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RESEARCH ARTICLE

Supervisor behavior and character: A simulation study of employee helpfulness

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Abstract

Supervisor character and behavior are key components of an organization's ethical fabric that should play a role in employee helping behavior. However, research has not fully distinguished how these factors are interrelated. The current study explores these relationships by developing a deeper understanding of ethical language in organizations via thick ethical concepts found in simulation software, supported by affect control theory. Software formulae in these simulations were developed via empirical research conducted over several decades. Simulations provided predictions of employee helpfulness in response to encounters with supervisors of varying ethical characters, enacting a variety of behaviors. The likely impact of supervisor character on employee helpfulness is more substantial than the impact of supervisor behavior. New insights emerged related to underlying complexities of ethical languages, such as the role of cultural meanings of language terms. These outcomes, as well as the associated implications, research limitations, and suggestions for future research, are discussed.

Keywords: leadership; ethics/character; organizational citizenship behavior; simulation studies

Introduction

Defined from a biological/behavioral perspective, employee helping behavior (i.e., altruism) is known to greatly benefit coworkers and organizations (e.g., Organ, 1988). Assisting others at work is often indicative of organizational citizenship behavior (OCB), a confluence of voluntary acts initiated spontaneously by employees that can lead to many favorable individual and organizational outcomes (Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009; Walz & Niehoff, 1996). As noted by Katz and Kahn (1966) in their description of acts (such as helpfulness) that are necessary for effective organizations, such citizenship behavior is important to companies. Research shows that OCBs are key components of job performance that lie outside the kinds of contributions linked to task-related performance. Such actions can contribute to organizational success 'above and beyond' behaviors that are typically expected of employees. In this regard, OCBs function as extra-role behaviors and contribute to a constellation of positive consequences (e.g., Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff et al., 2009; Walz & Niehoff, 1996). For instance, a recent meta-analytic study identified noteworthy correlations between OCBs and multiple organizational outcomes including productivity, efficiency, costs, and profitability (Podsakoff et al., 2009). In several other studies, OCBs (including helping behavior) accounted for significant variance in financial indicators and customer service, and they were significantly related to key work outcomes such as customer satisfaction (Podsakoff, Ahearne, & MacKenzie, 1997; Walz & Niehoff, 1996). Taken as a whole, these results show that OCBs and similar expressions of altruism in the workplace are important building blocks for enhanced well-being in companies.

However, the question of what motivates individuals to help others at work still persists. The individual and organizational benefits of citizenship behavior suggest that they are provided by caring employees, advancing the idea that altruism reflects a belief among individuals that helping and doing well for others is a moral action (e.g., Turnipseed, 2002). This notion implies that acts of altruism are motivated by employees' ethical preferences, but such behavior may also be precipitated by factors found within the immediate work environment. In this capacity, understanding the ethical origins of helping behavior, both individual and environmental, may facilitate the identification of key factors that precipitate altruistic tendencies.

Consequently, the purpose of this study is to determine the degree to which supervisor ethical character and behavior, facets of organizational leadership that can advance ethical cultures (e.g., Foote & Ruona, 2008; Kaptein, 2008), prompt employee helping behavior. Investigating the ethical character and behavior of supervisors is particularly relevant because these tendencies are likely motivated by an underlying concern for ethics among leaders, reflected by their own altruism, due care, ethical traits/behavior, and other characteristics. While scholars have examined leader behavior relative to OCBs, few studies have focused on leader character, suggesting that such inquiry makes a valuable contribution to the literature. For instance, a meta-analysis covering over a decade and a half of research showed leader behavior, along with employee attitudes and task characteristics, were significant antecedents to OCBs (Podsakoff, MacKenzie, Paine, & Bachrach, 2000); however, leader character was not among the variables reviewed. More recently, studies have determined that leaders' ethical character can impact OCBs (e.g., Kim & Kim, 2013; Kottke & Pelletier, 2013; Zoghbi-Manrique-de-Lara & Suarez-Acosta, 2014). While behaviors are clearly important predictors of citizenship, they involve specific actions assessed at one point in time in static circumstances. Alternatively, character is the reputation a person earns over time and is less situation-specific. An individual's character should therefore be more stable than behavior, as well as more reflective of individual ethics, especially given that an individual's actions may or may not be consistent with character and can vary based on the situation and context. However, character should encourage certain long-term behavioral tendencies in individuals, leading to the notion that ethical character and behavior function together synergistically. More research is clearly needed to clarify the role that leader character and behavior play in the advancement of employee citizenship and other prosocial/ethical behaviors.

Another purpose of this study is to answer Whetstone's (2001) call for research that develops a deep understanding of ethical language in organizations. Past research provides important insights by considering the effects of written documents such as mission statements, codes of conduct, and policies on ethics (Cressey & Moore, 1983; Dobson, 2003; McCraw, Moffeit, & O'Malley, 2009). Yet, much of this work fails to adequately address the complex embedded meaning of words and language in work settings (Whetstone, 2001). This research uses an innovative methodology to distinguish the impact of supervisor ethical character versus supervisor behavior on likely employee helpfulness to a supervisor, relying on (1) computer simulations that generate predictions based on affect control theory (Heise, 1970, 2003, 2007), and (2) the consideration of 'thick ethical concepts' as important components of moral language in work settings – or the way that words may be used to articulate universal principles and characteristics connected to individuals (Harcourt & Thomas, 2013). In this sense, a better understanding of ethical language may be obtained by exploring how words are understood and interrelated in a simulation setting.

Philosophers have considered thick ethical concepts in linguistic and moral issues (Jordan, 2013; Moore, 2006). For example, Williams (1985: 129) posited that evaluative terms such as 'brutality and courage…express a union of fact and value.' Thorpe (2014: 60) argued that thick ethical concepts offer fuller descriptions and 'fleshed out concepts' more effectively than do general prescriptive terms related to ethical language (i.e., 'thin' concepts) such as 'good,' 'ought,' 'right,' and 'wrong.' Considering these ideas, this paper utilizes a broad array of contextualized and language-

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based social interactions to gain insight on the likely effects of supervisor ethical character and behavior on employee helpfulness[1].

The use of thick ethical concepts to study social interactions requires substantial quantities of complex information, which can be cost prohibitive and impractical in empirical research. However, social psychologists have developed and validated an effective methodology for simulating social interactions based on empirical definitions of identity and behavior concepts and guided by affect control theory (Heise, 1991, 2003). Prior research in business and managerial ethics has rarely considered simulation methodologies. Apart from two recent studies that used computer models (Chen, 2010; Miller & Engemann, 2004), simulations in the field have used case studies (e.g., Hunt & Jennings, 1997; White & Dooley, 1993) and the Iterative Prisoner's Dilemma game (e.g., Watkins & Hill, 2005). Thus, this study also seeks to contribute to the literature by utilizing an established social psychology/sociology simulation methodology uncommon in the fields of business, leadership, and ethics.

The following sections briefly explore supervisor behavior and character in management research, with particular emphasis on employee helping behavior and other kinds of OCBs. An overview of affect control theory is provided to explain the study's conceptual and methodological approach, followed by a discussion of the simulation methods and models used in this research. Finally, the results of the simulations are presented, and the managerial implications, limitations, and suggestions for future research are discussed.

Review of Relevant Research

Supervisor behavior/character and helping behavior/OCB

Given that an understanding of language is critical based on the methodology employed, it is important to clearly define relevant terminology. In this study, supervisor behavior refers to actions from a supervisor, operating as a social actor, that are directed at an employee, who represents the object person in a social interaction (Heise, 2002). Character, often linked to an individual's *reputation*, is advanced from the macro-accumulation of behaviors in micro-instances that define personal status and power (MacKinnon, 1994). Management researchers have used similar terms to define leader behavior and character. For instance, Kaptein (2008: 932–933) developed an ethical culture measure that included items related to leader behavior ('My supervisor sets a good example in terms of ethical behavior') and leader character ('My supervisor is honest and reliable').

Previous research suggests that variations of these particular conceptions of leader/supervisor behavior and character are related to helping behaviors and other types of OCBs, with OCB being a common outcome of ethics-based leadership practices. For instance, a meta-analysis conducted by Podsakoff et al. (2000: 528–529) covering over a decade and a half of research on OCB showed that leader behavior and other work setting factors were significant antecedents of citizenship. Despite the fact that leader character was not among the variables reviewed, examples of leader behaviors that correlated with OCBs included 'articulating a vision' ($r = 0.20$, $p < .05$), 'fostering the acceptance of group goals' ($r = .23$, $p < .05$), and 'supportive leader behaviors' ($r = .26$, $p < .05$).

Alternatively, other studies indicate how leader morality may impact OCB. Kim and Kim (2013) defined *leader moral competence*, similar to leader character, to include qualities of honesty, fairness, integrity, and compassion, and determined that leader moral competence favorably influenced OCB ($\beta = .43$, $p < .001$). Other researchers defined ethical leadership to include supervisors as sources of moral guidance with a focus on fairness. In one investigation conducted by Zoghbi-Manrique-de-Lara and Suarez-Acosta (2014), ethical leadership fully mediated the relationship between justice at work and employee OCBs ($\beta = .36$, $p < .001$). Philipp and Lopez

[1]The independent variables, supervisor character and behavior, are operationalized with thick ethical concepts (Harcourt & Thomas, 2013) embedded within the affect control theory software (Heise, 1991, 2002). Helping behavior is operationalized by calculating differences between quantified cultural meanings of employee response behaviors to supervisors and the meaning of the term 'to help.'

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(2013) also found that ethical leadership, defined in terms of both behavior and character, positively influenced the relationship between relational contracts and OCB, with moderated regression results indicated acceptable findings ($R^2 = .41$, $p < .05$). Sosik (2005) determined that a manager's performance moderated the relationship between manager values (a factor of character) and charismatic leadership, as well as employee OCBs. The *t*-value of differences in path coefficients was significant ($t = -16.93$, $p < .001$). Finally, Tang and Liu (2012) found employee perceptions of supervisor integrity and character were related to employees' propensity to engage in unethical behavior ($r = -.20$, $p < .05$), and Kottke and Pelletier (2013) concluded that top leaders and supervisors' ethics can influence dimensions of employee OCB such as altruism and civic virtue. As a whole, these studies indicate that leader behavior and character influence employee OCBs. This research also provides evidence that helping behaviors and other OCBs have ethical origins and are tied to multiple indicators of organizational success.

Key principles of affect control theory

Affect control theory (Heise, 1991) provides a platform to explore the linkages between supervisor character, supervisor behavior and employee helping behavior. Members of a society hold long-term, culturally defined impressions of identities and behaviors, referred to as *fundamental sentiments* (Heise, 2002), which persist across decades and serve as social knowledge about an identity and his or her character (e.g., 'a manager'). A *fundamental sentiment* about 'a manager,' for example, is 'the cumulative product of micro situational events' (MacKinnon, 1994: 175) and corresponds to the definition of a manager's character in this study. To verify the persistence of cultural definitions, we compared quantitative definitions of *fundamental sentiments* of concepts used in this study defined by male college students in two states 24 years apart: 2002 Indiana (Francis & Heise, 2004) and 1978 North Carolina (Smith-Lovin & Heise, 1980). This comparison yielded a high correlation ($r = 85$, $p < .05$) between the two sets of sentiments as cultural meanings.

Individuals also develop temporary impressions in response to each encounter in the ongoing stream of social interactions. *Transient impressions* refer to momentary perceptions formed after a social encounter (Heise, 2002). Employee perceptions of a supervisor's behavior in situations in this study correspond to *transient impressions* in affect control theory. The theory's main principle is that people intuitively compare *fundamental sentiments* with *transient impressions* and seek to minimize discrepancies between these two factors as social encounters unfold (Heise, 2002). Affect control theory differs from cognitive dissonance theory, which focuses on conflicts within individuals over their attitudes and actions (Festinger, 1957).

Fundamental sentiments and transient impressions of concepts have been quantitatively defined on semantic differential scales ranging from −4.3 to +4.3 in empirical research (Smith-Lovin & Heise, 1980). The three dimensions of cultural meanings are *evaluation* (E), *potency* (P), and *activity* (A), and these factors refer to the EPA definition of a concept. The EPA dimensions represent universal meanings to persons within a culture (Osgood, May, & Miron, 1975). In a cross-cultural study of 27 countries, Osgood, May, and Miron (1975) showed that the EPA profile represents universal dimensions across cultures, and the meaning of each concept varies by culture. *Evaluation* represents status and prestige with a morality component. It has been measured using 'good-bad' or 'nice-awful' as opposing anchors on the scale. For example, after seeing an actor help another person, observers tend to give the actor evaluation 'credits' for his/her noble act (Smith-Lovin, 1987). *Potency* represents power implied in property or relationships using 'big-little' or 'powerful-powerless' as opposing anchors. *Activity* refers to the liveliness of social expression or emotional energy defined as '…relating to arousal versus languor, and initiative versus passivity' (Heise, 2002: 36). *Activity* has been measured using 'active-inactive' or 'noisy-quiet' as opposing anchors (MacKinnon, 1994). EPA dimensions of cultural meanings quantitatively define fundamental sentiments and transient impressions of concepts for identity, behavior, emotion, and modifier concepts in the theory (Heise, 2007).

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Numerous studies contributed to the development of the principles of affect control theory, as well as the theory's formulas, which support simulations that predict likely outcomes from interpersonal interactions. Heise and Smith-Lovin (1981) collected out-of-context EPA definitions of identity and behavior concepts such as 'a judge,' (EPA = 1.1, 1.8 and −.3) and 'to contemplate' (EPA = .9, 1.2, −.1) from 72 university students. They also collected EPA definitions of concepts in specific situations (in-context) such as 'the judge contemplated the gambler.' In this situation, 'judge' is the Actor (A), 'contemplate' is the Behavior (B) and 'gambler' (O) is the Object person in the ABO structure of events (Smith-Lovin, 1987). Through structural equation modeling with out-of-context EPA definitions *(fundamental sentiments)* as the independent variables, they found that the independent variables influenced EPA definitions for concepts in-context (*transient impressions*-dependent variables). Further, the most influential coefficient in terms of effect size (in the ABO structure) associated with the independent variables was Evaluation of Behavior (.68) (Heise & Smith-Lovin, 1981).

Smith-Lovin (1987) conducted a similar but larger study with over 1,000 University of North Carolina students and compared results to studies done with university students from Wisconsin, Ireland, Egypt, and Lebanon. Again, among the highest, significant SEM coefficients for the independent variables from the North Carolina students was for an actor's behavior (Be) to predict actor's evaluation (Ae'), with a coefficient value of .49 ($p < .05$) associated with Be, which facilitates an overall regression result of .78 ($p < .05$) to predict Ae' by all interaction variables including Be (Smith-Lovin, 1987: 64, see Table IV). Regression results between other English-speaking students with results from US students ranged from .68 to .87 ($p < .05$), with substantial similarities in impression formation (*transient impressions*) of ABO elements in interactions. Results for Arabic speakers compared to North Carolina students were lower, due to varying patterns in a few factors, including Actor potency and Actor activity. Regression results varied from $R^2 = .45$ to .62 ($p < .05$) (Smith-Lovin, 1987).

Later studies validated affect control theory's ability to predict EPA profiles of transient impressions from EPA profiles of fundamental sentiments by comparing results of identical sets of behaviors and identities in simulations and in laboratory experiments. Based on formulae developed in prior empirical research, simulations predicted a 'student' (EPA = 1.49, .31, .35), evaluated to be 'good' is likely to be helpful to another 'student.'[2] In an identical situation, simulations predicted a 'student' is likely to be neutral or unpleasant to a 'delinquent' (EPA = −1.81, −.78, .41) as a 'bad' interaction partner (e.g., Wiggins and Heise, 1987). In the related experiment with 57 university students in situations identical to the simulations, the difference between subject helpfulness to a good 'student' (confederate) versus helpfulness to a (bad) 'delinquent' (confederate) was significant ($t = 3.78$, $p < .001$)[3]. The less ethical character received neutral to unpleasant responses instead of helpfulness.

Schröder and Scholl (2009) also tested affect control theory by comparing theory simulation predictions to experimental results involving 60 university students and using a German language dictionary of EPA definitions of concepts including 40 emotion concepts. The experiment involved virtual agents assessing employee (subject) leadership skills. Experiment results supported theory

[2]The EPA values applied in this research were obtained from the database of student ratings at Indiana University from 2002 to 2003 (Francis and Heise, 2004). The EPA values for "a student" identity in that data set is an average value for each respective dimension, that is, 1.49 is the average value for the evaluation of a student identity indicated by students in the survey, .31 is the average for potency of a student identity and .35 is the average for activity of a student identity. See the section "Key Principles of Affect Control Theory." Significance is stated for the comparison of E, P and A values of English terms collected from two groups of U.S. students in two different states (Indiana and North Carolina), 24 years apart at $r = .85$, $p < .05$. Francis conducted the comparison analysis as part of this research, to show the stability of the average EPA values across time and locations. We believe this statistical measure is more meaningful than the standard deviation (SD) of each average value since the standard deviation provides limited information as a summary measure of differences of each observation from the mean of a series of values.

[3]The contrasting ethical characters (the independent variables) and helpfulness (the dependent variable) in this research are key variables for the current study.

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predictions of subjects' felt emotions (e.g., happy, satisfied vs. angry, sad) in a 2×3 design of many interactions with a virtual agent who was supportive, antagonizing or withdrawn. Correlations for subjects' felt emotions between simulation results and experiment results were all significant except for one of the six design modes (.61, $p < .001$; −.40, $p < .001$ (×2); −.27, $p < .05$; −.23, $p < .10$; and −.18, $p > .05$ – deemed non-significant). Other research has also validated the theory by comparing simulation predictions to experiment results (e.g., Smith-Lovin & Douglass, 1992).

Hypothesis development

The current study predicts outcomes of simulated supervisor behavior based on research in management and affect control theory. Prior research suggests employees are more likely to be more helpful to ethical supervisors than to unethical supervisors based on the stability principle and behavior-object consistency principle of affect control theory. Stability refers to fundamental sentiments of an actor that are transferred to transient impressions of the actor. Stability emerged in the analysis of *transient impressions* collected empirically across cultures in the United States, Ireland, Lebanon (Smith-Lovin, 1987), Canada (MacKinnon, 1985/1988/1998), and Japan (Smith, Matsuno, & Umino, 1994). An actor fundamentally evaluated as 'quite good' seemed 'good' to some degree in an interaction whether the actor's behavior was deemed good or bad.

The behavior-object consistency principle is considered, 'one of the most important [principles]' (Wiggins & Heise, 1987: 156). 'Actors produce positive impressions [of oneself] by doing good acts to good people or bad acts to bad people' (Wiggins & Heise, 1987: 156). Stability and behavior-object consistency principles suggest employees are likely to act in morally positive ways such as helping a person perceived as a moral character enacting good behavior. The study discussed above by Wiggins and Heise (1987) supported this principle. This research, along with prior work in management (ethics), suggests the following relationships:

Hypothesis 1: *A supervisor with an ethical character who behaves ethically is more likely to elicit helpful responses from employees than a supervisor with an unethical character that exhibits unethical behavior.*

When supervisor character and behavior are inconsistent, how will employees respond? Will they be more or less helpful? The principles of stability and behavior-object consistency provide insight. When employees experience a supervisor of ethical character exhibiting unethical behavior, the behavior-object consistency principle suggests employees will likely be unhelpful to be morally consistent with immoral (unethical) behavior. However, the stability principle suggests that while employees are likely to form a reduced view of their leader's character based on recent bad behavior, the fundamental sentiment of a good character is likely to be transferred in part to the transient impressions of the supervisor. These principles suggest the following relationships:

Hypothesis 2: *A supervisor with an ethical character who behaves unethically is less likely to elicit helpful responses from employees than a supervisor with ethical character who exhibits ethical behavior.*

Similarly, the principles suggest employee helpfulness to a supervisor of unethical character behaving in an ethical manner should be slightly higher compared to employee behavior to an unethical supervisor behaving in an unethical manner. Consequently, the following hypothesis is offered:

Hypothesis 3: *A supervisor with an unethical character who behaves ethically is more likely to elicit helpful responses from employees when compared to a supervisor of unethical character who exhibits unethical behavior.*

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Previous research demonstrated that leader behavior is related to OCBs (Podsakoff et al., 2000). Separately, other studies have found that leaders' ethical character can impact OCBs (e.g., Kim & Kim, 2013; Kottke & Pelletier, 2013; Zoghbi-Manrique-de-Lara & Suarez-Acosta, 2014). However, the question of whether leader behavior or character is more influential on OCBs remains an open question. Leader character is generally viewed as being more stable than individual leader behaviors. However, leader behavior represents a leader's current perspective. Thus, the long-term character and recent behavior may each influence employee's altruistic response. The principle of stability from affect control theory suggests that the consistency observed in leader character will be more important than are passing behaviors in influencing OCBs. Therefore, we propose:

Hypothesis 4: *Supervisor character will have a greater effect on likely employee helpfulness than will supervisor behavior.*

Methods

Sample

Data on EPA definitions of concepts were previously collected from 1,027 university students at a large university in the United States (Francis and Heise, 2004). In particular, the 2002–2004 dictionary was used in this study, which was considered appropriate for the factors considered in this investigation. While the accumulation of additional research is used to adjust the impression formation equations driving the simulation software so that new understandings of cultural relationships are better reflected, the changes made are generally not major and are not expected to dramatically affect simulation results. Prior research suggests that fundamental sentiments, affective meanings, and other culturally derived beliefs tend to be highly enduring over time, producing only small differences in results over many years (see Heise, 2002, 2007; MacKinnon & Luke, 2002). However, ongoing updates to the simulation can make the precise replication of specific research findings difficult.

Students rated identity, behavior, and modifier concepts on a survey instrument using semantic differential scales to measure cultural meanings of concepts for E, P, and A. Students rated each concept via the three scales, each ranging in values from −4.3 to +4.3. For example, the E dimension ranged from −4.3, extremely bad to +4.3 extremely good, zero represented neutral. The average of student ratings for each concept represents fundamental sentiments (Heise, 1970; Osgood, May, & Miron, 1975) for simulations in this research.

Simulation procedures and the interact software

Prior research in leadership and managerial ethics has rarely considered simulation methodologies. Apart from two recent studies involving computer models (Chen, 2010; Miller & Engemann, 2004), simulations tend to use case studies (e.g., Hunt & Jennings, 1997) and strategic games, such as the Iterative Prisoner's Dilemma game (e.g., Watkins & Hill, 2005) to simulate social interactions. Burton and Obel (1980) argue that computer simulations offer both internal and statistical validity via tight control of experimental conditions. Despite abstractions from reality, simulations focus on variables of concern without the confounding effects from organizational culture, history, etc. (Burton & Obel, 1980).

As summarized previously, affect control theory research provides evidence for the validity of the simulation model employed in this study. Researchers use fundamental sentiments defined by EPA profiles of language terms to create interactions in the simulation procedure – the sentiments serve as inputs, out-of-context meanings (Heise, 1991). Thick ethical concepts are included in the EPA dictionary of fundamental sentiments in the simulation software, which are defined as specific instances of universal principles (Harcourt & Thomas, 2013). For example, being 'just' or

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'kind' describes instances of 'good' and 'right.' Thick ethical concepts such as integrity and justice involve both evaluative and descriptive aspects, while thin ethical concepts (i.e., good/bad and right/wrong) represent core meanings without descriptions (Jordan, 2013).

The simulation generates predicted outcomes, including the likely behavior of an object person (e.g., employee) to an in-context actor in the simulation. In this study, inputs for supervisor character and behavior, and employee are fundamental sentiments, and among the output are transient sentiments in EPA terms of the likely helpfulness of employee to supervisor.

Based on theory principles, Heise (1970) and his colleagues created complex predictive formulae (e.g., Heise & Smith-Lovin, 1981; Smith-Lovin, 1987) to develop the software *Interact*. Based on the *Interact* dictionary selected by the researcher, the software utilizes mathematical models to convert verbal information to quantitative data, and then it transforms these numeric results back to a verbal format for interpretation (see Francis, 2006). Operating the software involves selecting two English language identity terms, a social actor and an object individual (e.g., a 'manager' and an 'employee' could be selected), as well as a behavior term for the social actor (e.g., 'manager praises employee'). The interaction that occurs between a social actor and an object individual may be adjusted by entering additional terms that highlight the characteristics of a setting and/or describe an actor's emotional state. After terms are selected, the software provides an output that summarizes the likely interactional findings, such as the likely behavior of the object individuals and likely emotions of a social actor and object individual (see Francis, 2006).

An example algorithm for *Interact* shown below predicts *transient impressions* (DV: Ae') of an object person's evaluation (e) of an Actor (Ae') in an interaction based on fundamental sentiments. *Fundament sentiment* (IV) definitions on the right refer to actor Behavior (B), 'O' to the Object person of actor behavior, 'p' to potency, and 'a' refers to activity. Evaluation (e) terms tend to carry higher coefficients:

$$\begin{aligned} Ae' = {} & -.10 + .47Ae - .01Ap - .01\ Aa + .42Be - .07Bp - .11Ba + .05Oe - .02Op - .001Oa \\ & + .05AeBe + .13BeOe + .03ApBp + .07\ BpOp + .007AaBa - .04AeBp - .01AeBa \\ & + .01ApBe - .01ApOa - .06BeOp - .07BpOe - .002BpOa + .01BaOe + .02BaOp \\ & + .03AeBeOe - .006ApBpOp + .003AaBaOa + .03AeBpOp + .02\ ApBpOa \end{aligned}$$

(Schneider, 2002a).

The use of simulated responses via *Interact* software is well-established in the social psychology literature. Fararo (1989: 166) stated, 'Undoubtedly this is the best developed empirically applicable cybernetic model in the history of theoretical sociology.' Kemper (1991: 342–343) also noted 'affect control theory is the most methodologically rigorous program… is more efficient than any other presently available in either sociology or psychology.' The high predictive validity of affect control theory via software Interact contributes to this recognition.

Design

Basic characteristics of the study's design proceeded as follows. First, we defined variables of interest that could be manipulated in an *Interact* simulation. These were the 'inputs' or independent 'variables' that created the controlled variation in the study. Next, *Actors* were specified to include three types of *supervisors:* An *ethical character* (called 'Honest Hank'), a *somewhat bureaucratic* type, yet *marginally unethical* character (identified as 'Strict Sam'), and an *unethical* character (named 'Rude Rick'). Then, objects were defined as two types of *employees* (*male*, *female*). Following that, we identified 'behaviors' of an 'actor' toward 'objects' that the authors determined as being consistent with the concepts of ethical character and behavior being considered in this study. The Appendix 'EPA profiles of Behavior Concepts Modeled as Supervisor Behavior' lists the 'good' (33) and 'bad' (29) behaviors utilized in the present study. The identification and selection of 33 'good' and 29 'bad' behaviors necessarily constrained the behaviors existing in the 2002–2004 dictionary (Francis & Heise, 2004) previously identified, resulting in a thick/rich set of behaviors for analysis.

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In the next step of the study, we ran a simulated interaction for each combination of actor type, employee type, and behavior (3 actor types × 2 employee types × 62 behaviors = 372 simulated interactions) and obtained 372 predicted E, P, and A responses. E, P, and A responses were used as dependent variables in analyses of variance. Additionally, we created another dependent variable, 'ED' (Euclidean distance to the concept 'to help') using the three dependent variables from the previous step. This was accomplished by calculating the three-dimensional Euclidean (straight line) distance from each of the 372 predicted E, P, and A values to the overall E, P, and A value indicated for 'to help' in the dataset. The 'ED' variable indicated the relative distance of each simulation result from helping behavior (e.g., OCB) and was used as a dependent variable in the analyses of variance.

The study proceeded by obtaining descriptive statistics for the four dependent variables (E, P, A, and Distance). Then ANOVA and MANOVA analyses were performed and comparisons of means were obtained in order to test hypotheses and gain further insight. Employee gender (2 levels), supervisor character (3 levels), and supervisor behavior (2 levels) were used as independent variables and E, P, A, and ED were used as dependent variables.

Measures

Dependent variables (E, P, A, and ED – helpfulness/OCB)

E, P, and A values were obtained using the values generated from 372 simulations which utilized the data described previously and the *Interact* software (also described previously). ED, the measure of distance to helpfulness/OCB was measured as noted previously. Additional detail follows: Comparisons were made between the 372 EPA indicated employee response (from EPA output values) to the EPA definition of the focal behavior, 'to help' (EPA = male, 2.90, 2.65, 1.58; female, 3.09, 2.52, 1.35). Specifically, the ED in three-dimensional space between each of the 372 predicted employee responses (E, P, A values) and the term 'to help' was calculated. For example, assume a specific supervisor type enacts a behavior to a specific employee type – such as 'to oppose.' Terms entered to the software for the interaction would be 'supervisor opposes employee.' Output in EPA terms in this study predicted employee responses to each of 372 supervisor-to-employee actions, resulting in 372 EDs. A low distance means close proximity to the term 'to help,' indicating a likely employee response closely approximating helpfulness or helping behavior, while a greater distance indicates a lower likelihood of helping behavior.

Independent variables (supervisor character and behavior) and control variables (gender)

Three supervisor characters are referred to as Honest Hank (an ethical character), Strict Sam (a somewhat bureaucratic type, yet marginally unethical character), and Rude Rick (an unethical character). Through simulations, each supervisor enacted identical behaviors to each employee. The behaviors are categorized as good and bad; see the Appendix for behaviors simulated and respective EPA profiles. Prior research indicates responses in social interactions differ by gender; thus, both genders are represented in the simulations (Heise & Smith-Lovin, 1981).

Table 1 displays a fully-crossed design which includes three supervisors (actors) of varying ethical character (identified as Honest Hank, Strict Sam, and Rude Rick), two categories of supervisor behavior (good, bad) toward two types (male, female) of competent employees. Thirty-three good supervisor behaviors and 29 bad behaviors by each supervisor toward each employee were simulated. A total of 372 unique simulated (predicted) likely employee emotional responses (E, P, A) were obtained, as described in Table 1. The E, P, A measures were used, as described in the 'Measures' section of this study, to calculate a measure of helpfulness (ED).

Embedded formulae in the theory's software support identity modifications (Heise & Smith-Lovin, 1981). Two 'employee' identities, Ann and Andy, were modified via the software as 'competent employees' for this study. EPA profiles of 'an employee' (male: 1.16, .48, .66; female: 1.88, .05, .84) were each combined with the EPA of 'competent' (male: 2.74, 2.35, .88; female: 2.71, 2.62, 1.32) to result in a 'competent male employee' (1.61, 1.17, .80) and a

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Table 1. Experimental design: Supervisor–employee simulated interactions

Factor: Actor (supervisor) (1) Honest Hank (2) Strick Sam (3) Rude Rick	Factor: Actor's behavior to object person (1) Good (2) Bad	Factor: Object person (employee) (1) Female 'Ann' (2) Male 'Andy'	# of Behaviors
Honest Hank	Good	Female 'Ann'	33
Honest Hank	Good	Male 'Andy'	33
Honest Hank	Bad	Female 'Ann'	29
Honest Hank	Bad	Male 'Andy'	29
Strict Sam	Good	Female 'Ann'	33
Strict Sam	Good	Male 'Andy'	33
Strict Sam	Bad	Female 'Ann'	29
Strict Sam	Bad	Male 'Andy'	29
Rude Rick	Good	Female 'Ann'	33
Rude Rick	Good	Male 'Andy'	33
Rude Rick	Bad	Female 'Ann'	29
Rude Rick	Bad	Male 'Andy'	29
Note: Total simulated interactions			372

'competent female employee' (2.04, 1.10, 1.06). As expected, modifications increased the value of each EPA dimension for each employee identity.

A similar process was required to differentiate the EPA profiles of 'supervisor' for the three levels of supervisor ethical character. The unmodified 'supervisor' EPA profile (.88, 1.88, 1.09) was adjusted by a four-step process for each character. Honest Hank was modified to be considerate, competent, honest and generous with a final EPA profile of 3.26, 1.69, .67. This is similar to the EPA profile of 'a best friend.' The modifiers as thick ethical concepts are more descriptive than simply 'good' or 'bad.' Strict Sam was modified as cool, soft-spoken, strict and conscientious with a final EPA profile of −.42, .62, .02, similar to the EPA profile of 'a bureaucrat.' Rude Rick was modified to be inconsiderate, unambitious, unfair and rude with a final EPA profile of −1.91, −.93, −.36, similar to the EPA profile of 'a delinquent.' Honest Hank and Rude Rick as supervisors represent conceptually opposing ethical characters. Modified identities were added to the *Interact* EPA dictionary to conduct the simulations.

Results

Table 2, provides descriptive statistics for dependent variables (likely employee responses to supervisor behavior) including E, P, A, and ED. Evaluation exhibits the greatest variation of the four variables and ED has the least variation. Previous studies show E and P tend to be somewhat similar per interaction (Smith-Lovin, 1987). As expected, E and P for the dependent variables were strongly correlated in this study. E, P, and A are also significantly correlated with ED. The negative correlation between Evaluation and ED is also consistent with expectations since a low value for ED represents close proximity to helping behavior, which should be expected to be associated with high values for E.

An analysis of variance (ANOVA) was performed using the ED from the simulated employee responses to the concept 'to help' (ED). Results are provided in Table 3. Employee gender was

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Table 2. Dependent variables: means, standard deviations, and correlations

Descriptive statistics	Mean	Std. deviation	Evaluation	Potency	Activity
Evaluation	1.0739	.87839			
Potency	1.5230	.56639	−.744**		
Activity	.5637	.55991	.396**	−.678**	
Euclidean Distance to 'To Help'	2.6120	.46676	−.930**	.596**	−.339**

$N = 372$.
**Correlation is significant at the .001 level (2-tailed).

Table 3. ANOVA – tests of between-subjects effects dependent variable: Euclidean Distance (ED) from likely employee response to the concept 'To Help'

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.	Partial eta squared
Corrected model	64.324[a]	4	16.081	357.622	.001	.796
Intercept	2,533.546	1	2,533.546	56,343.025	.001	.994
Employee gender	.084	1	.084	1.873	.172	.005
Supervisor character	63.327	2	31.664	704.164	.001	.793
Supervisor behavior	.912	1	.912	20.288	.001	.052
Error	16.503	367	.045			
Total	2,618.737	372				
Corrected total	80.827	371				

[a]R Squared = .796 (Adjusted R Squared = .794).

included as a control variable, while supervisor character and supervisor behavior were entered as main effects. The ANOVA model was statistically significant ($p < .01$) and exhibited a partial eta-squared value of .80 ($R^2 = .80$ and adjusted $R^2 = .79$).

Table 4 displays means of the ED, for each factor (including the control variable of employee type/gender). The lower ED mean for Honest Hank indicates employee responses on average were closer to the EPA value for 'to help'; the higher ED for Rude Rick indicate employee responses on average were further from the EPA value of 'to help.' These results are supportive of Hypothesis 1. A direct effect for gender was not observed ($p = .17$. partial eta squared = .01); however significant effects were observed for both supervisor character ($p < .01$, partial eta-squared = .79) and supervisor behavior ($p < .01$, partial eta-squared = .05). Pairwise comparisons of the ED of employee responses were analyzed. They revealed significant differences ($p < .01$) between all pairs of supervisor character (Honest Hank-Strict Sam, Honest Hank-Rude Rick, and Strict Sam-Rude Rick). Similarly, significant differences ($p < .01$) were observed between good and bad supervisor behavior indicating support for Hypothesis 2 and Hypothesis 3.

To gain further insight into the potentially different effects of supervisor character, supervisor behavior, and employee gender on E, P, and A distances to 'to help', we conducted a MANOVA analysis, where E, P, and A were included as the dependent variables and the same main effects (as in the preceding ANOVA) were used. Results of the between-subjects analyses are presented in Table 5. The *F*-tests for the E, P, and A models were all significant ($p < .001$). The models explained between 70 and 87% of the variance in the E, P, and A models.

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Table 4. Means for Euclidean Distance for likely employee response to the concept 'To Help'

Employee gender	Mean	*n*	Standard deviation
Male	2.627	186	.476
Female	2.597	186	.458
Supervisor character			
Rude Rick	3.125	124	.086
Strict Sam	2.597	124	.242
Honest Hank	2.114	124	.277
Supervisor behavior			
Bad	2.665	174	.496
Good	2.566	198	.435

Notes: EPA – Evaluation, potency, activity dimension to define verbal concepts, $n = 33$ good behaviors and 29 bad behaviors for each supervisor to each employee. Euclidean distance is the difference in three dimensional space between two concepts; the formula is: the square root of $((E\text{-}E')^2 + (P\text{-}P')^2 + (A\text{-}A')^2)$, where 'to help' is represented by E', P', and A'. E, P, and A terms represent the mean of employee likely/predicted behavior as shown above for Andy and Ann's likely responses to the supervisor.

Results for main effects were statistically significant ($p < .001$) for all variables (employee gender, supervisor character, and supervisor behavior) on the dependent variables (E, P, and A). From these results, it is apparent that employee gender, supervisor character, and supervisor behavior exhibit a differential pattern of effects upon E, P, and A, providing greater insight than the ANOVA analysis with the single overall measure of ED. While supervisor character is the dominant predictor of Evaluation, both supervisor character and supervisor behavior have a substantial impact on Potency. All three sources have a moderate impact upon Activity, yet, employee gender is the more dominant factor of the three. Thus, it appears that the pooling of E, P, and A data into ED in the prior (ANOVA) analysis may have obscured a more complex set of effects – including a gender effect – that appears when E, P, and A are examined separately.

Next, we consider the effects of supervisor character on likely employee responses (in EPA terms) to supervisors. Estimated means for employee responses to supervisor character are provided in Table 6. Pairwise comparisons indicate highly significant differences ($p < .01$) between all pairs of supervisor characters for E, P, and A, with the exception of the comparison of Rude Rick and Strict Sam on the Activity dimension, which is significant at a lower level ($p = .01$). Effects of Supervisor Character on E, P, and A of likely employee responses produced partial eta-squared values of .87, .67, and .41 for E, P, and A, respectively (see Table 5), indicating support for Hypothesis 4 and fairly substantial and persistent effects of supervisor character on all three dimensions. Corresponding effects of supervisor behavior on likely employee responses were eta-squared values of .23 for E, .71 for P and .35 for A (see Table 5). Simulations for Rude Rick (the least ethical supervisor) predict the lowest definitions for the Evaluation and Activity dimensions of likely employee responses, indicating neutral to bad likely employee responses for Evaluation, the good versus bad dimension and less active versus lively responses for Activity; yet predict the highest potency for likely employee responses to Rude Rick. Overall, this suggests likely neutral to bad and passive employee responses with the most strength or emotional energy to Rick. These predictions contrast with likely employee responses predicted for Honest Hank, with highest definitions for Evaluation and Activity, that is quite good and lively likely responses and mild on the potency dimension.

Finally, we consider the effects of different types of supervisor behavior on the E, P, and A estimates of likely employee responses – data are shown in Table 7. The means for good and bad behavior were significantly different ($p < .01$) for all three dependent variables. Partial eta-squared values .23, .71, and .35 for E, P, and A (see Table 5) indicate that all three variables were at least

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Table 5. MANOVA – tests of between-subjects effects dependent variables: Distance for likely employee response (E, P, A) to the concept 'To Help'

Source	Dependent variable	Type III sum of squares	*df*	Mean square	*F*	Sig.	Partial eta squared
Corrected model	Evaluation (Emp Type) *n*-372	249.534[a]	4	62.384	623.485	.001	.872
	Potency (Emp Type) *n*-372	98.151[b]	4	24.538	431.623	.001	.825
	Activity (Emp Type) *n*-372	81.859[c]	4	20.465	218.030	.001	.704
Intercept	Evaluation (Emp Type) *n*-372	418.432	1	418.432	4,181.970	.001	.919
	Potency (Emp Type) *n*-372	886.898	1	886.898	15,600.703	.001	.977
	Activity (Emp Type) *n*-372	111.725	1	111.725	1,190.311	.001	.764
Emp Type 1Male2 Female	Evaluation (Emp Type) *n*-372	2.211	1	2.211	22.099	.001	.057
	Potency (Emp Type) *n*-372	2.717	1	2.717	47.787	.001	.115
	Activity (Emp Type) *n*-372	39.243	1	39.243	418.093	.001	.533
Supr Chara 3HH 2SS 1RR	Evaluation (Emp Type) *n*-372	236.285	2	118.142	1,180.760	.001	.865
	Potency (Emp Type) *n*-372	43.096	2	21.548	379.037	.001	.674
	Activity (Emp Type) *n*-372	23.923	2	11.961	127.436	.001	.410
Supr Behvr 2Good 1Bad	Evaluation (Emp Type) *n*-372	11.038	1	11.038	110.319	.001	.231
	Potency (Emp Type) *n*-372	52.338	1	52.338	920.630	.001	.715
	Activity (Emp Type) *n*-372	18.693	1	18.693	199.155	.001	.352
Error	Evaluation (Emp Type) *n*-372	36.721	367	.100			
	Potency (Emp Type) *n*-372	20.864	367	.057			
	Activity (Emp Type) *n*-372	34.447	367	.094			
Total	Evaluation (Emp Type) *n*-372	715.288	372				
	Potency (Emp Type) *n*-372	981.922	372				
	Activity (Emp Type) *n*-372	234.499	372				
Corrected total	Evaluation (Emp Type) *n*-372	286.255	371				
	Potency (Emp Type) *n*-372	119.015	371				
	Activity (Emp Type) *n*-372	116.307	371				

[a]R Squared = .872 (Adjusted R Squared = .870).
[b]R Squared = .825 (Adjusted R Squared = .823).
[c]R Squared = .704 (Adjusted R Squared = .701).

Table 6. EPA means of likely employee responses by supervisor character

Estimates				95% Confidence interval	
Dependent variable	Supervisor character ($n = 372$)	Mean	Std. error	Lower bound	Upper bound
Evaluation	Rude Rick	.179	.028	.123	.235
	Strict Sam	.899	.028	.843	.955
	Honest Hank	2.111	.028	2.055	2.166
Potency	Rude Rick	1.899	.021	1.857	1.941
	Strict Sam	1.656	.021	1.614	1.698
	Honest Hank	1.087	.021	1.045	1.129
Activity	Rude Rick	.323	.028	.269	.377
	Strict Sam	.421	.028	.367	.475
	Honest Hank	.903	.028	.849	.958

$N = 372$.

Table 7. EPA means of likely employee responses by supervisor behavior

Estimates				95% Confidence interval	
Dependent variable	Supervisor behavior	Mean	Std. error	Lower bound	Upper bound
Evaluation	Bad	.890	.024	.843	.937
	Good	1.235	.022	1.191	1.280
Potency	Bad	1.923	.018	1.888	1.959
	Good	1.171	.017	1.138	1.205
Activity	Bad	.325	.023	.279	.370
	Good	.774	.022	.731	.817

$N = 372$.

moderately related to supervisor behavior, with 'potency' of likely employee responses being most influenced by supervisor behavior. 'Good' supervisor behavior was associated with higher definitions on both evaluation and activity, but a lower definition for potency similar to the pattern of likely employee behavior to Honest Hank, the ethical character of interest in Table 6.

DISCUSSION

This study explores the ethical origins of employee helpfulness/OCB and responds to Whetstone's (2001) call for research to develop a deep understanding of ethical language in organizations. The study utilizes the idea of thick ethical concepts (Harcourt and Thomas, 2013) as applied via affect control theory's software, *Interact* (Heise, 1970; 2003; 2007). This study evaluated likely (i.e., predicted) employee responses to supervisor ethical character and behavior with respect to likely employee helpfulness. It appears the ethical supervisor (Honest Hank) has a degree of license to behave badly, at least in the short-term, without unfavorable consequences from employees. Simulated (predicted) employee responses suggest that employees are likely to respond in a conciliatory manner to this supervisor's bad behavior. Favorable responses to an ethical supervisor's bad behavior suggest that employees seek to create an interaction to return the pair to an expected respectful encounter, consistent with affect control theory's main principle, 'people seek to confirm

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fundamental sentiments' (Heise, 2007). Simulation results of employee likely behavior in response to an unethical supervisor (Rude Rick) were neutral at best. Predicted responses show resistance to the good behavior of an unethical supervisor and fairly potent neutral or negative responses to that supervisor's bad behavior. Employee responses to a slightly unethical bureaucratic character (Strict Sam) indicate this supervisor's good behavior likely generates less helpful responses versus responses to an ethical supervisor's good behavior. Yet, the potency dimension is higher, indicating more aggressive responses to a slightly unethical supervisor. Likely employee responses to Sam's bad behavior were similar to likely responses to the unethical supervisor's (Rick's) bad behavior, that is, punitive and assertive employee behavior, such as 'to discipline' and 'to oppose.'

These results further demonstrate the theory's main principle, as noted previously. Thus, this study distinguished between the effects of supervisor character and behavior on employee helping behavior. Simulated results indicate supervisor character is the dominant factor. The study also distinguished the effects between unethical and minimally ethical supervisor character on employee helpfulness to supervisors. This apparent inflection point provides insight on the effects of leaders with a substantial ethical character versus those with limited ethical character. However, due to the limited number of characters that this study utilized, future research should identify where the inflection point occurs.

Simulated results are consistent with the principle of stability in affect control theory, which indicates that people (e.g., employees) transfer a portion of fundamental sentiments of an actor (e.g., a supervisor) to transient impressions of that leader in interactions. The simulated responses also indicated employees were likely to be more willing to assist their ethical supervisor and less likely to help an unethical supervisor. The simulated (predicted) response data also supported the behavior-object consistency principle, which states individuals preserve positive impressions of themselves by 'doing good acts to good people and bad acts to bad people' (Wiggins & Heise, 1987: 156). This implies a person is likely to respond more in a morally positive manner to an ethical character versus an unethical character. Results from this study suggest that employees are likely to forgive an ethical supervisor's bad behaviors. Yet unfavorable results were predicted for employees' dealing with unethical supervisor's bad behavior. Consistent with prior research, this study indicates supervisors are well-positioned to influence employees' positive work behaviors (e.g., helping behavior) by paying close attention to their own ethics (e.g., Tang and Liu, 2012). The results observed in this research also suggest that a limited demonstration of ethical character is unlikely to produce positive employee responses. It would then seem that clear demonstration of a leader's ethical character may be necessary to engender positive employee responses with respect to helpfulness.

Study limitations and future research

This study simulated interactions between supervisors and employees with a reasonably broad array of verbal concepts representing actions (behaviors) of supervisors with (researcher) defined characters. It was the intention of the researchers that the breadth of actions identified considered as 'good' or 'bad' would provide a sufficiently complex cross-section of human actions as to characterize a reasonably 'thick' and realistic representation of likely actions and responses. Despite this approach, other descriptors of character or behavior might yield different results. Substantial attempts were made to select a range of verbal concepts to rigorously apply theoretically relevant concepts to specify character and behavior. While the use of a conceptually similar set of verbal concepts could result in different substantially different findings, the authors believe that the steps taken here to richly define supervisor character and behaviors should minimize that possibility. Nevertheless, the use of a different set of verbal concepts representing another set of actions for supervisors may generate different findings. Thus, future studies might consider how the results of the current study might change (or not) under the use of different sets or subsets of 'actions.' Thus, potential limitations to generalizability do exist despite the use of thick ethical concepts.

The study defines three essentially discrete supervisor characters that might exist within a complex continuum of possible ethical characters. This approach was a necessity of research design

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and execution, as the incorporation of a broad range of supervisors along an ethical continuum was not practical from either a design or modeling standpoint. Thus, generalizations made from the present study should not be extended beyond the ethical character types utilized. Similarly, the study utilized a relatively simplistic representation of gender rather than incorporating the many possible conceptualizations of gender that are acknowledged today. Thus, generalizations beyond the boundaries of gender as characterized herein is not advisable.

The use of predicted employee responses as simulated behavior, while well established in other literatures, is relatively rare in the business/management literatures. It is essential to recognize that the 'simulated' interactions and responses obtained and analyzed herein represent mean or average responses that are 'likely,' but that are not guaranteed. Further, with a single point estimate of a likely response based on a specific supervisor character (as defined herein), a specific behavior, and a specific employee gender, all variability inherent in all individuals meeting those same criteria is not included in the simulation values. Thus, an unidentified amount of variation that would occur in interactions among real individuals (as opposed to simulated ones) is absent in the study. This should not be considered as a weakness of the methodology, as random variance in human populations would likely be categorized as 'noise' in statistical analyses. In this study, most 'noise' has been excluded through the use of mean (average) predicted values. The primary source of variation in the study comes from the 372 unique combinations of supervisor character, supervisor behavior, and employee gender. While this omits some of the 'real' variability of actual (and infinitely more complex) individuals interacting with one another, it captures the mean, or average, or expected behavior that is 'likely' for individuals with comparable characteristics in comparable situations. Thus, we would argue that highly relevant and useful variance has been captured via the interactive software and analyzed in this study – and the variance excluded, which reflects even greater 'reality,' is likely 'noise' or 'error' in most studies anyway, as every study has boundaries on what can and cannot be measured and analyzed.

Software predictions of likely behaviors are dependent on the most recent dictionary of US fundamental sentiments collected from university juniors and seniors in the United States in 2002–2003 (Francis & Heise, 2004). These definitions likely differ for people in organizations with varying cultures. Yet, college juniors and seniors have good understandings of general cultural meanings of concepts (Schneider, 2002a) because they are mature enough to be socialized to general societal norms, yet they have not been heavily influenced by cultural norms in a single organization. Past research shows correlations of EPA definitions of general concept domains by college students across cultures can be somewhat high suggesting global norms for more generalized concept domains (Schneider, 2002b). However, correlations of concept domains with varying salience across cultures have not been significantly related (Schneider, 2002b). Caution is recommended before generalizing findings of this study to populations with cultures that differ from US values and beliefs.

Many types of OCBs exist and a number of factors influence citizenship in organizations. This study focused on the outcome of employee behavior 'to help' and a limited number of predictors. This approach represents a potential limitation because a trade-off can be made when applying thick ethical concepts in simulations. The inclusion of additional predictive concepts would likely have increased the research content beyond manageable levels. Yet, the strength and explanatory power of findings in this study suggest that the focus on a limited set of concepts was reasonable. Another limitation is that, unlike another study (i.e., Francis, 2012), this current research does not compare software predictions with empirical findings; future research should validate the software's predictions with observational data, vignette studies, and/or other information.

Affect control theory suggests that repeated specific behaviors are likely necessary to change perceptions of character, and to modify behavior responses in interactions. The amount of repetition needed is theoretically unclear and is a challenging opportunity for future research. New work might investigate the impact of repetitive behaviors on perceptions of character. Results of this study provide some insights on a possible 'tipping point' between the ethical character (e.g., Honest Hank) and the bureaucratic character (Strict Sam). Likely employee responses to

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the minimally ethical and unethical supervisors were predicted to be quite similar. Moral intensity and the ethical decision-making process (Jones, 1991) might be used to examine the influence of highly intense and impactful behaviors to change perceptions of supervisors.

In conclusion, this research gives new insight into the complexity of underlying factors in the ethical language in organizations. Specifically, affect control theory principles and cultural meanings of EPA profiles are important factors in supervisor/employee relations. Also, simulation predictions offer guidance to managers on likely employee outcomes as a consequence of supervisor ethical character and behavior.

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References

Burton, R.M., & Obel, B. (1980). A computer simulation test of the M-Form hypothesis. *Administrative Science Quarterly*, *25* (3), 457–466.

Chen, S. (2010). The role of ethical leadership versus institutional constraints: A simulation study of financial misreporting by CEOs. *Journal of Business Ethics*, *93*, 33–52.

Cressey, D., & Moore, C. A. (1983). Managerial values and corporate codes of ethics. *California Management Review*, *25*, 53–77.

Dobson, J. (2003). Why ethics codes don't work. *Financial Analyst Journal*, *59*(6), 29–36.

Fararo, T. J. (1989). *The meaning of general theoretical sociology: Tradition and formalization*. New York: Cambridge University Press.

Festinger, L (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Foote, M. F., & Ruona, W. E. A. (2008). Institutionalizing ethics: A synthesis of frameworks and the implications for HRD. *Human Resource Development Review*, *7*(3), 292–308.

Francis, C. (2006). Introduction to affect control theory. In K. McClelland & T. Fararo (Eds.), *Purpose meaning and action: Control systems theories in sociology* (Chapter 6, 139–161). New York: Palgrave Macmillan.

Francis, C., & Heise, D.R. (2004). Mean affective ratings of 1,500 concepts by Indiana University undergraduates in 2002–03 [Computer file]. Retrieved from affect control theory website 2006. Retrieved from http://www.indiana.edu/~socpsy/ACT/interact/JavaInteract.html.

Francis, C. A. (2012). The mediating force of "face" supervisor character and status related to perceived organizational support and work outcomes. *Journal of Leadership & Organizational Studies*, *19*(1), 58–67.

Harcourt, E., & Thomas, A. (2013). Thick concepts analysis and reductionism. In S. Kirchin (Ed.), *Thick concepts* (20–43). Oxford: Oxford University Press.

Heise, D. R. (1970). Semantic differential and attitude research. In G. F. Summers (Ed.) *Attitude measurement* (48–54). Chicago: Rand McNally.

Heise, D. R. (1991). *INTERACT 2: A computer program for studying cultural meanings and social interactions* (235–253). Bloomington, IN: Department of Sociology, Indiana University.

Heise, D. R. (2002). Understanding social interaction with affect control theory. In Joseph Berger & Morris Zelditch (Eds.), *New* directions in sociological theory (17–41). Boulder, CO: Rowman and Littlefield.

Heise, D. R. (2003). Sociology Department, Indiana University, Bloomington, Indiana. Retrieved from http://www.indiana.edu/~socpsy/ACT/acttutorial/basicideas.htm.

Heise, D. R. (2007). *Expressive order: Confirming sentiments in social actions*. New York: Springer.

Heise, D. R., & Smith-Lovin, L. (1981). Impressions of goodness, powerfulness and liveliness from discerned social events. *Social Psychology Quarterly*, *44*, 93–106.

Hunt, T. G., & Jennings, D. F. (1997). Ethics and performance: A simulation analysis of team decision making. *Journal of Business Ethics*, *16*(2), 195–203.

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

Jordan, J. E. (2013). Thick ethical concepts in the philosophy and literature of Iris Murdoch. *The Southern Journal of Philosophy*, *51*(3), 402–417.

Kaptein, M. (2008). Developing and testing a measure for the ethical culture of organizations: The corporate ethical virtues model. *Journal of Organizational Behavior*, *29*(7), 923–947.

Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: Wiley.

Kemper, D. T. (1991). An introduction to the sociology of emotions. In K. T. Strongman (Ed.), *International* review of studies on emotion (342–343). New York: Wiley.

Kim, T-Y., & Kim, M. (2013). Leaders' moral competence and employee outcomes: The effects of psychological empowerment and person–supervisor fit. *Journal of Business Ethics*, *112*(1), 155–166.

https://doi.org/10.1017/jmo.2019.37 Published online by Cambridge University Press

Kottke, J. L., & Pelletier, K. L. (2013). Measuring and differentiating perceptions of supervisor and top leader ethics. *Journal of Business Ethics*, *113*(3), 415–428.
MacKinnon, N. J. (1985/1988/1998). Final Reports to Social Sciences and Humanities Research Council of Canada on Projects 410-81-0089, 410-86-0794, and 410-94-0087. Guelph, Ontario: Department of Sociology and Anthropology, University of Guelph.
MacKinnon, N. J. (1994). *Symbolic interactionism as affect control*. Albany, NY: State University of New York Press.
MacKinnon, N. J., & Luke, A. (2002). Changes in identity attitudes as reflections of social and cultural change. *Canadian Journal of Sociology*, *27*, 299–338.
McCraw, H., Moffeit, K.S., & O'Malley, J.R. (2009). An analysis of the ethical codes of corporations and business schools. *Journal of Business Ethics*, *87*(1), 1–13.
Miller, H., & Engemann, K.J. (2004). A simulation model of intergroup conflict. *Journal of Business Ethics*, *50*, 355–367.
Moore, A.W. (2006). Maxims and thick ethical concepts. *Ratio*, *19*(2), 129–147.
Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
Osgood, C. E., May, W. H., & Miron, M. S. (1975). *Cross-cultural universals of affective meaning*. Urbana, IL: University of Illinois Press.
Philipp, B. L. U., & Lopez, P. D. J. (2013). The moderating role of ethical leadership: Investigating relationships among employee psychological contracts, commitment, and citizenship behavior. *Journal of Leadership & Organizational Studies*, *20*(3), 304–315.
Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta- analysis. *Journal of Applied Psychology*, *94*(1), 122–141.
Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology*, *82*, 262–270.
Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, *26*(3), 513–563.
Schneider, A. (2002a). Behaviour prescriptions versus professional identities in multi-cultural corporations: A cross-cultural computer simulation. *Organizational Studies*, *23*(1), 105–131.
Schneider, A. (2002b). Probing unknown cultures. *Electronic Journal of Sociology*, *6*(3), 268–287.
Schröder, T., & Scholl, W. (2009). Affective dynamics of leadership: An experimental test of affect control theory. *Social Psychology Quarterly*, *72*, 180–197.
Smith, H.W., Matsuno, T., & Umino, M. (1994). How similar are impression-formation processes among Japanese and Americans? *Social Psychology Quarterly*, *57*, 124–139.
Smith-Lovin, L. (1987). Impressions from events. *Journal of Mathematical Sociology*, *13*(1–2), 35–70.
Smith-Lovin, L., & Douglass, W. (1992). An affect-control analysis of two religious groups. *Social Perspectives on Emotion*, *1*, 217–247.
Smith-Lovin, L., & Heise, D.R. (1980). Mean Affective Ratings of 2,106 Concepts by University of North Carolina Undergraduates in 1978 [Computer file]. Retrieved from Affect Control Theory Website, Program Interact, 2006. Retrieved from http://www.indiana.edu/~socpsy/ACT/interact/JavaInteract.html.
Sosik, J. J. (2005). The role of personal values in charismatic leadership of managers: A model and preliminary field study. *The Leadership Quarterly*, *16*(2), 221–224.
Tang, T. L., & Liu, H. (2012). Love of money and unethical behavior intention: Does an authentic supervisor's personal integrity and character (aspire) make a difference? *Journal of Business Ethics*, *107*(3), 295–312.
Thorpe, M. (2014). My night with Maud and the moral imagination: Rhymes, symmetries and variations on ethical themes. In L. Anderst (Ed.), *The* films of *e*ric *r*ohmer: French new wave to old master (49–62). New York: Palgrave Macmillan.
Turnipseed, D. L. (2002). Are good soldiers good? Exploring the link between organizational citizenship behavior and personal ethics. *Journal of Business Research*, *55*, 1–15.
Walz, S. M., & Niehoff, B. P. (1996). Organizational citizenship behaviors and their effect on organizational effectiveness in limited-menu restaurants. *Academy of Management Best Papers Proceedings*, *1*, 307–311.
Watkins, A., & Hill, R.P. (2005). The impact of personal and organizational moral philosophies on marketing exchange relationships: A simulation using the prisoner's dilemma game. *Journal of Business Ethics*, *62*, 253–265.
Whetstone, J. T. (2001). How virtue fits within business ethics. *Journal of Business Ethics*, *33*, 101–114.
White, C. S., & Dooley, R. S. (1993). Ethical or practical: An empirical study of students' choices in simulated business scenarios. *Journal of Business Ethics*, *12*(8), 643–651.
Wiggins, B., & Heise, D. R. (1987). Expectations, intentions, and behavior: Tests of affect control theory. *Journal of Mathematical Sociology*, *13*(1–2), 153–169.
Williams, B. (1985). *Ethics and the limits of philosophy*. London: Fontana.
Zoghbi-Manrique-de-Lara, P., & Suarez-Acosta, M.A. (2014). Employees' reactions to peers' unfair treatment by supervisors: The role of ethical leadership. *Journal of Business Ethics*, *122*(4), 537–549.

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Appendix: EPA profiles of behavior concepts modeled as supervisor behavior

Simulated supervisor 'Good' behaviors	Evaluation males	Potency males	Activity males	Simulated supervisor 'Bad' behaviors	Evaluation males	Potency males	Activity males
Agree with	1.66	1.27	.87	Abuse	−3.21	−.33	1.00
Assist	2.20	1.64	.75	Argue with	−.90	.75	1.39
Brief	.93	.94	.55	Bawl-out	−1.62	−.03	.48
Caution	1.66	1.03	.60	Bully	−2.07	−.14	.46
Coach	2.16	1.83	1.68	Coerce	−1.36	.69	.03
Collaborate with	1.44	1.11	.61	Degrade	−2.35	−.28	−.23
Confer with	1.87	.87	−.35	Discourage	−1.69	−.44	−.56
Consult with	1.64	1.15	.25	Exploit	−2.36	.05	−.05
Encourage	2.30	1.39	.89	Forget	−1.29	−.32	−.94
Explain something to	2.01	1.72	.55	Frown at	−1.03	−.6	−.82
Forgive	2.56	2.03	.40	Hassle	−2.22	−.22	.93
Greet	2.18	1.56	1.16	Hound	−1.70	−.19	.55
Guide	1.89	1.63	.49	Hurt	−1.34	.32	1.11
Hand something to	.91	.80	.18	Ignore	−1.58	−.75	−1.44
Inform	1.96	1.73	1.10	Insult	−1.88	−.46	.56
Instruct	1.85	1.65	.30	Lie to	−2.3	−.18	−.64
Listen to	2.18	1.57	.11	Make fun of	−2.65	−.92	.14
Lunch with	1.43	1.00	.30	Neglect	−2.68	−.35	−1.40
Negotiate with	1.23	1.26	.69	Obstruct	−1.10	.45	.31
Observe	.75	.39	−.30	Oppose	.05	.83	.87
Promise something to	1.17	1.27	.47	Overwork	−1.29	.58	.71
Protect	2.54	2.31	.59	Retaliate against	−1.29	.77	1.12
Reason with	2.15	1.83	.70	Ridicule	−2.04	−.22	.21
Reassure	1.98	1.28	.30	Scream at	−1.79	.45	2.03
Remind	1.63	1.45	.01	Sneer at	−1.42	−.32	−.23
Reward	2.72	1.92	.84	Steal from	−2.89	−.82	−1.57
Shake hands with	1.81	1.51	.46	Talk down to	−1.58	−.07	.31
Smile at	2.51	2.02	.42	Threaten	−2.5	−.10	.93
Speak to	1.69	1.04	.86	Underpay	−2.25	−.57	−.57
Talk shop with	.89	.70	.77				
Teach	2.76	2.39	.90				
Thank	2.93	2.01	1.49				
Welcome	2.57	2.08	1.21				

Notes: Data source: Empirical values collected in the 2002–2003 concept study at Indiana University. Values above represent average ratings by male subjects. Ratings by female subjects not shown are similar, yet differences impact results. For 62 behavior concepts above correlations between ratings by males and females are: Evaluation, $r = .98$; Potency, $r = .90$, Activity, $r = .75$.

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