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ORIGINAL PAPER

Change is Coming, Time to Undermine? Examining the Countervailing Effects of Anticipated Organizational Change and Coworker Exchange Quality on the Relationship Between Machiavellianism and Social Undermining at Work

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Abstract
A considerable body of research supports the link between Machiavellianism and antisocial forms of behavior at work. Yet, meta-analytic findings and existing theory allude to a more complex story, whereby Machiavellian employees' engagement in antisocial acts is likely to be simultaneously influenced by countervailing situational forces. To promote more nuanced, contextualized knowledge of high Machs' antisocial tendencies at work, we developed and tested a social context model that describes how multiple situational factors may, at once, provoke *and* constrain the tendency of such individuals to engage in one notable form of antisocial behavior at work: social undermining. Specifically, we argue that Machiavellian employees likely experience competing motivations to undermine their colleagues as a result of two countervailing situational factors that are relevant to their self-interests: anticipated organizational change and perceptions of coworkers' exchange quality. To develop our predictions, we draw on trait activation theory's core assertion that employees' behavior is multiply determined, such that trait–behavior relations stem from a complex interplay among diverse and potentially competing trait-relevant situational cues. The results of a three-wave, time-lagged survey supported our predictions that anticipated change would strengthen the positive relation between Machiavellianism and undermining, while perceptions of coworkers' exchange quality would attenuate it. Additionally, the results supported our three-way interaction hypothesis that perceived coworker exchange quality would weaken the two-way interaction effect of Machiavellianism and anticipated organizational change on social undermining. We discuss the implications of our findings, as well as avenues for future research.

Keywords Machiavellianism · Organizational change · Social undermining

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Introduction

Although more than 500 years old, Niccolò Machiavelli's *The Prince* (1513/2008)—his (in)famous treatise on how to acquire and retain political power—remains a shrewd commentary on the dark side of human nature in organizational settings. Machiavelli maintained that political success depends on expediency, as opposed to a rigid adherence to traditional virtues of decency, honor, and trust (Wilson et al., 1996). Like the political behavior that he wrote about at the time, recent reports of brutally competitive workplaces, such as Amazon's, reveal a willingness of certain employees to engage in Machiavellian tactics, such as manipulation, deceit, and sabotage, to get ahead (Kantor & Streitfeld, 2015). The relevance of Machiavelli's writings to modern work settings has evoked a renewed interest among organizational scholars in *Machiavellianism* (e.g., Bagozzi et al., 2013; Belschak et al., 2015; Den Hartog & Belschak, 2012; Belschak et al., 2018; Castille et al., 2018; Zagenczyk et al., 2014)—defined as a "propensity to distrust others, engage in amoral manipulation, seek control over others, and seek status for oneself" (Dahling et al., 2009, p. 219).

Machiavellianism may confer a number of adaptive benefits for employees, such as the capacity to skillfully navigate power dynamics, establish political networks, and exert charismatic influence (Judge et al., 2009). However, meta-analyses suggest that Machiavellian individuals, referred to casually as "high Machs," tend to significantly disrupt work relationships via their engagement in manipulation, deceit, and other types of antisocial behavior (cf., O'Boyle et al., 2012). In particular, recent studies (Castille et al., 2017; Greenbaum et al., 2017) link Machiavellianism to *social undermining*—behavior that is intended to hinder, over time, the ability of employees to achieve work success, establish and maintain positive relationships, and build favorable reputations (e.g., backbiting, delaying others' work, misleading coworkers; Duffy et al., 2002). These subtle, low -intensity behaviors are well-suited to high Machs' repertoire of subversive activities given they reflect a mode of conduct by which high Machs can reduce their coworkers' power, enhance their own status, and ultimately "get what they want" (Duffy et al., 2006b, p. 1068).

However, simply accepting that Machiavellian employees will engage in consistent levels of antisocial behavior, such as undermining, reflects an oversimplification. High Machs are likely to adopt a flexible mode of procedure, whereby they vary their conduct from "good" to "bad" and back again depending on situational forces (Bereczkei, 2015, 2018; Bereczkei et al., 2013; Czibor & Bereczkei, 2012). To this point, recent research suggests that high (vs. low) Mach employees display a greater willingness to behave antisocially in situations where they believe it is in their self-interest to do so, such as when they face organizational constraints (e.g., poor supplies or equipment) (Castille et al., 2017) or experience abusive supervisor behavior (Greenbaum et al., 2017). Yet, it is also argued that high Machs are strategic, non-impulsive actors who are sensitive to the risk of punishment in their environment and, therefore, will refrain from harmdoing when the potential costs outweigh the benefits (Jones, 2014; Jones & Mueller, 2021; Jones & Paulhus, 2011a, 2017). From a theoretical perspective, this suggests that the relationship between Machiavellianism and undermining may be more complex and that high Mach employees' antisocial tendencies may be simultaneously shaped by countervailing situational forces at work. Yet, previous research has overlooked this possibility in favor of examining interactions between Machiavellianism and single situational factors in isolation. From an empirical view, examining the complex conditions under which high Mach employees are more *and* less likely to behave in antisocial ways is important given previous meta-analyses (O'Boyle et al., 2012) suggest the links between Machiavellianism and various forms of counterproductive work behavior are "extremely complex and varied" and likely depend heavily on the environment (LeBreton et al., 2018, p. 392). As Jones and Mueller (2021) emphasized, relative to other dark traits—especially psychopathy—Machiavellianism is a "situationally sensitive" trait, particularly due to its non-impulsive, risk-sensitive features. As such, they argued that viewing the relationship between Machiavellianism and antisocial behavior through a person–situation interaction lens is necessary to understand the unique contribution of the Mach construct to the behavioral ethics and dark personality literatures.

Accordingly, we address the question of how multiple, potentially competing situational factors in a given work environment may, at once, provoke *and* restrict high Machs' engagement in social undermining. Specifically, we propose a social context model that suggests Machiavellian employees experience competing motivations to undermine their peers as a result of countervailing situational factors that are relevant to their self-interests. To develop our model, we draw on trait activation theory (TAT), which asserts that personality traits find their expression in behavior as a function of trait-relevant cues present in a given situation (Tett & Burnett, 2003; Tett & Guterman, 2000). According to TAT, traits represent "latent potentials" within individuals and are activated by trait-relevant situational "presses" that motivate trait-consistent behavior. Relevant to our study, TAT maintains that employees' behavior is not simply a reflection of isolated situational features. Rather, it proposes that behavior is multiply determined, such that trait–behavior relations

result from a complex interplay among diverse and potentially competing trait-relevant situational cues.

Integrating these core principles of TAT with existing research on Machiavellianism, we examine two relevant features of the social context: employees' anticipation of major changes in their organization and perceptions of their coworkers' social exchange quality. First, *anticipated organizational change* entails a global perception of uncertainty regarding the organization based on expected major changes, such as downsizings, restructurings, and mergers (Hui & Lee, 2000). We focus on anticipated change as a situational factor that intensifies high Machs' engagement in undermining behavior given change often presents threats to employees' sense of control, status, and very survival in the organization (Ashford, 1988; Dent & Goldberg, 1999), fanning the flames of competition and increasing the perceived benefits of obstructing or "eliminating" competitors (Salin, 2003). Second, we examine high Machs' overall belief that their coworkers can serve as *positive exchange partners* (i.e., that they are willing to engage in profitable social or economic exchanges; Scott et al., 2013) as a defusing factor that restricts the extent to which anticipated major changes increase their undermining. We focus on coworkers' exchange quality as a countervailing situational moderator given it aligns with the notion that high Machs are strategic, non-impulsive actors who shrewdly weigh the potential costs and benefits of different social strategies based on the situation (Jones, 2014; Jones & Mueller, 2021; Jones & Paulhus, 2017).

Consistent with TAT, we propose that while anticipated change intensifies high Machs' motivation to undermine their coworkers, perceptions of their colleagues' exchange quality create a competing motivation that restricts their undermining activities. Moreover, in line with TAT's core assertion that trait–behavior relations are a function of complex interactions between multiple trait-relevant cues, we examine the three-way interaction between Machiavellianism, anticipated change, and coworker exchange quality on undermining, with the expectation that the moderating effect of anticipated change will be weaker when coworkers' exchange quality is high (vs. low).

We make three contributions to the literature. First, we contribute to the Machiavellianism literature by proposing a social context model that accounts for competing situational influences on the link between Machiavellianism and antisocial behavior at work. Specifically, we build on existing research by proposing that while certain situational factors—namely, anticipated change in the organization—may intensify high Machs' motivation to undermine their coworkers, other situational factors—namely, perceptions of their colleagues' exchange quality—may engender a competing motivation that defuses their tendency to undermine. In doing so, we not only answer recent calls for more contextualized models that explain *when* Machiavellianism relates to antisocial behavior in organizations (Jones & Mueller, 2021; Lebreton et al., 2018), but we also underscore the need to consider how multiple, potentially competing trait-relevant cues may impact these links.

Second, we extend prior work on antisocial behavior during times of organizational change by departing from the traditional focus on victims (e.g., Baillien & De Witte, 2009; Skogstad et al., 2007) and instead adopt a perpetrator-centric lens. To date, researchers have focused primarily on employees' own exposure to antisocial acts during change situations. These studies tend to explain this relationship by suggesting that change produces job-related anxiety and stress, which renders employees passive or defenseless targets (e.g., Baillien & De Witte, 2009; Baillien et al., 2009). Despite the merits of taking a victim-centric perspective, we know little regarding *who* is more likely to become a perpetrator of antisocial behavior during times of change and *when* such individuals are more or less likely to restrict their harmdoing under these conditions. Because multiple parties are involved in such situations (Salin, 2003), examining the perspective of perpetrators serves to broaden and enrich our understanding of such phenomena. Accordingly, we build knowledge around why certain employees—namely, individuals high on Machiavellianism—are likely to engage in strategic efforts to undermine their coworkers during times of change, as well as describe how certain situational factors—namely, coworkers' overall exchange quality—may constrain or exacerbate high Machs' tendency to engage in undermining.

Third, we add to the broader TAT literature by examining the joint operation of multiple trait relevant situational cues involving a specific trait at work. While TAT posits that personality traits may be activated by multiple trait-relevant cues present in a work environment, most studies consider only one trait-relevant factor in isolation (Tett et al., 2013). In the case of complex traits like Machiavellianism, this focus on single situational moderators does not capture the complexity of real-life situations and the multiple, potentially competing effects they may exert on trait–behavior relationships (Tett & Guterman, 2000). By considering multiple trait-relevant cues, we offer a more complete test of TAT that aligns with its original conceptualization.

Theoretical Background and Hypothesis Development

Machiavellianism and Social Undermining

Machiavellianism represents a personality trait defined by a desire to accumulate external indicators of success, such as status, power, and wealth (i.e., desire for status), a desire to

exercise dominance over interpersonal situations to minimize other people's power (i.e., desire for control), a cynical view on the motivations of others (i.e., distrust of others), and a tendency to see value in and engage in behaviors that benefit the self at the expense of others (i.e., amoral manipulation) (Dahling et al., 2009). These characteristics, together, represent a self-serving, pragmatic approach to social interaction—one focused on doing whatever the actor believes is necessary to protect and promote their self-interests depending on the situation (i.e., an "ends justify the means" mentality).

To this end, previous research has linked Machiavellianism to a wide range of antisocial behaviors, such as lying (Geis & Moon, 1981), cheating (Bogart et al., 1970; Cooper & Peterson, 1980), stealing (Harrell & Hartnagel, 1976), and most relevant to the present study, social undermining (Castille et al., 2017; Greenbaum et al., 2017). As mentioned earlier, undermining behaviors, such as talking badly about one's coworkers behind their backs, providing them with incorrect or misleading information about the job, and intentionally slowing them down on work tasks, represent strategic, proactive efforts to tarnish colleagues' reputations, hinder their productivity, and minimize their power (Duffy et al., 2002, 2006b). As such, in workplace settings, Machiavellian employees are likely to regard such behaviors as necessary tools for achieving their instrumental goals of preserving and enhancing their status and control (Greenbaum et al., 2017; Judge et al., 2009; Thoroughgood et al., 2012).

Trait Activation Theory and Countervailing Trait-Relevant Situational Cues

The inherent complexity of Machiavellianism has led to recent interest in understanding the role of situational factors in moderating the relation between Machiavellianism and antisocial behavior, including undermining (Castille et al., 2017; Greenbaum et al., 2017). These studies have focused on single aspects of situations, such as job constraints and abusive supervision, that tend to amplify Machiavellian employees' tendencies to behave antisocially. While informative, we argue that consistent with TAT's original conceptualization and the broader Machiavellianism literature, a more complete account of the situational variability underlying high Machs' antisocial behavior should address the potential for multiple, countervailing situational influences on these relations.

A core tenet of TAT is that employees' behavior is not simply a function of trait-relevant situational factors in isolation. Rather, as a broad theory of person-situation interactionism, TAT maintains that personality processes are complex and that behavior is a product of multiple trait-relevant situational features that may jointly operate in relation to a specific trait (Tett & Burnett, 2003; Tett & Guterman, 2000; Tett et al., 2013). Such factors may reside at the task (e.g., day-to-day tasks, responsibilities, and procedures), social (e.g., social demands arising from working with peers, supervisors, subordinates, and customers), and organizational levels (e.g., organizational culture, climate, and structure). Importantly, TAT also asserts that situations are likely to present diverse and potentially competing trait-relevant cues (Tett & Guterman, 2000). This points to the potential for a given situation to exert countervailing "presses" on employees' behavior at work.

Yet, most studies applying TAT have surprisingly focused on single situational factors in isolation, and the few studies that have considered multiple situational factors have overlooked the potential for competing trait-relevant cues (Kim et al., 2010; Turgut et al., 2016; Yoon et al., 2019). Moreover, as alluded to earlier, we are unaware of any previous investigations that have examined multiple situational moderators of Machiavellianism's links to organizational outcomes, much less the potential for countervailing trait-relevant cues. Given the observed heterogeneity reported in the relations between Machiavellianism and various forms of counterproductive work behavior (see O'Boyle et al., 2012, for a meta-analytic review), as well as the assertion that high Machs' antisocial behavior is contingent upon situational cues signaling the potential benefits *and* costs of engaging in such behavior (Jones & Mueller, 2021), a consideration of how multiple situational factors may simultaneously operate on these links in countervailing ways may shed light on the complexities that underlie these relationships. As such, drawing on TAT, a key contribution of our study is that it takes a more nuanced approach to examining the link between Machiavellianism and undermining. Specifically, we introduce a model that illuminates how two relevant situational factors (anticipated change and coworker exchange quality) may concurrently impact high Machs' self-interested motivations in competing ways, thereby determining when they are more *and* less likely to undermine their colleagues at work. Below, we discuss the moderating roles of anticipated change and coworker exchange quality. We then describe our three-way interaction hypothesis.

Anticipated Organizational Change as an Intensifying Factor

Using TAT as a theoretical lens, we argue that during times of anticipated major change, marked by a global perception of uncertainty regarding the organization that stems, in part, from expected downsizings, mergers, and adoptions of new technologies that eliminate jobs (Ashford et al., 1989; Hui & Lee, 2000), high (vs. low) Machs will intensify their undermining activities. TAT has been used sparingly in efforts to understand employees' responses to various aspects of organizational change. In the only study we could locate,

Turgut et al. (2016) found a stronger relationship between dispositional resistance to change and emotional exhaustion when perceived organizational support was low and team informational climate was high. These results suggest that TAT can provide useful insights to explaining employees' unique reactions to change situations. Such knowledge is important given major change initiatives are increasingly pervasive in today's globally competitive economy (Fugate et al., 2012), with the average company having embarked on five major changes in the past three years (Gartner, 2018). Below, we offer two reasons why anticipated change activates high Machs' antisocial tendencies.

First, during periods of anticipated change, employees often expect, among other things, layoffs, pay cuts, fewer promotion opportunities, role changes, and shifting power dynamics, all of which may pose threats to their sense of control, status, and overall survival in the organization (e.g., Ashford, 1988; Fink et al., 1971; Fugate et al., 2012; Judge et al., 1999; Oreg, 2003; Van Dijk &Van Dick, 2009). We focus on anticipated change—as opposed to actual change—because employees' perceptions of threat during this stage of the change process tend to be heightened as rumors and tidbits of information circulate throughout the organization (Armenakis & Bedeian, 1999; Fugate et al., 2002; Lawrence & Callan, 2011; Paulsen, et al., 2005). Situations that threaten employees' interests at work, including their status and control, can evoke a self-protective mindset (Kouchaki & Desai, 2015; Mitchell et al., 2018; Murnighan et al., 2001). Under such conditions, employees may focus more narrowly on their own interests and concerns and perceive morally questionable behavior as a means of shielding themselves from threats they encounter at work. Consistent with this idea, because major changes can present various threats to employees' sense of control and status as noted above, they have the potential to reduce "thresholds for aggression" and to "enhanc[e] the incentives to impede or eliminate competitors" (Hoel & Salin, 2003; Salin, 2003, p. 1125). For example, the anticipation of company-wide layoffs, pay cuts, and compressed promotion opportunities may motivate some employees to sabotage their coworkers' performance in order to boost their own relative status and gain a competitive advantage over their colleagues.

Drawing on TAT, we argue that because high Machs have intense desires for status and control at work, they are likely to experience even lower "thresholds for aggression" in response to expected major changes in their organizations compared to their low Mach counterparts. Indeed, Machiavelli emphasized that while staving off unfortunate events is not in one's complete control despite the most carefully laid countermeasures, being prepared for the inevitability of change and adopting a morally flexible mode of conduct as circumstances dictate is essential to one's self-preservation (i.e., to protecting one's status and control) (Adams & Dyson, 2007; Chong, 2005). Consistent with this notion, recent theoretical and empirical work by Bereczkei and his colleagues (Bereczkei, 2015, 2018; Bereczkei & Czibor, 2014; Bereczkei et al., 2013) suggests high Machs are flexible, long-term decision-makers who attempt and are able to exploit others in changing environments. In particular, high Machs possess specialized cognitive domains of planning and decision-making, which cause them to closely monitor their social environments, remain focused on their goals, and flexibly adapt their behavior to protect and advance their interests in changing situations (Bereczkei, 2015). Accordingly, given high Machs' strong desires for status and control and their morally flexible approach to social interaction, we argue that they will be more reactive to the situational "press" imposed by expected changes relative to their low Mach peers. That is, when such changes are on the horizon, they will activate high Machs' intense desires for status and control and their proclivity toward amoral manipulation. In fact, prior research suggests that high Machs view large-scale changes as more impactful (i.e., having major consequences) for employees than low Machs (Belschak et al., 2020). Perceiving the stakes of competition rising, high (vs. low) Mach employees are more likely to shift their attention inward on their own desires for status and control at work and, therefore, are likely to flexibly adopt undermining behaviors as a means of protecting these interests due to their capacity to diminish coworkers' relative status and power.

Second, the anticipation of major changes is often accompanied by a breakdown in normal business activities as an emotionally charged period of turmoil sets in (Armenakis & Bedeian, 1999; Buono & Bowditch, 2003; Schweiger & Denisi, 1991). Under such conditions, employees often experience stress, confusion, disorientation, and anxiety as they seek to cope with situational uncertainties (Ashford, 1988; Bordia et al., 2004; Schweiger & Ivancevich, 1985). Managers may feel similarly overwhelmed as they frenetically attempt to gain control over the situation (Buono & Bowditch, 2003), thereby causing them to be less attentive to behavioral problems in their work units (Shoss, 2017). As such, these conditions engender greater opportunities for harm doing, in part, because they decrease the likelihood of such behaviors being regulated at work (Salin, 2003).

As a result, conditions of anticipated change may create a more loosely structured, affect—laden work environment—one that scholars argue intensifies high Machs' own self-serving desires and motivation to manipulate people and situations to their advantage (e.g., Christie & Geis, 1970; Gable et al., 1992; Shultz, 1993; Sparks, 1994). Specifically, high Machs' manipulative proclivities are believed to emerge more in unstructured, ambiguous situations lacking adequate regulation of behavior and when the emotional intensity of the situation is such that "affective involvement

with details irrelevant to winning distracts low Machs" (Christie & Geis, 1970, p. 312). Accordingly, in alignment with TAT, periods of anticipated change may further activate high Machs' self-serving, manipulative tendencies by creating greater freedom, or "wiggle room," to promote their relative status and control via undermining. That is, such situations, although posing threats to their status and control if they fail to act, also provide a window of opportunity that impels them to test the limits of their undermining activities to advance these self-interests. In sum, we argue that during times of anticipated organizational change, high (vs. low) Machs will adopt a more self-serving mindset whereby they are more likely to undermine their peers. Formally, we predict the following:

Hypothesis 1 Anticipated organizational change moderates the positive relationship between Machiavellianism and social undermining, such that the relationship will be stronger when anticipated organizational change is higher versus lower.

Coworker Exchange Quality as a Defusing Factor

Although high Machs may be more likely to undermine their coworkers, especially during times of anticipated major change in the organization, other situational factors may further impact their undermining decisions. In particular, because they are strategic, non-impulsive individuals who are sensitive to the risk of punishments in their environment (Jones, 2014; Jones & Mueller, 2021; Jones & Paulhus, 2011a, 2011b, 2017; Szabó & Jones, 2019), high Mach employees are likely to be keenly aware of the costs of alienating their colleagues when they are useful to them. As such, if it is in their self-interest to do so, they will likely restrict their undermining activities at work.

At a basic level, people are motivated to form and maintain social exchange relationships based, in part, on principles of self-interest and economic rationality (Mitchell et al., 2012). In fact, prior research suggests that individuals often avoid damaging exchange relationships that are highly valuable or likely to promote their future success, even when others act aggressively (Hershcovis et al., 2012) or in an uncivil manner (Scott et al., 2013) toward them. Based on TAT, we propose that for high (vs. low) Machs, evaluations of their peers' exchange quality represent an important situational factor that determines whether they undermine their coworkers. As noted earlier, high Machs closely attend to their environment, evaluating the potential costs and benefits of different social strategies based on situational factors (Bereczkei, 2015; Jones & Mueller, 2021). It is argued that this calculating, strategic mindset allows high Machs to remain cautious and planful, rather than impulsive and hostile, when pursuing long-term goals requiring the delay of momentary drives and emotions (Jones, 2014; Jones & Mueller, 2021; Jones & Paulhus, 2009; Rauthmann & Will, 2011). This suggests high Mach employees may have a unique capacity to override their impulsive tendencies to behave antisocially in situations where they believe it is in their self-interest to do so.

Consistent with this idea, experimental studies show that high Machs are highly sensitive to the risks of behaving antisocially in certain situations and adjust their behavior accordingly to avoid punishment and "gain the most in a particular social situation" (Bereczkei & Czibor, 2014, p. 172; Czibor & Bereczkei, 2012; Jones & Paulhus, 2017; Spitzer et al., 2007). A key conclusion from these studies is that while high Machs are often motivated to cheat and exploit others even for minimal gain, they tend to resist this temptation in risky situations through executive override, thereby underscoring their capacity for impulse control (Jones & Paulhus, 2017). Similarly, other research suggests that Machiavellian individuals often adopt cooperative strategies in situations where cheating and manipulation are too costly and when cooperation benefits them—for example, in terms of their status and reputation (Belschak et al., 2015; Bereczkei et al., 2010; Hawley, 2003). Additionally, high Machs are believed to be adept at cultivating political alliances with those who can help protect and promote their status and sphere of influence and, therefore, "may not [always] be more hostile, vicious, vindictive, or manipulative" (Christie & Geis, 1970; Deluga, 2001, p. 341). Likewise, high Machs have been found to construe their relationships with others in strategic, transactional terms due to their focus on profitable exchanges (e.g., Jonason & Schmitt, 2012; Zagenczyk et al., 2014). For instance, they often seek out "functional friendships" with people who can serve a purpose for them (Jonason & Schmitt, 2012) and develop romantic relationships with partners who can help them attain their goals for status and resources (Ináncsi et al., 2016; Jonason & Kavanagh, 2010). Thus, high Machs may constantly assess the usefulness of others by asking, "What can you do for me[?]" (Jonason & Schmitt, 2012, p. 417).

In sum, we propose that high Machs are likely to carefully weigh the costs and benefits of undermining their peers based on their overall perceived exchange quality. In situations marked by low coworker exchange quality, high Machs are especially likely to view their coworkers as little more than "obstacles" or "barriers" to their success. Under such conditions, they are likely to believe that the benefits of proactively marginalizing their peers outweigh the costs. Conversely, in situations marked by high coworker exchange quality, although high Machs may still view their peers as potential competitors, they will see less value and higher personal costs in undermining them. Accordingly, in line with TAT, these situations should activate high Machs'

strategic, non-impulsive tendencies, causing them to exercise prudence and restrict their undermining behavior.

Hypothesis 2 Coworker exchange quality moderates the positive relationship between Machiavellianism and social undermining, such that the relationship will be stronger when coworker exchange quality is lower versus higher.

Three-Way Interaction Effect

To this point, we have described how anticipated organizational change and coworkers' exchange quality independently moderate, in opposite ways, the link between Machiavellianism and social undermining. Extending these arguments, we further predict a three-way interaction effect. As noted earlier, TAT asserts that traits may be simultaneously activated by multiple trait-relevant situational cues, which may be diverse and competing in nature (Tett & Guterman, 2000; Tett et al., 2013). Accordingly, trait–behavior relations may be a function of complex interactions between countervailing trait-relevant cues present within a given work setting. Further drawing on TAT, our central argument is that while high Machs' anticipation of major changes at work will intensify their motivation to undermine, the recognition that their coworkers are of high exchange quality will concurrently produce a competing motivation to restrict their undermining. Thus, we posit that perceived coworker exchange quality reflects a situational "antidote" that attenuates the moderating effect of anticipated change on the link between Machiavellianism and undermining.

In situations marked by high levels of anticipated organizational change and low perceived coworker exchange quality, we expect that high (vs. low) Machs will enact greater undermining behavior. Consistent with our earlier theorizing, in these situations Machiavellian employees will adopt a more self-serving mindset characterized by a heightened motivation to protect and promote their status and control. Under such conditions, they will also perceive their coworkers as offering relatively little instrumental value to them and, therefore, will see them as little more than potential "obstacles" or "competitors" as the expected changes unfold. Accordingly, high Machs are likely to view the costs associated with undermining their peers as low, believing that they do not need to sacrifice any opportunities to take advantage of their assistance in the future (Scott et al., 2013). Unfettered by any perceived situational constraints on their undermining and likely experiencing lower "thresholds for aggression" (Salin, 2003, p. 1225), we argue that situations marked by high levels of anticipated organizational change and low levels of perceived coworker exchange quality create dual situational "presses" that motivate high Machs to intensify their undermining behavior.

A more complex scenario occurs, however, when anticipated organizational change and perceived coworker exchange quality are both high. This is because such factors likely represent countervailing trait-relevant cues that motivate high Machs to behave in different ways. As noted earlier, during times of expected major change, employees tend to experience uncertainty, marked by an inability to forecast future events that may threaten their control, status, and overall career future within the organization (Ashford, 1988; Bordia et al., 2004). Although such situations may increase the perceived benefits of "eliminat[ing] competitors" (Salin, 2003, p. 1225), they may also shift employees into a more politically oriented mindset in which "functional friendships" (Jonason & Schmitt, 2012) are viewed as increasingly important to navigating anticipated changes and the shifting political dynamics they tend to create (Mintzberg, 1985; Morrison, 2002; Nadler, 1981). For instance, peers can act as key informal channels through which employees strategically acquire needed information about change initiatives and their social, political, and role implications (Barrett, 2018; Casey et al., 1997; Morrison, 2002). Coworkers also tend to be preferred sources of such information given they are often more accessible and associated with fewer perceived risks (e.g., reputational harm) compared to acquiring information from managers (Barrett, 2018; Miller, 1996). Additionally, when coworkers possess substantial social capital, they may provide connections to influential networks that increase one's power and status at work (Adler & Kwon, 2002; Sandefur & Laumann, 1998) — benefits which may be increasingly important during times of major change.

Given high Machs' strategic, non-impulsive nature, we anticipate that they will be shrewd enough to recognize and avoid the costs of undermining their colleagues when such individuals can assist them in navigating expected changes. On the other hand, low Machs may be more likely to become immersed in and distracted by the emotional intensity of such situations (Christie & Geis, 1970) and therefore may react in less strategic ways. As such, despite the "press" that stems from high anticipated change, when perceived coworker exchange quality is also high, we expect high Machs will be less inclined to undermine their peers because, in most cases, they engage in undermining to protect and promote their interests. Yet, in this case, doing so does not benefit them. In sum, we argue that high perceived coworker exchange quality presents a competing situational factor under high anticipated change, which motivates high Machs to restrict their undermining.

Hypothesis 3 Coworker exchange quality moderates the two-way interaction effect of Machiavellianism and anticipated organizational change on social undermining, such that the relationship between Machiavellianism and social

undermining is stronger when anticipated organizational change is high and coworker exchange quality is low.

Method

Participants and Procedure

Participants included 836 employees from various industries throughout the United States. Participants were recruited via two sources: (a) a survey response panel run by Qualtrics, a third-party online survey administration company[1] ($n = 475$), and (b) snowball sampling and personal contacts ($n = 361$). In both data collections, study participants were informed that the study would consist of three online surveys, each separated by three weeks, and that to participate they needed to be at least 18 years of age, a full-time employee, and have coworkers who they regularly interact with at work. Imposing a time lag between collection of measures of the predictor and criterion variables is necessary to reduce common method variance (CMV) bias (Podsakoff et al., 2003). Moreover, temporally separating measures over several weeks has been found to substantially decrease the magnitude of CMV-related inflation in relationships between predictor and criterion measures (Ostroff et al., 2002). In both data collections, all participants were assigned a unique identifier to link their data across the study's three surveys.

Of the 475 individuals in the Qualtrics online panel, 227 provided usable data for all three surveys (response rate = 47.79%). Of the 361 individuals in the snowball sample, 300 provided usable data for each survey (response rate = 83.10%). For participating, individuals in the online panel were compensated $15 by Qualtrics ($5 for each survey), while those in the snowball sample were entered into a raffle for a Travelocity gift card. Participation in the study was voluntary. All participants were informed that they could withdraw at any time without penalty, that the survey data would be analyzed in aggregate form, and that their responses would remain confidential.

Participants in the Qualtrics online survey panel were, on average, 44.19 years of age ($SD = 10.73$), had an average organizational tenure of 12.81 years ($SD = 8.54$), were primarily White (87.7%) and male (53.7%), and represented a range of industries [e.g., business and professional services (10.1%), government (10.1%), healthcare (9.3%), transportation and utilities (6.6%), and manufacturing (12.8%)]. Participants in the snowball sample were 36.48 years of age, on average ($SD = 8.70$), had an average tenure of 5.86 years ($SD = 5.99$), were primarily White (68.3%) and female (79.7%), and worked in various industries [e.g., business and professional services (16.0%), healthcare (10%), government (10.0%), financial services (9.0%), and manufacturing (8.7%)].

We combined our two data sources for two reasons. First, across the four measures of our study's focal variables, there are 36 total items. When calculating the number of free parameters, neither sample met the minimum recommended ratios of sample size per free parameter for our confirmatory factor analyses (CFAs) [e.g., 10:1 (Bentler & Yuan, 1999) or 20:1 (Kline, 2005)]. By combining the two samples and increasing our total N, this was the most straightforward approach to reducing measurement error and achieving stable estimation in our item-level CFAs (Bandalos, 1997; Finch et al., 1997; Matsunaga, 2008). Second, research suggests that when sample sizes are small, power is especially restricted for slope difference tests when probing three -way interaction effects (Dawson & Richter, 2006; Heo & Leon, 2010). In their simulation study, Dawson and Richter (2006) found that to detect a medium difference (0.30) between the correlations of a pair of slopes with at least 80% power, it is necessary to have either: (a) roughly 200 cases and data that are perfectly reliable or (b) 500 cases and data with a reliability of 0.80. They noted that such results point to "the danger of failing to detect moderate slope differences due to small sample size" (p. 923). Additionally, to identify a small difference (0.10) with at least 80% power, they found that 500 cases and perfectly reliable data are needed. Accordingly, by combining our samples to reach an N of 527, we ensured that our slope difference tests possessed the appropriate power to detect small to medium effect sizes when testing our three-way interaction hypothesis.

Lastly, we examined whether there were any significant differences between the samples on our focal constructs. An independent samples t-test revealed that participants in the snowball sample had lower levels of Machiavellianism ($M = 2.81$, $SD = 0.84$) than those in the Qualtrics panel ($M = 3.55$, $SD = 1.21$), $t\ (525) = 8.28$, $p < 0.001$. Similarly, those in the snowball sample reported engaging in less social undermining ($M = 1.60$, $SD = 0.66$) than participants in the Qualtrics panel ($M = 2.09$, $SD = 1.35$), $t\ (525) = 5.48$, $p < 0.01$]. No significant differences were found between the samples for anticipated organizational change or coworker exchange quality. As we discuss more below, the significant differences found for Machiavellianism and undermining may be primarily due to the snowball sample being comprised of a greater proportion of women, whom research has found are less Machiavellian (Wilson et al., 1996) and less likely to act antisocially at work compared to men (Berry et al., 2007). As such, we controlled for any effects of sample

[1] Meta-analyses suggest that employee samples obtained from online panel data services, such as Qualtrics, display similar psychometric properties and produce criterion validities that generally fall within the credibility intervals of meta-analytic findings from conventionally sourced data (Walter et al., 2019).

type by utilizing a dummy coded variable (i.e., Qualtrics panel versus snowball sample).

Measures

Machiavellianism (Time 1)

Dahling et al.'s (2009) sixteen-item Machiavellian personality scale (MPS) was used to measure Machiavellianism ($a = 0.92$). This scale measures the four dimensions of Machiavellianism: desire for status (e.g., "Status is a good sign of success in life"), desire for control (e.g., "I enjoy having control over other people"), distrust of others (e.g., "Other people are always planning ways to take advantage of the situation at my expense"), and amoral manipulation (e.g., "I am willing to sabotage the efforts of other people if they threaten my goals"). Participants were asked to respond to the items based on their personality. Consistent with previous studies (e.g., Castille et al., 2017, 2018; Zagenczyk et al., 2014), as well as Dahling et al.'s (2009) claim that Machiavellianism should be measured as a unitary construct, we averaged the items into an overall score. All ratings were on a 1 (*Strongly disagree*) to 7 (*Strongly agree*) scale.

Anticipated Organizational Change (Time 2)

Ashford et al.'s (1989) six-item scale was used to measure anticipated organizational change ($a = 0.84$). Participants were asked to reflect on their current experiences at work when responding to each of the scale items. The item stem read, "In your view, what is the likelihood that your organization will…", and sample items include "… undertake a major restructuring?", "… cut back the size of its workforce?", and "… accept new technologies that may eliminate jobs?" Ratings were on a 1 (*Very unlikely*) to 7 (*Very likely*) scale.

Exchange Quality of Coworkers (Time 3)

Six items adapted from Lynch et al.'s (1999) reciprocation wariness scale assessed coworkers' overall exchange quality ($a = 0.95$). Items from this measure have been used previously to measure evaluations of coworker exchange quality (e.g., Scott et al., 2013). Participants were asked to reflect on their experiences with their coworkers when responding to the scale items. Sample items are: "My coworkers are more likely to accept favors than to do favors" (R) and "My coworkers would not bend over backwards to help me" (R). Ratings were on a 1 (*Strongly disagree*) to 7 (*Strongly agree*) scale.[2]

Social Undermining (Time 3)

Social undermining was assessed with an eight-item scale similar to previous studies (e.g., Duffy et al., 2006a; $a = 0.93$). Also consistent with previous research (Duffy et al., 2006a, 2006b, 2012; Lee et al., 2016), we assessed undermining from the perpetrator's perspective. We selected this measurement approach for two important reasons. First, a number of these behaviors are covert and less readily observable to victims. Because observability is a critical source of measurement error, assessing undermining using other-report measures from coworkers or supervisors carries the potential to create rater inaccuracy and bias (Carpenter et al., 2017). Thus, we measured undermining from the perpetrator's perspective because they are the only source with complete knowledge of their engagement in these behaviors (Berry et al., 2012; Carpenter et al., 2017). Second, given our focus on Machiavellian employees' deliberate, strategic efforts to undermine their peers, it was important to capture perpetrators', rather than targets', perceived intentionality (Duffy et al., 2012). Participants were asked how often they intentionally engaged in each of the eight social undermining behaviors. Sample items include: "did not give as much help to your coworkers as you promised," "gave your coworkers incorrect or misleading information about the job," "competed with your coworkers for status and recognition," and "talked bad about your coworkers behind their backs." Each item was rated on a 1 (*Never*) to 7 (*All the time*) scale.

Control Variables

We considered several potentially relevant control variables in our analyses (Bernerth & Aguinis, 2016). First, as mentioned earlier, men demonstrate greater levels of Machiavellianism (Wilson et al., 1996) and are more likely to engage in antisocial behavior at work (Berry et al., 2007). These differences may be due to gendered patterns of socialization that encourage greater pursuit of personal status and achievement and more aggressive tendencies in men relative to women

[2] Our decision to measure coworker exchange quality at Time 3 was informed by prior research suggesting high Machs are long-term planners who carefully evaluate the costs and benefits of different social strategies over time (Bereczkei, 2015; Bereczkei et al., 2013). Accordingly, by measuring coworker exchange quality at Time 3, we sought to capture the longer-term decision-making processes that such individuals are likely to adopt when deciding their course of action in response to expected major changes at work. For high Machs who have anticipated changes in their organization for longer periods of time, measuring coworker exchange quality at Time 3 may not have been necessary. However, for high Machs who recently learned about expected major changes at work, imposing a time lag helped to address their long-term decision-making regarding whether to undermine their coworkers based on their perceived exchange quality.

Table 1 Means, standard deviations, reliabilities, and correlations among study variables

Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1. Sample type (Time 1)	0.43	0.50								
2. Age (Time 1)	32.48	10.66	−0.43**							
3. Gender (Time 1)	0.35	0.48	−0.35**	0.16**						
4. Tenure (Time 1)	9.06	8.06	0.43**	0.19**	0.24**					
5. Machiavellianism (Time 1)	3.12	1.08	0.34**	−0.33**	0.22**	0.02	(0.92)			
6. Anticipated organizational change (Time 2)	3.43	1.42	0.03	0.00	0.01	0.05	0.33**	(0.84)		
7. Coworker exchange quality (Time 3)	4.74	1.52	−0.30**	0.23**	−0.07	−0.03	−0.48**	−0.33**	(0.95)	
8. Social undermining (Time 3)	1.81	1.04	0.23**	−0.22**	0.12**	0.02	0.57**	0.41**	−0.48**	(0.93)

Note. $N = 527$ ($N = 492$ for tenure). Coefficient alphas are reported in the diagonal. Sample type: snowball sample = 0, Qualtrics panel = 1. Gender: female = 0, male = 1

**$p < 0.01$

(Eagly, 1987). Thus, we controlled for gender given it may impact the link between Machiavellianism and undermining. Second, age is negatively related to Machiavellianism (Hunt & Chonko, 1984) and antisocial behavior (Berry et al., 2007). Older individuals, perhaps due to instructive life experiences, are less likely to engage in antisocial acts (Aquino & Douglas, 2003). As such, we controlled for age given it may partly suppress our hypothesized relationship. Third, we controlled for organizational tenure because it may be related to perceptions of social interactions and antisocial behavior (Duffy et al., 2012). Lastly, as noted above, we controlled for sample type given the differences between the two samples on Machiavellianism and undermining.

An independent samples *t*-test revealed that men were more Machiavellian ($M = 3.45$, $SD = 1.27$) than women ($M = 2.96$, $SD = 0.92$), $t\ (525) = 5.08$, $p < 0.001$. Men also reported engaging in greater undermining ($M = 1.98$, $SD = 1.36$) than women ($M = 1.72$, $SD = 0.81$), $t\ (525) = 2.83$, $p < 0.05$. The bivariate correlations revealed that age was negatively related to Machiavellianism ($r = -0.33$, $p < 0.001$) and undermining ($r = -0.22$, $p < 0.001$). Tenure was not related to Machiavellianism ($r = 0.03$, *ns*) nor undermining ($r = 0.02$, *ns*). When we included gender, age, tenure, and sample type as controls in our analyses, the overall conclusions did not change substantively. Thus, we report our results without controls to provide the most interpretable results (Bernerth & Aguinis, 2016).

Results

Table 1 presents means, standard deviations, reliabilities, and correlations among the study variables. Before testing our hypotheses, we checked the validity of our measures by conducting a series of confirmatory factor analyses (CFAs) on our focal variables (i.e., Machiavellianism, anticipated organizational change, coworker exchange quality and social undermining). All factors were modeled using item-level indicators. Consistent with Dahling et al. (2009), Machiavellianism was modeled as a higher-order factor comprised of four lower-order factors (i.e., desire for status, desire for control, amoral manipulation, and distrust of others). Our hypothesized 4-factor model assumes that the study's variables will each load on separate factors. Average variance extracted (AVE) was over 0.50 for most of the focal variables (Fornell & Larcker, 1981). Although AVE for anticipated change (0.47) was slightly below the recommended level, composite reliability (0.84) was above the recommended level of 0.70. Overall, our measures displayed convergent validity. AVE values for all four variables were also larger than the squared intercorrelation between variables, providing evidence of discriminant validity. The 4-factor model demonstrated an adequate fit to the data [$\chi^2\ (584) = 2002.81$, $p < 0.001$, CFI = 0.91, TLI = 0.90, RMSEA = 0.07; Kline, 2005; Williams et al., 2020]. This model also displayed a better fit relative to several alternative models (see Table 2). The items measuring our focal variables and their loadings are reported in Table 3.

Table 4 presents the results of the regression analyses. We mean centered all the predictor variables and created interaction terms before entering them into the equations. When probing the interaction patterns, we plotted them at low (-1 *SD*) and high (+1 *SD*) levels of the moderators.

Hypothesis 1 stated that anticipated organizational change will moderate the positive relationship between Machiavellianism and social undermining, such that the relationship will be stronger when anticipated change is higher versus lower. As shown in Table 4, Machiavellianism was positively related social undermining (Model 1: $b = 0.38$, $p < 0.01$). Further, the interaction term of Machiavellianism and anticipated organizational change was significant (Model 2a: $b = 0.17$, $p < 0.01$). As Fig. 1 shows, Machiavellianism was more positively related to social undermining when anticipated organizational change was higher (simple slope = 0.63, $t = 17.32$, $p < 0.01$) versus lower (simple

Table 2 Confirmatory factor analyses

Model	χ^2	*df*	$\Delta\chi^2$	CFI	TLI	RMSEA
Model 1: 4-factor hypothesized model	2002.81	584	–	0.91	0.90	0.07
Model 2: 3-factor model	2231.87	587	229.06****	0.89	0.88	0.07
Model 3: 3-factor model	4237.16	587	2234.35****	0.76	0.74	0.11
Model 4: 3-factor model	2355.32	587	52.51****	0.88	0.87	0.08
Model 5: 3-factor model	2907.97	587	905.16****	0.85	0.83	0.09
Model 6: 2-factor model	3137.61	589	1134.80****	0.83	0.82	0.09

Note. Model 2 specified the Machiavellianism and social undermining items to load on to the same factor; Model 3 specified the coworker exchange quality and social undermining items to load on to the same factor; Model 4 specified the Machiavellianism and coworker exchange quality items to load on to the same factor; Model 5 specified the coworker exchange quality and anticipated organizational change items to load on to the same factor; Model 6 specified the Machiavellianism and coworker exchange quality items to load on the same factor and the coworker exchange quality and anticipated organizational change items to load on to the same factor

****$p < 0.0001$

slope = 0.15, $t = 3.37$, $p < 0.01$). As such, the results provide support for Hypothesis 1.

Hypothesis 2 stated that coworker exchange quality will moderate the positive relationship between Machiavellianism and social undermining, such that the relationship will be stronger when coworker exchange quality is lower versus higher. As reported in Table 4, the interaction term of Machiavellianism and coworker exchange quality was significant (Model 2b: $b = -0.18$, $p < 0.01$). As Fig. 2 shows, Machiavellianism was more positively related to undermining when coworker exchange quality was lower (simple slope = 0.60, $t = 15.68$, $p < 0.01$). Yet, the relationship between Machiavellianism and social undermining was not significant when coworker exchange quality was higher (simple slope = 0.03, $t = 0.68$, *ns*). As such, the results provide support for Hypothesis 2.

Hypothesis 3 stated a three-way interaction effect between Machiavellianism, anticipated organizational change, and coworker exchange quality on social undermining. More specifically, we predicted that the positive relation between Machiavellianism and social undermining will be stronger when anticipated organizational change is high and coworker exchange quality is low. As reported in Model 4 of Table 4, the interaction term between Machiavellianism, anticipated organizational change, and coworker exchange quality was significant ($b = -0.03$, $p < 0.01$). Figure 3 shows that Machiavellianism was most positively related to social undermining when anticipated organizational change was high and coworker exchange quality was low (simple slope = 0.52, $t = 12.20$, $p < 0.01$). As reported in Table 5, the slope for high anticipated organizational change and low coworker exchange quality was significantly more positive than the slopes for the other three conditions. When coworker exchange quality was high, both slopes were nonsignificant regardless of whether anticipated change was high (simple slope = 0.07, $t = 0.94$, *ns*) compared to low (simple slope = 0.07, $t = 1.25$, *ns*), and they did not significantly differ from each other (difference = 0.00, $t = 0.01$, *ns*). When coworker exchange quality was low, the slopes were both positive and significant, but the slope for high anticipated organizational change (simple slope = 0.52, $t = 12.20$, $p < 0.01$) was stronger (difference = 0.27, $t = 4.11$, $p < 0.01$) relative to the slope for low anticipated organizational change (simple slope = 0.24, $t = 3.50$, $p < 0.01$). As such, the results lend support to Hypothesis 3.

Discussion

Meta-analyses indicate that Machiavellian employees display considerable variability in their enactment of various forms of counterproductive and antisocial behavior at work (O'Boyle et al., 2012). Such findings point to the presence of situational moderators and the need for more nuanced, contextualized models that account for these effects (Jones & Mueller, 2021). Central to our theorizing, we have suggested that an appropriately specified model of Machiavellianism and antisocial behavior in organizations should not only account for single situational factors operating in isolation but also the effects of multiple, potentially countervailing situational moderators of this relationship. Accordingly, we drew on TAT to develop a social context model that explicates the conditions under which employees high on Machiavellianism are more *and* less likely to engage in social undermining of their coworkers. Results of a three-wave, time-lagged study of 527 full-time employees support our prediction that high (vs. low) Machs undermine their colleagues to a greater extent when they anticipate major changes in their organization. Yet, they do not undermine their colleagues to the same

Table 3 Standardized factor loadings for confirmatory factor analysis of study variables

Measurement items	Standardized factor loadings
Machiavellianism (AVE = 0.69; CR = 0.97)	
1. I believe that lying is necessary to maintain a competitive advantage over others. (amoral manipulation)	0.82
2. The only good reason to talk to others is to get information that I can use to my benefit. (amoral manipulation)	0.84
3. I am willing to be unethical if I believe it will help me succeed. (amoral manipulation)	0.96
4. I am willing to sabotage the efforts of other people if they threaten my goals. (amoral manipulation)	0.94
5. I would cheat if there was a low chance of getting caught. (amoral manipulation)	0.89
6. I enjoy having control over other people. (desire for control)	0.82
7. I like to give the orders in interpersonal situations. (desire for control)	0.87
8. I enjoy being able to control the situation. (desire for control)	0.66
9. Status is a good sign of success in life. (desire for status)	0.73
10. Accumulating wealth is an important goal for me. (desire for status)	0.87
11. I want to be rich and powerful someday. (desire for status)	0.86
12. People are only motivated by personal gain. (distrust of others)	0.60
13. I dislike committing to groups because I don't trust others. (distrust of others)	0.74
14. Team members backstab each other all the time to get ahead. (distrust of others)	0.88
15. If I show any weakness at work, other people will take advantage of it. (distrust of others)	0.82
16. Other people are always planning ways to take advantage of the situation at my expense. (distrust of others)	0.87
Anticipated Organizational Change (AVE = 0.47; CR = 0.84) In your view, what is the likelihood that your organization will…	
1. …go into decline?	0.62
2. …undertake a major restructuring?	0.73
3. …accept new technologies that may eliminate jobs?	0.68
4. …cut back the size of its workforce?	0.75
5. …merge with another company?	0.59
6. …change your employment contract?	0.73
Coworker Exchange Quality (AVE = 0.77; CR = 0.95)	
1. My coworkers are more likely to accept favors than to do favors	0.86
2. My coworkers would not bend over backwards to help me	0.86
3. I feel that my coworkers take more from me than they want to give	0.91
4. If my coworkers were to help me, they would only think about what is in it for them	0.90
5. My coworkers do not help me as much as they promise	0.86
6. In general, my coworkers let others do more for them than they do for others	0.88
Social undermining (AVE = 0.63; CR = 0.93)	
1. Talked bad about your coworkers behind their backs	0.79
2. Gave your coworkers incorrect or misleading information about the job	0.86
3. Competed with your coworkers for status and recognition	0.64
4. Did not defend your coworkers when people spoke poorly of them	0.76
5. Criticized the way your coworkers handled things on the job in a way that was not helpful	0.78
6. Did not give as much help to your coworkers as you promised	0.81
7. Insulted your coworkers	0.88
8. Let your coworkers know you did not like them or something about them	0.83

Note. All factor loadings are significant at $p < 0.001$; *AVE* = average variance extracted; *CR* = composite reliability

degree when they perceive them as high in exchange quality. Further, we found a three-way interaction, such that high Machs were more likely to undermine their peers when they anticipated major changes and viewed their

Table 4 Hierarchical regression results

	Social undermining (Time 3)					
	Model 1	Model 2a 2	Model 2b	Model 2c	Model 3	Model 4
Machiavellianism (Time 1)	0.38**	0.31**	0.28**	0.27**	0.27**	0.23**
Anticipated organizational change (Time 2)	0.14**	0.14**	0.14**	0.13**	0.13**	0.10**
Coworker exchange quality (Time 3)	– 0.15**	– 0.15**	– 0.15**	– 0.15**	– 0.15	– 0.14**
Machiavellianism x Anticipated organizational change		0.17**		0.10**	0.07	0.05**
Machiavellianism x Coworker exchange quality			– 0.18**	– 0.12**	– 0.12	– 0.10**
Anticipated organizational change x Coworker exchange quality					– 0.03*	– 0.03*
Machiavellianism x Anticipated organizational change x Coworker exchange quality						– 0.03**
R^2	0.41**	0.51**	0.52**	0.54**	0.54**	0.55**
ΔR^2		0.10**	0.11**	0.13**	0.00*	0.01**

Note. $N = 527$. For ΔR^2 comparisons, Model 2a, Model 2b, and Model 2c were compared to Model 1; Model 3 was compared to Model 2c; Model 4 was compared to Model 3

*$p < 0.05$; **$p < 0.01$

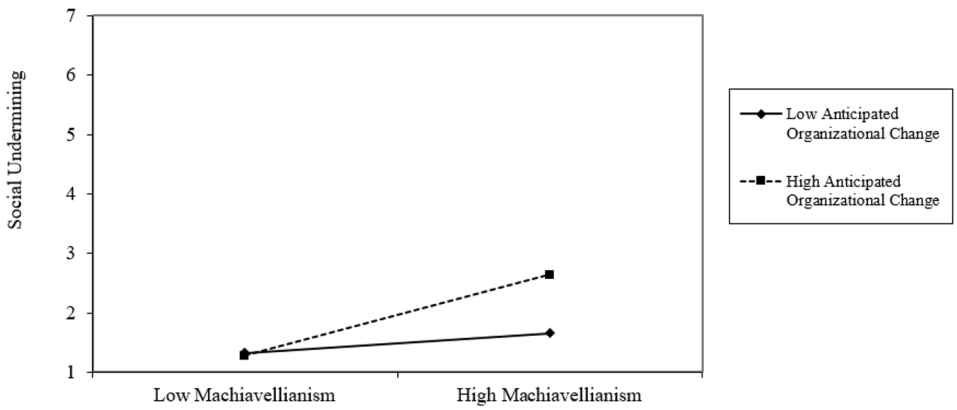

Fig. 1 Moderating effect of anticipated organizational change on the relation between Machiavellianism and social undermining

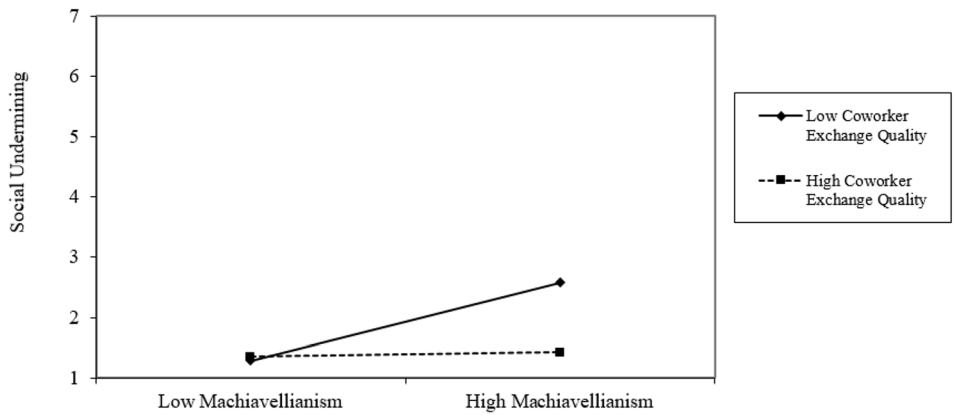

Fig. 2 Moderating effect of coworker exchange quality on the relation between Machiavellianism and social undermining

coworkers as having little exchange value, but not when they anticipated changes and perceived their colleagues to be of high exchange quality.

Theoretical Implications

A novel contribution of our research is the introduction of a more contextualized view on Machiavellianism and antisocial behavior at work. As mentioned earlier, recent

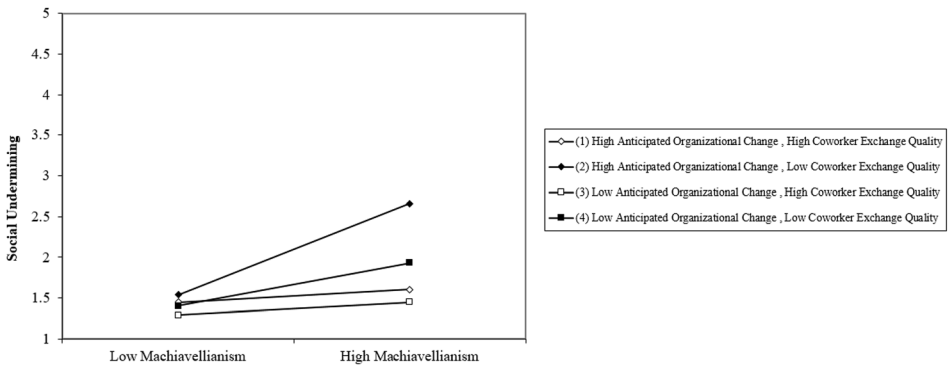

Fig. 3 Three-way interaction among Machiavellianism, anticipated organizational change, and coworker exchange quality in predicting social undermining

Table 5 Effects of machiavellianism on social undermining at low and high levels of anticipated organizational change and coworker exchange quality

	Slope	*SE*	*t*
When anticipated organizational change is low			
Slope for low coworker exchange quality	***0.24*****	0.07	3.50**
Slope for high coworker exchange quality	**0.07**	0.06	1.25
When anticipated organizational change is high			
Slope for low coworker exchange quality	***0.52*****	0.04	12.20**
Slope for high coworker exchange quality	**0.07**	0.08	0.94

Note. $N = 527$. Coefficients in bold are significantly different across levels coworker exchange quality. Coefficients in italics are significantly different across levels of anticipated organizational change

*$p < 0.05$; **$p < 0.01$

research suggests that high (vs. low) Machs are more willing to behave antisocially under certain conditions at work, such as when they experience abusive supervisor behavior (Greenbaum et al., 2017) or encounter job constraints (e.g., lack of training, poor equipment, time constraints) (Castille et al., 2017). We extend such work by providing a more nuanced perspective that accounts for multiple, competing situational influences on high Machs' engagement in antisocial acts at work. Drawing on TAT's basic assertion that trait–behavior relations are a function of diverse and potentially countervailing trait-relevant cues (Tett & Guterman, 2000), our findings indicate that certain situational factors relevant to high Machs' self-interests may both augment *and* constrain their antisocial tendencies.

Specifically, our findings suggest that under conditions of anticipated major change in the organization, high Machs are more likely to perceive such situations as a "call to arms," thereby causing them to intensify their undermining activities as a way of subverting potential competitors and fulfilling their desires for status and control. However, our results further suggest high Machs may exhibit some restraint in their undermining when they believe their colleagues can be useful in contributing to their goals. That is, when Machiavellian employees view their colleagues as high in exchange quality, such conditions present a competing situational "press" that simultaneously produces a motivation to limit their undermining activities. This finding reflects a novel contribution to the workplace Machiavellianism literature and is consistent with recent empirical work in non-work settings, suggesting Machiavellian individuals are strategic, non-impulsive actors who restrict their engagement in antisocial acts when the risks outweigh the rewards (e.g., Bereczkei & Czibor, 2014; Czibor & Bereczkei, 2012; Jones, 2014; Jones & Paulhus, 2017). Taken together, our results suggest that the link between Machiavellianism and social undermining is complex and depends on multiple, countervailing situational factors that Machiavellian employees strategically consider when deciding whether to undermine their peers. In illuminating these situational contingencies on high Machs' engagement in undermining, we answer recent calls for more nuanced theoretical models that shed light on the situational conditions under which Machiavellianism is more or less predictive of antisocial behavior in organizations (Jones & Mueller, 2021; Lebreton et al., 2018).

Second, we contribute to the organizational change literature by adopting a perpetrator- centric lens on antisocial behavior during times of change. As mentioned earlier, previous research has largely focused on victims' exposure to antisocial behavior in change situations. A primary explanation offered for this link is that change situations produce job-related stressors (e.g., role conflict and ambiguity, higher workload, job insecurity), which create strain and, in turn, render employees vulnerable and defenseless targets (Baillien & De Witte, 2009; Baillien et al., 2009; Hoel & Salin, 20033). However, there remains a dearth of research on perpetrators of antisocial acts during periods of change. This is despite the claim that change creates incentives for employees to sabotage the productivity and reputations of their colleagues (Salin, 2003). That is, by deceiving, spreading rumors, or engaging other acts of undermining in change situations—situations that tend to engender harsher internal competition—employees can protect and elevate their

relative status and control at work. As such, these behaviors may be "rational" and strategically advantageous for individuals during times of change (Salin, 2003). Utilizing TAT as a theoretical lens, we add to this less studied, perpetrator perspective on antisocial behavior during organizational change by describing *who* (i.e., high Machs) is more likely to engage in deliberate acts of undermining under such conditions. Moreover, our model goes further by suggesting that change situations do not inevitably intensify high Machs' engagement in undermining. That is, *when* they view their peers as capable of advancing their interests at work (i.e., as having high exchange value), they may curb their undermining activities. In sum, the present study underscores the importance of considering how certain individual difference factors of employees, as well as other situational factors, may further impact individuals' decisions to behave antisocially during times of organizational change.

Third, our research contributes to the TAT literature by examining the simultaneous occurrence of multiple situational cues that are relevant to a specific trait at work. As mentioned earlier, although TAT maintains that personality traits may be activated by multiple trait-relevant "presses" at work, most TAT studies examine only solitary trait-relevant situational factors (Tett et al., 2013). Modeling single situational factors in isolation offers only a partial view, especially in the case of complex traits like Machiavellianism, given such analyses are likely to provide an overly simplified perspective on the complexity of real-life work environments and the multiple, potentially competing effects they exert on trait–behavior relations (Tett & Guterman, 2000). Thus, we provide a more complete test of TAT that is more in line with the theory's original exposition.

Practical Implications

Our results suggest organizations can reduce the degree to which high Machs engage in antisocial behavior by carefully managing certain situational factors that impact their motivation to undermine their colleagues. First, in order to ensure that impending changes are viewed as less threatening to their strong desires for control and status, leaders should carefully craft their change -related communications to de-emphasize the potential for uncertain and shifting power structures. For instance, the organizational change literature suggests that providing employees with timely and accurate information about how the change is likely to unfold can send important signals that the organization is focused on ensuring order throughout the change process (Allen et al., 2007). Thus, if high Machs perceive impending changes as less chaotic and more structured, they may be less likely to construe such situations as requiring them to intensify their undermining efforts. Similarly, leaders should avoid language that implies the need for employees to contend for power and resources to survive the change. For example, stressing that structured decision-making underlies changes in the organizational hierarchy may reduce the likelihood that high Machs view undermining as a feasible strategy to protect their self-interests at work. Along with the above, because high Machs may perceive greater opportunity to engage in political maneuvering during times of anticipated change, managers should be especially attentive to and proactively address behavioral issues with employees if they arise, rather than keeping their heads down and focusing only on their own change-related tasks and duties (Buono & Bowditch, 2003).

Second, our findings suggest that managers can reduce the incidence of high Machs' social undermining by fostering a more collaborative, interdependent work environment. Although high Machs are unlikely to become emotionally attached to their peers in such contexts, the perception of their colleagues as valuable exchange partners may deter their undermining by increasing the perceived costs of such behavior. In general, employees tend to develop perceptions of their peers' exchange quality through key exchanges (e.g., receiving important task assistance) or a series of smaller beneficial interactions over time (Mitchell et al., 2012). Accordingly, by instituting greater teamwork requirements, high Machs may be more likely to recognize the various ways in which their coworkers benefit them at work and, thus, the consequences of undermining them. Managers might also underscore the unique contributions that employees make to their coworkers' success, enhancing high Machs' awareness of their peers' exchange quality and deterring their undermining.

Limitations

Our study has limitations. First, we focused on one specific form of antisocial behavior: social undermining. We chose undermining as it is an intentional set of behaviors meant to hinder others' work reputations and success. Thus, it aligns with high Machs' strategic focus on enhancing their status and control relative to others. However, some have expressed concern with focusing on specific forms of aggression, suggesting they are too narrow in their conceptualization (Hershcovis, 2011). As such, future work might examine our model across other antisocial behavior constructs.

Second, although focal employees were the best informants for assessing our study's constructs of interest (Carpenter et al., 2017), relying on self-report measures raises potential concerns about common method variance (CMV) bias. Yet, we created temporal separation between measures of our focal variables in order to alleviate this concern (Podsakoff et al., 2003) Moreover, we found significant interaction effects between Machiavellianism, anticipated change, and coworker exchange quality. Because CMV is known to

weaken interactions (Evans, 1985; Siemsen et al., 2010), these results provide evidence against the effects of CMV.

Third, because our analysis did not include narcissism and psychopathy—the other two traits comprising the dark triad (Paulhus & Williams, 2002)—it remains to be determined whether our theoretical model holds exclusively for Machiavellianism or whether it applies to the other dark triad traits as well. In the case of psychopathy, we would argue that during times of change psychopaths are unlikely to display the same restraint on their undermining when their coworkers can be valuable to achieving their goals. Indeed, compared to high Machs, psychopaths lack both impulse control and the attentional processes needed to alert them to future punishments (Hare & Neumann, 2008; Jones & Mueller, 2021; Jones & Paulhus, 2014). Therefore, unlike high Machs who engage in antisocial behavior only when they calculate that the rewards outweigh the costs, psychopaths are likely to act more recklessly, engaging in consistent levels of antisocial behavior regardless of the negative consequences to their self-interests (Jones & Mueller, 2021). In the case of narcissism, we also see little reason to believe that narcissists will refrain from undermining their peers in situations marked by high anticipated change and high coworker exchange quality. This is because narcissists have a strong sense of grandiosity and personal entitlement (Emmons, 1987), which fuels their hyper-competitiveness (Luchner et al., 2011), enhances their reactivity to uncertain situations characterized by high levels of social comparison information (Bogart et al., 2004), and contributes to their exploitation of and general unwillingness to cooperate with other people (Bradlee & Emmons, 1992). Narcissism is also associated to some degree with impulsivity (Vazire & Funder, 2006), if not as extremely as psychopathy is. In sum, although we argue that Machiavellianism is the most relevant dark triad trait to our model, future research should seek to examine the other two traits' relevance as well.

Fourth, although our core focus was on anticipated organizational change and coworker exchange quality as moderators, there are likely other situational factors operating on the relation between Machiavellianism and social undermining. For example, one factor that may intensify high Machs' willingness to manipulate, betray, and sabotage their coworkers to get ahead is the extent to which their supervisors employ *moral disengagement language* to account for the ethical misconduct of subordinates. Drawing on Bandura's (1991, 1999) theory of moral disengagement (MD), which defines MD as a set of cognitive strategies (e.g., moral justification, euphemistic labeling, displacement of responsibility, distortion of consequences) designed to reframe unethical behavior as more appropriate, Dang et al. (2017) theorized that leaders may explain a subordinate's unethical behavior using language that is grounded in MD strategies. In doing so, they convey their lack of concern with the ethicality of the subordinate's behavior and diminish the importance of acting in accordance with moral standards. Because high Machs are very sensitive to situational cues that signal greater latitude or autonomy in how they go about achieving their selfish goals (Christie & Geis, 1970; De Hoogh et al., 2021; Sparks, 1994), we suspect that they will be highly attentive to a manager's use of MD language in accounts of subordinate misconduct. Under such conditions, high Machs should be more likely to view undermining as a viable strategy they can utilize to gain a competitive advantage at work.

With respect to defusing factors, another situational factor that may attenuate high Machs' motivation to undermine their colleagues is whether their work environment is marked by high levels of *peer monitoring*—an informal organizational control mechanism that involves employees noticing and responding to a peer's poor behavior at work (Loughry & Tosi, 2008; see DeCelles & Aquino, 2020, for a related discussion of "workplace vigilantes"). Peer monitoring includes both direct (e.g., reporting an employee's misbehavior to organizational authorities) and indirect (e.g., negatively gossiping about a coworker's misconduct) behaviors, which are designed to deter inappropriate behavior by creating fear in employees that their misbehavior will be detected and sanctioned appropriately (Loughry & Tosi, 2008). When peer monitoring is high, employees are more likely to believe that their coworkers are closely observing them and that the risk of being exposed and punished for violating workplace norms is higher than in work environments where employees stay silent and keep to themselves (DeCelles & Aquino, 2020; Morrison & Milliken, 2000). As noted earlier, because high Machs' manipulative tendencies surface more in situations that fail to exert adequate checks on their behavior (Christie & Geis, 1970; Thoroughgood et al., 2018), workplaces marked by informal peer monitoring should serve as an important check on high Machs' undermining by activating in them a rational analysis of the risks associated with engaging such behavior. In sum, we encourage future research that considers additional factors that are likely to intensify *and* defuse high Machs' motivation to engage various forms of antisocial behavior, including undermining.

Fifth, although Dahling et al.'s (2009) MPS has been widely utilized by researchers to measure Machiavellianism, especially in workplace studies, it is important to acknowledge other potential measures in the literature, including the Short Dark Triad (SD3; Jones & Paulhus, 2014) and the Five Factor Machiavellianism Inventory (FFMI; Collison et al., 2018; Kückelhaus & Blickle, 2021). Although a detailed discussion of these different measures is beyond the scope of our discussion, future work should replicate and extend our findings using alternative measures of Machiavellianism. Lastly, our study utilized convenience samples of employees from within the U.S. Thus, questions may arise

about the extent to which our results are generalizable to the broader U.S. population and other cultures. Regarding the latter, because the U.S. culture is strongly individualistic (Hofstede, 2001) and tends to encourage competitive behavior more so than collectivistic societies (Earley & Gibson, 1998), it is possible that cultural differences played a role influencing the social undermining effects observed in our research. As such, future studies might seek to expand our work by examining the generalizability of our findings cross-culturally.

Conclusion

Existing theory suggests that situational factors likely play a prominent role in influencing the antisocial tendencies of Machiavellian employees. Yet, we know surprisingly little about how aspects of today's modern workplace impact high Machs' antisocial proclivities, and the limited research that has been conducted to date has focused on isolated situational factors that augment such tendencies. Drawing on TAT's fundamental assertion that trait–behavior relations stem from a complex interplay among multiple, potentially competing trait-relevant situational cues, we add to the literature by highlighting how two notable situational "presses" at work may independently and jointly influence, in opposite ways, high Machs' decisions to undermine their colleagues.

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Conflict of interest The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

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