefore allowed a conservative test of Hypothesis 6 (incremental validity) because the traditional predictors were measured in a temporally proximal fashion to CWB whereas the JDM-focused individual differences were measured with a temporal separation from CWB.

Sample 3 included full-time employees who resided in the U.S., interacted with other individuals at work for at least 20 h per week, and were recruited through MTurk ($N = 194$, 43.80% female, 80.90% White, mean age = 40.35, mean job tenure = 5.87 years). To maximize data quality, we recruited MTurk participants with at least 95% Human Intelligence Task approval rate and who had been prequalified by MTurk as U.S. taxpayers working 35 or more hours per week. In addition, we allowed only those MTurk workers who met the inclusion criteria to see our participant recruitment advertisement. Sample 3 participants completed a longitudinal survey, including two waves that were approximately one month apart. The first wave included measures of the JDM-focused individual differences and traditional predictors of CWB and the second wave included the CWB measure. Moreover, the first and second waves included 2 and 1 attention checks, respectively—and only data from those participants who passed the attention checks were included in the sample.

Overall, we followed practices to ensure data quality in all three samples (e.g., Cheung et al., 2017; Porter et al., 2019). In addition to including attention check items in Samples 1 and 3, we searched for participants with survey completion times two standard deviations below the mean completion time in all three samples; however, these searches did not return any such participants because survey completion time was positively skewed. Moreover, we separated measures of the JDM-focused individual differences and CWB temporally in Samples 2 and 3 to increase confidence in causal direction and to reduce common-method variance that could occur in the case of a single rater (Doty & Glick, 1998; Podsakoff et al., 2003). The data for all three samples as well as the measures utilized in the current study can be accessed via this Open Science Framework link: https://osf.io/mz26k/?view_only=e7759b453a4247abb1c95c4946a38405.

Measures

The following subsection provides information on the scales we used for measuring the JDM-focused individual difference variables, previously established individual difference predictors of CWB, and CWB. Scale reliabilities are provided on the diagonal of Table A1 (in the Appendix). As can be seen in the table, the scale reliability (Cronbach's α) exceeded 0.70 for all predictors in all three samples, except the reliability of riskiness perceptions of unethical behavior in Sample 2 (Cronbach's $\alpha = 0.66$).

Skill Associated with Recognizing Social Norms In all three samples, we measured the skill associated with recognizing social norms using Bruine de Bruin et al.'s (2007) scale, which included two parts, each with 16 questions. The first part of the scale assessed whether the participants endorsed a behavior (e.g., "Do you think it is sometimes OK…to steal under certain circumstances?") with two response options ("Yes" or "No") and was used to compute the percentage of participants in the sample who endorsed the behavior (i.e., actual percentage). The second part of the scale measured participants' estimate of the percentage of their peers who would endorse the same set of behaviors (e.g., "Out of 100 people your age, how many would say it is sometimes OK… to steal under certain circumstances?"). For each participant, the skill associated with recognizing social norms was then computed as the rank-order correlation between the actual percentage and the estimated percentage (Bruine de Bruin et al., 2007).

Decision-Making Styles In all three samples, we measured decision-making styles using the General Decision-Making Styles scale (Scott & Bruce, 1995). The measure included 5 items for each of the decision-making styles (except Sample 2, which included 4 items for rational decision-making style[6]). Participants indicated their agreement with statements pertaining to each decision-making style using a 7-point Likert scale (1 = "strongly disagree," 7 = "strongly agree"). Sample items included "My decision-making requires careful thought" for rational, "I avoid making important decisions until the pressure is on" for avoidant, "I generally make snap decisions" for spontaneous, "When making decisions, I rely upon my

---

[5] In Samples 2 and 3, the durations of the time gaps between the two waves of data were a compromise between methodological advantages and theoretical expectations. A time gap between the measurement of predictors and criteria is methodologically advantageous because it allows for increased confidence in causal direction and because it reduces common method variance (Doty & Glick, 1998; Podsakoff et al., 2003). However, from a theoretical perspective, the impact of the individual difference predictors on CWB should be immediate (and enduring). To balance these two considerations, we chose two time gaps that were both relatively short: 3 weeks in Sample 2 and 1 month in Sample 3.

[6] Sample 2 included the four rational decision-making style items that were reported in the original Scott and Bruce (1995) scale development paper. Samples 1 and 3 additionally included the item "I explore all of my options before making a decision" that was missing in the original Scott and Bruce (1995) paper but that is available via the Decision-Making Individual Differences Inventory of the Society for Judgment and Decision-Making (Appelt et al., 2021): http://www.sjdm.org/dmidi/General_Decision_Making_Style.html.

instincts" for intuitive, and "I often need the assistance of other people when making important decisions" for dependent decision-making style.

Risk–Benefit Perceptions We measured perceived riskiness and perceived benefits of unethical behavior using the 6-item "ethical" subscale of Blais and Weber's (2006) riskiness-benefits perceptions scale. Participants used a 7-point Likert scale (1 = "not at all risky"/ "no benefits at all," 7 = "extremely risky"/ "great benefits") to indicate their perceptions of the riskiness (e.g., "Perceptions of risk in… Revealing a friend's secret to someone else") and their perceptions of the benefits (e.g., "Perceptions of benefit in… Revealing a friend's secret to someone else") associated with a set of potentially unethical behaviors.

Personality We measured personality using John et al.'s (1991) Big Five Inventory (BFI) in Samples 1 and 3, and with Goldberg's (1999) NEO Personality Inventory-Revised (NEO-PI-R) in Sample 2. John et al.'s (1991) BFI, measured using a 5-point Likert scale (1 = "disagree strongly," 5 = "agree strongly"), included 9 items each for agreeableness (e.g., "Has a forgiving nature") and conscientiousness ("Does a thorough job"), 8 items each for neuroticism (e.g., "Can be tense") and extraversion (e.g., "Is full of energy), and 10 items for openness (e.g., "Is inventive"). Sample 1 participants completed conscientiousness, agreeableness, and neuroticism subscales (to keep the cross-sectional survey length manageable), whereas Sample 3 participants completed all 5 subscales. Goldberg's NEO-PI-R, measured using a 5-point Likert scale (1 = "very inaccurate," 5 = "very accurate") in Sample 2, included 10 items each for conscientiousness (e.g., "Pay attention to details"), agreeableness (e.g., "Respect others"), neuroticism (e.g., "Panic easily"), extraversion (e.g., "Make friends easily"), and openness (e.g., "Have a vivid imagination"). Sample 2 participants completed all 5 personality subscales.

Cognitive Ability We measured numerical cognitive ability using Weller et al.'s (2013) abbreviated numeracy scale in Samples 1 and 3, and with Lipkus et al.'s (2001) numeracy scale in Sample 2. The abbreviated numeracy scale includes 8 math problems, which are a subset of the numeracy scale (Lipkus et al., 2001). A sample question (from the Lipkus et al., 2001, version of the scale) is "The chance of getting a viral infection is 0.0005. Out of 10,000 people, about how many of them are expected to get infected?" In Samples 1 and 3, we measured verbal cognitive ability using the WORDSUM vocabulary test (Huang & Hauser, 1998). The test included 10 questions. Each question provided the participants with a word and then, out of a set of 5 words, asked them to choose the one

word that meant the same thing or most nearly the same thing as the original word. A sample question is "lift," with the response options "sort out," "raise," "value," "enjoy," and "fancy." Sample 2 did not include a verbal cognitive ability measure.

Trait Affect We measured trait negative affect and trait positive affect via the Positive and Negative Affect Schedule (PANAS; Watson & Clark, 1988) . Participants used a 5-point Likert scale to indicate the extent to which they experienced 10 discrete negative emotions (e.g., "irritable," "ashamed") for negative affect and ten discrete positive emotions (e.g., "strong," "excited") for positive affect. All 20 items were measured using a 5-point Likert scale (1 = "very slightly or not at all," 5 = "extremely"). Sample 1 included only the negative affect items to keep the cross-sectional survey length manageable, whereas Samples 2 and 3 included both negative and positive affect items.

CWB We measured CWB using Spector et al.'s (2006) scale. Participants indicated the frequency in which they engaged in 33 behaviors using a 5-point frequency scale (1 = "never," 6 = multiple times a day). In Samples 1 and 3, we specified the timeframe as the past month. We used averages of CWB item scores to create three scale scores: interpersonally directed CWB (CWB-I), which included items of the abuse subscale (e.g., "Insulted someone about their job performance"; organizationally directed CWB (CWB-O), which included items of the production deviance (e.g., "Purposely did my work incorrectly"), sabotage (e.g., "Purposely wasted my employer's materials/supplies"), theft (e.g., "Stole something belonging to my employer"), and withdrawal (e.g., "Came to work late without permission") subscales; and overall CWB, which included all the CWB subscales. This approach is consistent with most previous research, which uses either an overall CWB score (e.g., Spector et al., 2006) or else two separate scores pertaining to interpersonally and organizationally directed CWB (e.g., Bennett & Robinson, 2000). In this paper, we present the results for overall CWB. However, we note in passing that the results for CWB-I and CWB-O—which are available upon request from the corresponding author—were consistent with those for overall CWB, demonstrating the robustness of the results across commonly studied operationalizations of CWB.

Results

Table A1 (in the Appendix) provides the intercorrelations among, and reliabilities of, the predictors in Samples 1, 2, and 3, respectively. The intercorrelations among the

traditional predictors themselves were consistent with prior meta-analytic findings (Anglim et al., 2020; Judge et al., 2007; van der Linden et al., 2010). The intercorrelations among the JDM-focused predictors themselves were in the small (i.e., correlations of 0.10 to 0.29; Cohen, 1988) or medium (i.e., correlations of 0.30 to 0.50; Cohen, 1988) ranges, with one exception: In Sample 3, the correlation between intuitive decision-making style and spontaneous decision-making style ($r = 0.55$) was in the large range (i.e., correlations of 0.50 or greater; Cohen, 1988). The intercorrelations of the traditional predictors with the JDM-focused predictors were also in the small or medium ranges, with one exception: In Samples 1 and 3, the correlations between conscientiousness and avoidant decision-making style ($r = -0.50$ and -0.66, respectively) were in the large range. In general, these findings demonstrated that the JDM-focused predictors were related to but distinct from each other and from the traditional predictors.

Relations Between JDM-Focused Predictors and CWB

We expected that the skill associated with recognizing social norms, rational decision-making style, and individual differences in riskiness perceptions of unethical behavior would be related negatively to CWB (Hypotheses 1, 2, and 5a, respectively), whereas the avoidant decision-making style, spontaneous decision-making style, and individual differences in benefit perceptions of unethical behavior would be related positively to CWB (Hypotheses 3, 4, and 5b, respectively). In addition, we examined the relations of dependent and intuitive decision-making styles with CWB in an exploratory manner.

Table 1 presents the correlations between JDM-focused predictors and overall CWB. Of the 18 correlations involving the hypothesized relationships, 16 were statistically significant in the direction we expected. The two exceptions were the correlations of overall CWB with skill associated with recognizing social norms in Sample 1 ($r = 0.034$) and with perceived riskiness of unethical behavior in Sample 3 ($r = -0.133$), both of which were nonsignificant (i.e., $p > 0.05$) although the latter was in the expected direction. These results provided preliminary support for Hypotheses 1, 2, 3, 4, 5a, and 5b. Turning now to the correlations involving the exploratory relationships, we found that the relation between dependent decision-making style and overall CWB was nonsignificant in Samples 1 and 2, though significant and positive ($r = 0.150$, $p < 0.05$) in Sample 3, whereas the relation between intuitive decision-making style and CWB was nonsignificant in Samples 1 and 2, though significant and positive ($r = 0.177$, $p < 0.05$) in Sample 3.

Table 1 Observed (uncorrected for measurement error) correlations of JDM-focused individual difference variables with overall CWB

	Sample 1 (N=211)	Sample 2 (N=250)	Sample 3 (N=191)
Social Norms[†]	.034	− .223**	− .251**
Rational DMS[†]	− .202**	− .223**	− .329**
Avoidant DMS[†]	.224**	.160*	.241**
Spontaneous DMS[†]	.249**	.158*	.192**
Intuitive DMS	.045	− .069	.177*
Dependent DMS	.014	− .026	.150*
Riskiness Perceptions[†]	− .305**	− .340**	− .133
Benefit Perceptions[†]	.416**	.431**	.379**

Social Norms = the judgment and decision-making skill associated with social norms; DMS = decision-making style; Riskiness perceptions = riskiness perceptions of unethical behavior; Benefit perceptions = benefit perceptions of unethical behavior

[†]Hypothesized JDM-focused individual differences. The remaining two decision-making styles were studied in exploratory fashion

*$p \le .05$; **$p \le .01$

Table 2 presents the results of a meta-analysis, conducted using the procedures specified by Schmidt and Hunter (2015), of the correlations of CWB with the JDM-focused predictors across the 3 samples (i.e., the correlations reported in Table 1). As can be seen in Table 2, the meta-analytic correlations for all the hypothesized relationships were significant (indicated by a 95% confidence interval that excludes zero) and in the expected directions. Based on the results, the strongest JDM-focused predictor of overall CWB was the perceived benefit of unethical behavior ($\rho = 0.487$), followed by the perceived risk of unethical behavior ($\rho = -0.327$), rational decision-making style ($\rho = -0.280$), avoidant decision-making style ($\rho = 0.220$), spontaneous decision-making style ($\rho = 0.219$), and skill associated with recognizing social norms ($\rho = -0.154$). These results provided strong support for Hypotheses 1, 2, 3, 4, 5a, and 5b. In addition, as regards the exploratory analyses, the meta-analytic correlations of dependent and intuitive decision-making styles with overall CWB were nonsignificant (indicated by a 95% confidence interval that includes zero), suggesting that these particular JDM-focused individual difference variables are not meaningful predictors of CWB.

Incremental Validity of JDM-Focused Predictors

Hypothesis 6 predicted that JDM-focused predictors would exhibit incremental validity above and beyond the traditional predictors of CWB. We tested Hypothesis 6 via usefulness

Table 2 Meta-analytic relations (across 3 samples) of JDM-focused individual difference variables with overall CWB

Predictor	r	ρ	SD_ρ	95% CI LL	95% CI UL	80%CrI LL	80%CrI UL
Social Norms[†]	−.148	−.154	.111	−.278	−.018	−.296	−.011
Rational DMS[†]	−.247	−.280	.000	−.372	−.122	−.280	−.280
Avoidant DMS[†]	.204	.220	.000	.077	.332	.220	.220
Spontaneous DMS[†]	.197	.219	.000	.069	.325	.219	.219
Intuitive DMS	.040	.045	.083	−.093	.173	−.061	.151
Dependent DMS	.039	.043	.032	−.095	.172	.002	.084
Riskiness Perceptions[†]	−.268	−.327	.073	−.392	−.144	−.420	−.233
Benefit Perceptions[†]	.411	.487	.000	.300	.522	.487	.487

$k = 3$; $N = 652$. Social Norms = the judgment and decision-making skill associated with social norms; DMS = decision-making style; Riskiness perceptions = riskiness perceptions of unethical behavior; Benefit perceptions = benefit perceptions of unethical behavior; r = estimated mean observed (uncorrected for measurement error) correlation weighted for sampling error; ρ = estimated mean correlation corrected for measurement error; $SD\rho$ = standard deviation of corrected correlation; 95% CI = 95% confidence interval; 80% CrI = 80% credibility interval; LL = lower limit; UL = upper limit. For rational decision-making style, avoidant decision-making style, spontaneous decision-making style, and ethical risk perception-benefit $SD\rho$ was set to zero because the variance of ρ was negative (Schmidt & Hunter, 2015); accordingly, the range of the credibility interval around ρ is also zero

[†] JDM-focused individual differences hypothesized to relate to CWB. The remaining two decision-making styles were studied in exploratory fashion

analysis (Darlington, 1990). Traditionally, usefulness analysis involves a series of hierarchical multiple regressions aimed at estimating the incremental variance (ΔR^2) associated with every predictor and comparing it to the incremental variance associated with every other predictor. In the present case, however, we—like several others before us (e.g., Alaybek et al., 2021b; Judge et al., 2003)—conduct a version of usefulness analysis aimed at estimating the incremental variance associated with one *set* of predictors and comparing it to the incremental validity associated with another *set* of predictors. Specifically, we estimate the incremental validity of the JDM-focused predictors (above and beyond the traditional predictors) and compare it to the incremental validity of the traditional predictors (above and beyond the JDM-focused predictors).

Table 3 summarizes the results of the usefulness analyses for all three samples. The second (from the left) column of the table presents the mean $|\beta|$ (i.e., the absolute value of the standardized regression coefficient) of the traditional predictors in a model containing both the traditional and JDM-focused predictors of CWB. Conversely, the third column presents the mean $|\beta|$ of the JDM-focused predictors in a model containing both the traditional and JDM-focused predictors. The fourth column presents the mean ΔR^2 (i.e., incremental variance explained, or "usefulness") of the traditional predictors above and beyond the JDM-focused predictors. Conversely, the fifth (or right-most) column presents the mean ΔR^2 of the JDM-focused predictors above and beyond the traditional predictors. Thus, the fifth column in Table 3 provides the test of Hypothesis 6.

The fifth column of the table reveals that, across all 3 samples, the ΔR^2 for the set of JDM-focused predictors above and beyond the traditional predictors was appreciable ($\Delta R^2 = 8\%$, 13%, and 10% in Samples 1, 2, and 3,

Table 3 Results of usefulness analysis predicting overall CWB via traditional and JDM-focused individual differences variables

Sample	Mean $\|\beta\|$ in model containing both sets of predictors — Traditional predictors (controlling for JDM-focused predictors)	Mean $\|\beta\|$ in model containing both sets of predictors — JDM-focused predictors (controlling for traditional predictors)	Usefulness (ΔR^2) beyond other set of predictors — Traditional predictors (beyond JDM-focused predictors)	Usefulness (ΔR^2) beyond other set of predictors — JDM-focused predictors (beyond traditional predictors)
1	.14	.07	.06*	.08*
2	.08	.09	.06*	.13**
3	.17	.15	.17**	.10**

β = standardized regression coefficient; ΔR^2 = incremental variance explained; JDM = Judgment and decision-making. Traditional predictors include (1) agreeableness, conscientiousness, and neuroticism in Sample 1 and all the Big Five traits in Samples 2 and 3; (2) numerical intelligence in Sample 2 and both verbal intelligence and numerical intelligence in Samples 1 and 3; (3) trait negative affect in Sample 1 and both trait negative affect and trait positive affect in Samples 2 and 3. JDM-focused predictors include, in all samples, the JDM skill associated with recognizing social norms, decision-making styles (rational, avoidant, spontaneous, intuitive, and dependent; the last two were assessed in exploratory fashion), and perceived riskiness and perceived benefit of unethical behavior

*$p < .05$; **$p < .001$

respectively) and statistically significant ($p < 0.05$ in Sample 1 and $p < 0.001$ in Samples 2 and 3). Thus, Hypothesis 6 was strongly supported. Additionally, by way of comparison, the ΔR^2 for the JDM-focused predictors was comparable to that of the traditional predictors in Sample 1, larger in Sample 2, and smaller in Sample 3. The mean $|\beta|$ of JDM-focused predictors was smaller than that of the traditional predictors in Sample 1 and comparable in Samples 2 and 3. Overall, these results indicate that the JDM-focused individual difference predictors not only explain incremental variance in CWB beyond the traditional individual difference predictors (as hypothesized) but also that, more generally, they fare quite well in comparison with the traditional individual difference predictors.

Discussion

The current paper answers several calls in the literature (e.g., Dalal et al., 2010; Moore & Flynn, 2008) to conduct research at the intersection of the academic disciplines of IOOB and JDM. It does so by suggesting a novel category of individual differences predictors of CWB: namely, those from a JDM tradition. We moreover note that the paper offers a *conservative* test of the impact of some of these JDM-focused predictors. After all, the impact of recognizing social norms as well as that of perceived risks and benefits of unethical behavior would presumably be stronger if the items used to measure these constructs were to reflect actual CWBs (i.e., by using the precise items used in the CWB measure) rather than items focusing on risky or unethical behavior more generally (e.g., "…to drink and drive" and "…not to return something you borrowed," Bruine de Bruin et al., 2007; "Revealing a friend's secret to someone else" and "Leaving your young children alone at home while running an errand," Blais & Weber, 2006). Similarly, the impact of recognizing social norms would presumably be stronger if the peer group used to measure this construct were to reflect, say, coworkers in the same organization rather than "people your age."

Results indicated that 16 of the 18 hypothesized relationships were supported when considering correlations from the 3 samples individually (Table 1). In particular, Hypotheses 1 and 5a (involving the skill associated with recognizing social norms and the perceived riskiness of unethical behavior, respectively) were supported in 2 out of the 3 independent samples whereas Hypotheses 2, 3, 4, and 5b (involving rational, avoidant, and spontaneous decision-making styles and perceived benefits of unethical behavior, respectively) were supported in all 3 independent samples. Unsurprisingly, therefore, when correlations were meta-analyzed across the 3 samples (Table 2), all the hypothesized JDM-focused individual differences were found to be significant predictors of CWB.

The meta-analyzed correlations also revealed that, among the hypothesized JDM-focused individual differences predictors, by far the strongest (meta-analytic $\rho = 0.487$) involved the perceived benefits of unethical behavior on the part of the employee. In other words, people who believe unethical behavior is likely to benefit them will tend to engage in more CWB than those who do not. This is a rather simple insight but one that, surprisingly, appears to be almost completely missing from the existing IOOB literature on CWB. As noted previously, the tendency to define CWB in terms of harm to the organization may inadvertently have prevented the study of motives to enact CWB based on harm and benefit to the individual employee enacting the behavior. Our other findings—for instance, that rational decision-making style predicts CWB (negatively)—are also novel to the IOOB literature.

In addition to hypothesizing that JDM-focused individual difference variables predict CWB, we had hypothesized (Hypothesis 6) that they do so incrementally, above and beyond traditional individual differences predictors of CWB. Results were supportive across all 3 samples. More generally, the results suggested that the novel JDM-focused individual difference predictors emphasized in this paper performed comparably to the traditional individual difference predictors that have been the focus of study for decades in the CWB literature.

Our results should not, however, be interpreted as meaning that *all* JDM-focused individual difference variables predict CWB. Quite to the contrary, we had also included two additional JDM-focused individual difference variables—intuitive and dependent decision-making style—for whose relevance prior research had offered conflicting suggestions. We therefore studied these variables in an exploratory fashion, through research questions rather than hypotheses. Indeed, our results suggested that neither of these two decision-making styles predicted CWB appreciably (in terms of effect size) or statistically significantly.

Limitations

One potential limitation of this paper is that all the constructs were measured via self-report. This raises the possibility of common-method variance. However, across measures, multiple response formats were used: That is, not just the traditional Likert-type response format but also a comparison of one's own versus full-sample data (for the JDM-focused predictor of skill associated with recognizing social norms) and objectively correct answers (for the traditional predictor of cognitive ability). Moreover, in 2 of the 3 samples, the measurement of JDM-focused predictors was separated temporally from that of CWB. Using different response formats and separating the measurement of constructs

temporally are two of the methodological approaches to reducing common-method variance suggested by Podsakoff et al. (2003). Additionally, it is reasonable (and typical) to measure perceptual constructs—that is, not just the JDM-focused but also the traditional individual differences predictors—via self-report (Schmitt, 1994; Spector, 1994). Similarly, research suggests that CWB is better measured via self-report than via other-report. For instance, the meta-analysis by Berry et al. (2012) reveals that self- and other-reports of CWB are highly correlated and exhibit similar patterns and magnitudes of correlations with other variables—but also that CWB mean scores are higher in self- than other-ratings (suggesting that underreporting in self-ratings due to socially desirable responding is probably of less concern than underreporting in other-ratings due to the covertness of many forms of CWB) and that self-reported CWB accounts for more variance beyond other-reported CWB in common correlates than the converse.[7] Nonetheless, future research should aim to replicate our results by measuring predictors (both JDM-focused and traditional) as well as CWB using multiple sources.

In this vein, we propose that our results (using self-reports of CWB) will come closer to being replicated in studies using other-reports of CWB under several conditions that ameliorate the covertness of CWB. First, we propose that our results will come closer to being replicated when the other-report source has worked with the focal employee for at least one year. This is based on Rothstein's (1990) findings that the interrater reliability of performance (albeit task performance rather than CWB) does not increase as rapidly after a year of working together as it does during that first year. Second, we propose that our results will come closer to being replicated when the CWB being rated involves interpersonally rather than organizationally directed CWB. Conceptually, this is because several forms of interpersonally directed CWB (e.g., fistfights, sexual harassment, bullying, and incivility) require the target of the CWB to be present and aware of the behavior. Empirically, Berry et al.'s (2012) meta-analysis reported an appreciably higher self-other CWB rating correlation for interpersonally than organizationally directed CWB. Third, we propose that our results will come closer to being replicated when the other-rater is a coworker than a supervisor—especially for interpersonally directed CWB. This is because, much more so than coworkers, supervisors hold reward and punishment power over employees. We acknowledge that Berry et al.'s meta-analysis concluded that the difference in the self-other rating correlation was only slightly (and non-significantly) higher for coworkers than for supervisors, but their finding pertained to overall CWB. We contend that the difference is likely to be larger for interpersonally directed CWB, especially given that much interpersonally directed behavior is directed at coworkers rather than supervisors (such that supervisors may not be aware of such behavior). Fourth, we propose that our results will come closer to being replicated when employees work from the office or factory than when they telework, and when organizations employ extensive employee performance monitoring systems than when they do not. However, in making this last prediction, we caution that comparing CWB across in-person versus telework settings is quite complex even for a single rater (for a list of complexities, and potential solutions, see Holland et al., 2016) and that CWB may be displaced from monitored to unmonitored forms of behavior (Dalal et al., 2020). We furthermore note that all the aforementioned four recommendations pertain to the other-rater's opportunity to observe the performance of the focal employee. Therefore, we additionally recommend that other-raters be asked to complete explicit measures of their opportunity to observe the focal employee's CWB, and that other-ratings of CWB be considered valid only in cases involving, and/or for specific forms of CWB involving, high opportunity to observe.

Another potential limitation of this paper is that one of our samples involved part-time employees whereas the other two samples were recruited from an online participant panel (i.e., MTurk). However, our part-time employees worked a minimum of 20 h per week and did not appreciably resemble the archetypal U.S. undergraduate student in terms of demographic characteristics such as ethnicity (46.70% White in our sample) or age (mean age = 27.40 years in our sample). Additionally, research has shown that data collected via MTurk are at least as reliable and valid as data obtained through traditional research methods (e.g., Buhrmester et al., 2011; Hauser & Schwarz, 2015; Holden et al., 2013; Kees et al., 2017; Paolacci et al., 2010; see also Walter et al., 2019). MTurk

---

[7] In fact, due to the known weaknesses of other-reports of CWB, we also attempted to measure counterproductive behavior *objectively* in Sample 3, by selecting laboratory tasks used to measure aggressive and dishonest behavior that could be adapted for use in a survey format. In particular, we used measures that involved misreporting performance on an anagram task (adapted from van Rensburg et al., 2018), choosing easier anagrams for oneself and assigning harder anagrams to another participant (adapted from Saleem et al., 2015; in reality, there was no other such participant), and stabbing (virtual) pins into a (virtual) voodoo doll representing the employee's least preferred coworker (adapted from Chester & DeWall, 2017). However, the composite objective counterproductive behavior score developed from these measures did not correlate with any of the focal variables (i.e., CWB, the traditional individual differences predictors, or the JDM-focused individual differences predictors). Additional details associated with, as well as results of analyses involving, this measure of objective counterproductive behavior may be obtained upon request from the corresponding author.

participants also tend to be more diverse than convenience samples (e.g., samples from a single organization) in terms of demographic characteristics as well as life and work experiences (Buhrmester et al., 2011). Nonetheless, future research should aim to replicate our results using samples of full-time employees not obtained via participant panels.

Suggestions for Future Research

Beyond research aimed at addressing limitations of the current research, we propose several avenues for future research. First, consistent with the common view of individual differences as predictors of CWB, two of our samples measured the JDM-focused individual differences variables in Wave 1 of the survey and CWB in Wave 2. However, this design cannot rule out reciprocal causality. In fact, we believe that reciprocal causality is likely and worthy of future study. Specifically, we believe that CWB may in some cases serve as not just an outcome but also a predictor of JDM-focused individual difference variables. For instance, an employee's actual CWB—and the consequences that follow—may, over time, accumulate to influence the employee's skill at recognizing social norms as well as his or her perceptions of the benefits and risks associated with CWB. In fact, perceived benefits and risks of unethical behavior may be particularly good predictors of CWB precisely because they represent well-calibrated and periodically updated perceptions based on the person's reinforcement and punishment history after enacting previous forms of unethical behavior (including but not limited to CWB). Future research should therefore test for reciprocal causality via cross-lagged designs.

A second area for future research stems from the fact that Schwartz's (2016) model discusses the processes that lead to an individual enacting (or refraining from enacting) a specific instance of unethical behavior. We have contended that the various stages of this model are influenced by additional, JDM-focused individual differences not captured by Schwartz's concept of moral capacity. However, in the current paper, we have not directly tested the impact of the JDM-focused individual differences on the stages of Schwartz's model. Future research should do so using multilevel experience-sampling designs or policy-capturing designs in which within-person CWB "decision episodes" are nested within people (employees) who vary in their scores on JDM-focused individual differences. Additionally, in many cases, the most proximal JDM predictors of CWB may not be the JDM-focused *traits* (i.e., individual differences) that are the focus of the current paper but rather their *state* (i.e., momentary) counterparts. In particular,

the JDM-focused traits may interact with affective events (Weiss & Cropanzano, 1996) to determine JDM-focused states, which may then predict CWB (i.e., a first-stage moderated mediation model). Future research should examine these possibilities.

A third area for future research involves using the JDM-focused individual differences to predict forms of discretionary work behavior other than CWB. Consider, for example, organizational citizenship behavior, which is defined as employee behavior that is at least somewhat volitional and that improves the functioning of an organization (Dalal et al., 2009). Like CWB, organizational citizenship behavior can be thought of in terms of employee decisions to enact or not enact each instance of such behavior. Moreover, as can be seen from the definition provided above, organizational citizenship behavior, like CWB, is defined in terms of consequences to the organization (benefits in the case of organizational citizenship behavior vs. harms in the case of CWB). Thus, as with CWB, the focus on organization-level consequences may inadvertently have prevented the study of motives to enact organizational citizenship behavior based on harm and benefit to the individual employee enacting the behavior. Several other forms of volitional and non-routinized workplace behavior—such as accepting a job offer or choosing between multiple job offers, quitting a job, whistleblowing, taking paid or unpaid leave, disclosing an "invisible disability" or a pregnancy, and complying with the organization's COVID-19 policies, among others—are also the results of employee decisions (Dalal et al., 2010). Future research should therefore examine JDM-focused individual differences variables as predictors to these forms of work behavior. Of particular interest is the extent to which the relative importance of the various JDM-focused individual differences observed within the current paper generalizes across the specific work behavior being predicted. For instance, do the perceived benefits (to the employee) of the work behavior remain the best JDM-focused predictor, regardless of the specific form of work behavior being predicted?

Fourth, although research has begun to distinguish between approach and avoidance forms of CWB, such research remains in its infancy. Our findings regarding the impact of avoidant decision-making style on CWB per se, however, suggest that research on avoidance forms of CWB should be accelerated. The primary measure of approach-avoidance CWB (Ferris et al., 2016) focuses solely on supervisor-directed behavior: broader-bandwidth approach-avoidance measures of CWB would therefore be beneficial. Additionally, approach and avoidance CWB have not yet been cleanly distinguished conceptually or empirically from active and passive CWB, respectively (Ferris et al., 2016). In a similar vein, it is

unclear whether forms of CWB that typify avoidance can, or should, be distinguished from those that typify work withdrawal (in the case of behavior directed at the organization) or exclusion or ostracism of other individuals (in the case of behavior directed at employees in the organization). Our findings also suggest the importance of future refinement on the predictor side. For example, it is unclear whether avoidance CWB is better predicted by avoidant decision-making style or by, say, performance avoidance goal orientation. Future research should address these issues.

A fifth area for future research involves potential moderators of the impact of the JDM-focused individual difference variables on CWB (or other work behavior). The impact of these predictors on CWB is likely to be weaker in "strong" rather than "weak" situations (Dalal et al., 2020). For example, the skill associated with recognizing social norms may predict CWB less strongly in situations where social norms related to CWB are communicated clearly and consistently than in situations where they are not.

Several additional examples illustrate the circumstances under which, the levels of analysis at which, and the forms of behavior for which the skill associated with recognizing social norms may be less negatively or potentially even positively related to CWB. For instance, productivity norms among employees may tend toward intentionally low productivity under circumstances when the psychological contract is repeatedly violated by management, CWB within a work team may become contagious and even normative (despite the team existing within an organization whose norms are intolerant of CWB), and workplace norms may be quite tolerant of taking long work breaks under the assumption that the missed work would be made up later (while remaining intolerant of, say, getting into fistfights). In such cases, CWB would represent adherence to, rather than violation of, social norms—and employees who accurately judge norms may enact more rather than less CWB. Future research should explore such possibilities by examining situational characteristics as antecedents to social norms involving CWB (as opposed to antecedents to CWB per se), by examining social norms involving CWB at multiple levels of analysis simultaneously (e.g., team and organization), and by examining social norms separately for different forms of CWB (e.g., individual items on CWB measures).

Finally, from a more applied perspective, future research should assess questions involving adverse impact, faking good, and applicant reactions associated with the JDM-focused individual differences variables. In addition, the JDM-focused individual difference variables should be compared to their traditional counterparts (e.g., personality traits) on these criteria.

Practical Implications

This is the first paper to examine the JDM-focused individual differences as predictors of CWB, meaning that a discussion of practical implications must necessarily be tentative, pending future research on topics such as adverse impact, faking, and applicant reactions. Current measures of these constructs were developed for research purposes and may require modification for use in high-stakes testing or other applied contexts. With that caveat, the current results do suggest that some of the JDM-focused constructs (e.g., perceived benefits of unethical behavior) are very promising candidates for use in employee selection contexts with the aim of reducing CWB. Specifically, our results suggest that such constructs have the potential to be useful even above and beyond traditional individual difference predictors of CWB. Alternatively, some of these constructs—especially the skill associated with recognizing social norms and risk–benefit perceptions—could themselves be used as proximal outcomes in assessments of the impact of applied interventions aimed at reducing CWB (the distal outcome), thereby elucidating the mechanisms through which these applied interventions reduce CWB. For instance, given that perceived benefits and perceived risks of behavior are only moderately intercorrelated (see Table A1 in the Appendix), interventions aimed at reducing the perceived benefits of CWB may not additionally serve to increase the perceived risks of CWB, and vice versa. This suggests that CWB may most effectively be deterred via a suite of interventions that operate through multiple JDM-based mechanisms simultaneously.

Conclusions

This paper is the first to systematically examine JDM-focused individual differences as predictors of CWB. Results indicate that such variables predict CWB to an appreciable extent and that they also do so incrementally, beyond traditional individual differences predictors of CWB. The most important JDM-focused individual difference predictor of CWB involved the perceived benefits (to the employee himself or herself) of enacting unethical behavior. In time, this construct may become ubiquitous in the prediction of CWB.

Declarations

Competing Interests The authors declare no competing interests.

Disclaimer The corresponding author's affiliation with The MITRE Corporation is provided for identification purposes only, and is not intended to convey or imply MITRE's concurrences with, or support for, the positions, opinions, or viewpoints expressed by the author.

References

Alaybek, B., Wang, Y., Dalal, R. S., Dubrow, S., & Boemerman, L. S. G. (2021a). Meta-analytic relations between thinking styles and intelligence. *Personality and Individual Differences, 168*, 110322. https://doi.org/10.1016/j.paid.2020.110322

Alaybek, B., Wang, Y., Dalal, R. S., Dubrow, S., & Boemerman, L. S. G. (2021b). The relations of reflective and intuitive thinking styles with task performance: A meta-analysis. *Personnel Psychology, 75*(2), 295–319. https://doi.org/10.1111/peps.12443

Anderson, C. J. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin, 129*(1), 139–167. https://doi.org/10.1037/0033-2909.129.1.139

Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology, 53*, 27–51. https://doi.org/10.1146/annurev.psych.53.100901.135231

Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality: A meta-analysis. *Psychological Bulletin, 146*(4), 279–323. https://doi.org/10.1037/bul0000226

Appelt, K. C., Milch, K. F., Handgraaf, M. J. J., & Weber, E. U. (2011). The Decision Making Individual Differences Inventory and guidelines for the study of individual differences in judgment and decision-making research. *Judgment and Decision Making, 6*(3), 252–262.

Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*(3), 349–360. https://doi.org/10.1037/0021-9010.85.3.349

Berry, C. M., Carpenter, N. C., & Barratt, C. L. (2012). Do other-reports of counterproductive work behavior provide an incremental contribution over self-reports? A meta-analytic comparison. *Journal of Applied Psychology, 97*(3), 613–636. https://doi.org/10.1037/a0026739

Berry, C. M., Ones, D. S., & Sackett, P. R. (2007a). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology, 92*(2), 410–424. https://doi.org/10.1037/0021-9010.92.2.410

Berry, C. M., Sackett, P. R., & Wiemann, S. (2007b). A review of recent developments in integrity test research. *Personnel Psychology, 60*(2), 271–301. https://doi.org/10.1111/j.1744-6570.2007.00074.x

Blais, A. R., & Weber, E. U. (2006). A Domain-Specific Risk-Taking DOSPERT scale for adult populations. *Judgment and Decision Making, 1*(1), 33–47.

Bonaccio, S., & Dalal, R. S. (2006). Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes, 101*(2), 127–151. https://doi.org/10.1016/j.obhdp.2006.07.001

Bornstein, R. F. (2012). Illuminating a neglected clinical issue: Societal costs of interpersonal dependency and dependent personality disorder. *Journal of Clinical Psychology, 68*(7), 766–781. https://doi.org/10.1002/jclp.21870

Bruine de Bruin, W., Parker, A. M., & Fischhoff, B. (2007). Individual differences in adult decision-making competence. *Journal of Personality and Social Psychology, 92*(5), 938–956. https://doi.org/10.1037/0022-3514.92.5.938

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*(1), 3–5. https://doi.org/10.1177/1745691610393980

Catano, V. M., O'Keefe, D. F., Francis, R. E., & Owens, S. M. (2018). Construct-based approach to developing a short, personality-based measure of integrity. *International Journal of Selection and Assessment, 26*(1), 75–92. https://doi.org/10.1111/ijsa.12197

Chester, D. S., & DeWall, C. N. (2017). Combating the sting of rejection with the pleasure of revenge: A new look at how emotion shapes aggression. *Journal of Personality and Social Psychology, 112*(3), 413–430. https://doi.org/10.1037/pspi0000080

Cheung, J. H., Burns, D. K., Sinclair, R. R., & Sliter, M. (2017). Amazon Mechanical Turk in organizational psychology: An evaluation and practical recommendations. *Journal of Business and Psychology, 32*(4), 347–361. https://doi.org/10.1007/s10869-016-9458-5

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*(6), 1241–1255. https://doi.org/10.1037/0021-9010.90.6.1241

Dalal, R. S., Alaybek, B., Sheng, Z., Holland, S. J., & Tomassetti, A. J. (2020). Extending situational strength theory to account for situation-outcome mismatch. *Journal of Business and Psychology, 35*(3), 273–296. https://doi.org/10.1007/s10869-019-09632-z

Dalal, R. S., & Bolunmez, B. (2016). Evidence-based ways to improve workplace decisions: Small steps, big effects. *Society for Industrial and Organizational Psychology and Society for Human Resources Management white paper series.* Retrieved from http://www.siop.org/SIOP-SHRM/SHRM-SIOP_Decision_Making.pdf

Dalal, R. S., Bonaccio, S., Highhouse, S., Ilgen, D. R., Mohammed, S., & Slaughter, J. E. (2010). What if industrial-organizational psychology decided to take workplace decisions seriously? *Industrial and Organizational Psychology, 3*(4), 386–405. https://doi.org/10.1111/j.1754-9434.2010.01258.x

Dalal, R. S., & Brooks, M. E. (2014). Individual differences in decision-making style and skill. In S. Highhouse, R. Dalal, & E. Salas (Eds.), *Judgment and decision making at work* (pp. 80–101). Routledge.

Dalal, R. S., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. (2009). A within-person approach to work behavior and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal, 52*(5), 1051–1066. https://doi.org/10.5465/amj.2009.44636148

Darlington, R. B. (1990). *Regression and linear models.* McGraw-Hill.

Dewberry, C., Juanchich, M., & Narendran, S. (2013). Decision-making competence in everyday life: The roles of general cognitive styles, decision-making styles and personality. *Personality and Individual Differences, 55*(7), 783–788. https://doi.org/10.1016/j.paid.2013.06.012

Dilchert, S., Ones, D. S., Davis, R. D., & Rostow, C. D. (2007). Cognitive ability predicts objectively measured counterproductive work behaviors. *Journal of Applied Psychology, 92*(3), 616–627. https://doi.org/10.1037/0021-9010.92.3.616

Doty, D. H., & Glick, W. H. (1998). Common method bias: Does common methods variance really bias results? *Organizational Research Methods, 1*(4), 374–406. https://doi.org/10.1177/109442819814002

Ferris, D. L., Yan, M., Lim, V. K., Chen, Y., & Fatimah, S. (2016). An approach–avoidance framework of workplace aggression. *Academy of Management Journal, 59*(5), 1777–1800. https://doi.org/10.5465/amj.2014.0221

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual Review of Psychology, 62*, 451–482. https://doi.org/10.1146/annurev-psych-120709-145346

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf Eds, *Personality psychology in Europe, 7*, 7–28. Tilburg University Press.

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S., & Ditto, P. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. *Advances in Experimental Social Psychology, 47*, 55–130. https://doi.org/10.1016/B978-0-12-407236-7.00002-4

Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment, 11*(1), 30–42. https://doi.org/10.1111/1468-2389.00224

Gunia, B. C., Wang, L., Huang, L., Wang, J., & Murnighan, J. K. (2012). Contemplation and Conversation: Subtle influences on moral decision making. *Academy of Management Journal, 55*(1), 13–33. https://doi.org/10.5465/amj.2009.0873

Haidt, J., & Graham, J. (2007). When morality opposes justice: Conservatives have moral intuitions that liberals may not recognize. *Social Justice Research, 20*(1), 98–116. https://doi.org/10.1007/s11211-007-0034-z

Harper, S. J. (2009). Ethics versus morality: A problematic divide. *Philosophy & Social Criticism, 35*(9), 1063–1077. https://doi.org/10.1177/0191453709343388

Harren, V. A. (1979). A model of career decision making for college students. *Journal of Vocational Behavior, 14*(2), 119–133. https://doi.org/10.1016/0001-8791(79)90065-4

Hauser, D. J., & Schwarz, N. (2015). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods, 48*(1), 400–407. https://doi.org/10.3758/s13428-015-0578-z

Heckert, A., & Heckert, D. M. (2004). Using an integrated typology of deviance to analyze ten common norms of the US middle class. *Sociological Quarterly, 45*(2), 209–228. https://doi.org/10.1525/tsq.2004.45.2.209

Highhouse, S., Nye, C. D., Zhang, D. C., & Rada, T. B. (2017). Structure of the Dospert: Is there evidence for a general risk factor? *Journal of Behavioral Decision Making, 30*(2), 400–406. https://doi.org/10.1002/bdm.1953

Hogarth, R. M., Lejarraga, T., & Soyer, E. (2015). The two settings of kind and wicked learning environments. *Current Directions in Psychological Science, 24*(5), 379–385. https://doi.org/10.1177/0963721415591878

Holden, C. J., Dennie, T., & Hicks, A. D. (2013). Assessing the reliability of the M5–120 on Amazon's Mechanical Turk. *Computers in Human Behavior, 29*(6), 1749–1754. https://doi.org/10.1016/j.chb.2013.02.020

Holland, S. J., Simpson, K. M., Dalal, R. S., & Vega, R. P. (2016). I can't steal from a coworker if I work from home: Conceptual and measurement-related issues associated with studying counterproductive work behavior in a telework setting. *Human Performance, 29*(3), 172–190. https://doi.org/10.1080/08959285.2016.1160094

Huang, M. H., & Hauser, R. M. (1998). Trends in Black-White test score differentials: II the WORDSUM vocabulary test. In U. Neisser (Ed.), *The rising curve: Long-term gains in IQ and related measures* (pp. 303–332). American Psychological Association.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory-Versions 4a and 54*. University of California, Berkeley, Institute of Personality and Social Research.

Jones, T. M. (1991). Ethical decision making by individuals in organizations: An issue-contingent model. *Academy of Management Review, 16*(2), 366–395. https://doi.org/10.2307/258867

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The Core Self-Evaluations Scale (CSES): Development of a measure. *Personnel Psychology, 56*(2), 303–331. https://doi.org/10.1111/j.1744-6570.2003.tb00152.x

Judge, T. A., Jackson, C. L., Shaw, J. C., Scot, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: The integral role of individual differences. *Journal of Applied Psychology, 92*(1), 107–127. https://doi.org/10.1037/0021-9010.92.1.107

Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist, 58*(9), 697–720. https://doi.org/10.1037/0003-066X.58.9.697

Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Straus & Giroux.

Kahneman, D., & Klein, G. (2009). Conditions for intuitive expertise: A failure to disagree. *American Psychologist, 64*(6), 515–526. https://doi.org/10.1037/a0016755

Kees, J., Berry, C., Burton, S., & Sheehan, K. (2017). An analysis of data quality: Professional panels, student subject pools, and Amazon's Mechanical Turk. *Journal of Advertising, 46*(1), 141–155. https://doi.org/10.1080/00913367.2016.1269304

Lipkus, I. M., Samsa, G., & Rimer, B. K. (2001). General performance on a numeracy scale among highly educated samples. *Medical Decision Making, 21*(1), 37–44. https://doi.org/10.1177/0272989X0102100105

Mohammed, S., & Schwall, A. (2009). Individual differences and decision making: What we know and where we go from here. In G. P. Hodgkinson & J. K. Ford (Eds.), *International review of industrial and organizational psychology (24,* 249–312). John Wiley & Sons Ltd: United Kingdom.

Moore, D. A., & Flynn, F. J. (2008). The case for behavioral decision research in organizational behavior. *Academy of Management Annals, 2*(1), 399–431. https://doi.org/10.5465/19416520802211636

Moore, C., & Gino, F. (2015). Approach, ability, aftermath: A psychological process framework of unethical behavior at work. *Academy of Management Annals, 9*(1), 235–289. https://doi.org/10.5465/19416520.2015.1011522

Moore, D. A., & Loewenstein, G. (2004). Self-interest, automaticity, and the psychology of conflict of interest. *Social Justice Research, 17*(2), 189–202. https://doi.org/10.1023/b:sore.0000027409.88372.b4

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making, 5*(5), 411–419.

Parker, A. M., & Fischhoff, B. (2005). Decision-making competence: External validation through an individual-differences approach. *Journal of Behavioral Decision Making, 18*(1), 1–27. https://doi.org/10.1002/bdm.481

Phillips, W. J., Fletcher, J. M., Marks, A. D., & Hine, D. W. (2016). Thinking styles and decision making: A meta-analysis. *Psychological Bulletin, 142*(3), 260–290. https://doi.org/10.1037/bul0000027

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Porter, C. O. L. H., Outlaw, R., Gale, J. P., & Cho, T. S. (2019). The use of online panel data in management research: A review and recommendations. *Journal of Management, 45*(1), 319–344. https://doi.org/10.1177/0149206318811569

Rest, J. R. (1984). The major components of morality. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 24–38). Wiley.

Rest, J. R. (1986). *Moral development: Advances in research and theory*. Praeger.

Reynolds, S. J. (2006a). A neurocognitive model of the ethical decision-making process: Implications for study and practice. *Journal of Applied Psychology, 91*(4), 737–748. https://doi.org/10.1037/0021-9010.91.4.737

Reynolds, S. J. (2006b). Moral awareness and ethical predispositions: Investigating the role of individual differences in the recognition of moral issues. *Journal of Applied Psychology, 91*(1), 233–243. https://doi.org/10.1037/0021-9010.91.1.233

Reynolds, S. J. (2008). Moral attentiveness: Who pays attention to the moral aspects of life? *Journal of Applied Psychology, 93*(5), 1027–1041. https://doi.org/10.1037/0021-9010.93.5.1027

Robinson, S. L., & O'Leary-Kelly, A. M. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of employees. *Academy of Management Journal, 41*(6), 658–672. https://doi.org/10.4324/9781315290614-30

Rothstein, H. R. (1990). Interrater reliability of job performance ratings: Growth to asymptote level with increasing opportunity to observe. *Journal of Applied Psychology, 75*(3), 322–327. https://doi.org/10.1037/0021-9010.75.3.322

Saleem, M., Anderson, C. A., & Barlett, C. P. (2015). Assessing helping and hurting behaviors through the Tangram Help/Hurt Task. *Personality and Social Psychology Bulletin, 41*(10), 1345–1362. https://doi.org/10.1177/0146167215594348

Schmidt, F. L., & Hunter, J. E. (2015). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Sage.

Schmitt, N. (1994). Method bias: The importance of theory and measurement. *Journal of Organizational Behavior, 15*(5), 393–398. https://doi.org/10.1002/job.4030150504

Schwartz, M. S. (2016). Ethical decision-making theory: An integrated approach. *Journal of Business Ethics, 139*(4), 755–776. https://doi.org/10.1007/s10551-015-2886-8

Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement, 55*(5), 818–831. https://doi.org/10.1177/0013164495055005017

Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior, 15*(5), 385–392. https://doi.org/10.1002/job.4030150503

Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review, 12*(2), 269–292. https://doi.org/10.1016/S1053-4822(02)00049-9

Spector, P. E., & Fox, S. (2005). The stressor-emotion model of counterproductive work behavior. In S. Fox & P. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets(151–174).* Washington, DC: American Psychological Association.

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior, 68*(3), 446–460. https://doi.org/10.1016/j.jvb.2005.10.005

Van der Linden, D., te Nijenhuis, J., & Bakker, A. B. (2010). The general factor of personality: A meta-analysis of Big Five intercorrelations and a criterion-related validity study. *Journal of Research in Personality, 44*(3), 315–327. https://doi.org/10.1016/j.jrp.2010.03.003

Van Rensburg, Y.-E.J., de Kock, F. S., & Derous, E. (2018). Narrow facets of honesty-humility predict collegiate cheating. *Personality and Individual Differences, 123*, 199–204. https://doi.org/10.1016/j.paid.2017.11.006

Walter, S. L., Seibert, S. E., Goering, D., & O'Boyle, E. H. (2019). A tale of two sample sources: Do results from online panel data and conventional data converge? *Journal of Business and Psychology, 34*(4), 425–452. https://doi.org/10.1007/s10869-018-9552-y

Wang, Y., Highhouse, S., Lake, C. J., Petersen, N. L., & Rada, T. B. (2017). Meta-analytic investigations of the relation between intuition and analysis. *Journal of Behavioral Decision Making, 30*(1), 15–25. https://doi.org/10.1002/bdm.190

Watson, D., & Clark, L. A. (1988). Development and validation of a brief measure of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Watts, L. L., Medeiros, K. E., McIntosh, T. J., & Mulhearn, T. J. (2020). Decision biases in the context of ethics: Initial scale development and validation. *Personality and Individual Differences.* https://doi.org/10.1016/j.paid.2019.109609

Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making, 15*(4), 263–290. https://doi.org/10.1002/bdm.414

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, cause and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 18, pp. 1–74). JAI Press.

Weller, J., Dieckmann, N. F., Tusler, M., Mertz, C. K., Burns, W. J., & Peters, E. (2013). Development and testing of an abbreviated numeracy scale: A Rasch analysis approach. *Journal of Behavioral Decision Making, 26*(2), 198–212. https://doi.org/10.1002/bdm.1751

Welsh, D. T., & Ordóñez, L. D. (2014). Conscience without cognition: The effects of subconscious priming on ethical behavior. *Academy of Management Journal, 57*(3), 723–742. https://doi.org/10.5465/amj.2011.1009

Wood, N. L., & Highhouse, S. (2014). Do self-reported decision styles relate with others' impressions of decision quality? *Personality and Individual Differences, 70*, 224–228. https://doi.org/10.1016/j.paid.2014.06.036

Zhang, T., Gino, F., & Margolis, J. D. (2018). Does "could" lead to good? On the road to moral insight. *Academy of Management Journal, 61*(3), 857–895. https://doi.org/10.5465/amj.2014.0839

Appendix

Table A1 Intercorrelations among and scale reliabilities of the predictor variables

	1	2	3	4	5	6	7	8	9
1. Agreeableness	*.73/.88/.85*								
2. Conscientiousness	.38/.48/.54	*.70/.92/.87*							
3. Neuroticism	−.25/−.47/−.55	−.41/−.58/−.54	*.82/.91/.90*						
4. Openness	NA/.32/.28	NA/.24/.21	NA/−.13/−.15	*NA/.82/.85*					
5. Extraversion	NA/.20/.28	NA/.37/.27	NA/−.38/−.51	NA/.29/.13	*NA/.92/.89*				
6. Verbal Ability	.04/NA/−.12	.02/NA/−.01	−.02/NA/.04	NA/NA/.13	NA/NA/−.13	*–/NA/–*			
7. Numerical Ability	−.04/.14/−.08	−.14/.13/−.07	.03/−.16/.05	NA/.17/.10	NA/.08/−.17	.14/NA/.30	*–/–/–*		
8. Negative Affect	−.19/−.35/−.39	−.35/−.39/−.39	.67/.58/.62	NA/−.02/−.13	NA/−.23/−.23	−.09/NA/−.07	−.01/−.24/−.01	*.90/.90/.94*	
9. Positive Affect	NA/.30/.46	NA/.47/.49	NA/−.45/−.51	NA/.05/.28	NA/.35/.43	NA/NA/−.15	NA/.09/−.17	NA/−.26/−.26	*NA/.93/.91*
10. Social Norms	.11/.12/.03	.00/.06/.12	.08/−.11/.01	NA/.20/.12	NA/.03/−.14	.05/NA/.05	.12/.12/.20	.15/−.06/−.14	NA/−.09/.02
11. Rational DMS	.33/.20/.29	.44/.31/.47	−.15/−.21/−.13	NA/.25/.38	NA/.08/.08	.01/NA/−.06	−.01/.20/.07	−.15/−.20/−.15	NA/.17/.23
12. Dependent DMS	.03/.08/.01	−.25/−.13/−.18	.25/.13/.26	NA/.02/−.11	NA/−.09/−.13	−.09/NA/−.07	.00/.01/.01	.13/.14/.27	NA/.06/−.05
13. Avoidant DMS	−.17/−.27/−.45	−.50/−.47/−.66	.29/.47/.46	NA/−.16/−.23	NA/−.17/−.21	−.09/NA/.02	.00/−.07/−.14	.31/.30/.38	NA/−.24/−.32
14. Intuitive DMS	.09/.09/−.02	.07/.15/−.10	−.07/−.04/.09	NA/−.01/−.09	NA/.10/.06	−.17/NA/−.01	−.14/−.07/−.31	−.09/−.04/.22	NA/.16/.09
15. Spontaneous DMS	−.24/−.15/−.31	−.31/−.10/−.48	−.11/.13/.17	NA/−.20/−.22	NA/−.01/−.04	−.23/NA/.05	−.07/−.04/−.15	.00/.00/.18	NA/.06/−.17
16. Riskiness Perceptions	.43/.33/.30	.19/.29/.27	−.12/−.08/−.06	NA/.08/.20	NA/.05/.01	.00/NA/−.04	−.16/.00/−.10	−.14/−.03/−.03	NA/.15/.32
17. Benefit Perceptions	−.32/−.30/−.34	−.26/−.29/−.35	.12/.24/.20	NA/−.06/−.21	NA/−.15/−.09	−.06/NA/−.04	.07/−.09/.09	.28/.19/.22	NA/−.05/−.17

	10	11	12	13	14	15	16	17
1. Agreeableness								
2. Conscientiousness								
3. Neuroticism								
4. Openness								
5. Extraversion								
6. Verbal Ability								
7. Numerical Ability								
8. Negative Affect								
9. Positive Affect								
10. Social Norms	*–/–/–*							
11. Rational DMS	.00/.17/.06	*.84/.82/.85*						
12. Dependent DMS	.04/−.17/−.10	.02/.06/.14	*.88/.88/.81*					
13. Avoidant DMS	.09/−.17/−.13	−.23/−.19/−.34	.33/.26/.28	*.95/.93/.91*				
14. Intuitive DMS	.03/−.01/−.08	.15/.04/−.27	.11/−.04/.20	.18/−.08/.28	*.86/.83/.86*			
15. Spontaneous DMS	−.01/−.26/−.11	−.21/−.29/−.58	.08/.13/−.04	.45/.19/.47	.47/.39/.55	*.91/.87/.85*		
16. Riskiness Perceptions	−.07/.04/−.05	.20/.04/.23	.14/.05/.06	−.07/−.09/−.16	.01/.17/−.08	−.11/−.05/−.21	*.66/.79/.73*	
17. Benefit Perceptions	−.01/−.13/−.09	−.19/−.08/−.29	.03/.03/.03	.18/.18/.31	.08/−.10/.05	.11/.09/.24	−.48/−.38/−.38	*.77/.76/.77*

Note. DMS = Decision-making style; Riskiness Perceptions = perceived risk levels associated with unethical behavior; Benefit Perceptions = perceived benefit levels associated with unethical behavior. The intercorrelations and scale reliabilities (in *italics*, on the diagonal) are listed for Samples 1 ($N = 211$), 2 ($N = 250$), and 3 ($N = 194$), respectively, separated by the forward slash sign (i.e., "/"). "NA" indicates that the measure was not included in the respective sample and "–" indicates that a reliability coefficient (Cronbach's α) cannot be computed for the respective measure. Scale means and standard deviations are available upon request from the corresponding author. Correlations between the predictor variables and CWB are reported in Table 1. Reliabilities for overall CWB were .90, .96, and .96 in Samples 1, 2, and 3, respectively