



The Embodiment of Insult: A Theory of Biobehavioral Response to Workplace Incivility

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This article builds a broad theory to explain how people respond, both biologically and behaviorally, when targeted with incivility in organizations. Central to our theorizing is a multifaceted framework that yields four quadrants of target response: reciprocation, retreat, relationship repair, and recruitment of support. We advance the novel argument that these behaviors not only stem from biological change within the body but also stimulate such change. Behavioral responses that revolve around affiliation and produce positive social connections are most likely to bring biological benefits. However, social and cultural features of an organization can stand in the way of affiliation, especially for employees holding marginalized identities. When incivility persists over time and employees lack access to the resources needed to recover, we theorize, downstream consequences can include harms to their physical health. Like other aspects of organizational life, this biobehavioral theory of incivility response is anything but simple. But it may help explain how seemingly “small” insults can sometimes have large effects, ultimately undermining workforce well-being. It may also suggest novel sites for incivility intervention, focusing on the relational and inclusive side of work. The overarching goal of this article is to motivate new science on workplace incivility, new knowledge, and ultimately, new solutions.

Keywords: incivility; stress; physiology; affiliation; inclusion

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Interruption, derision, condescension, and omission of common courtesies—incivility abounds in organizational life. Such mundane indignities can erode one’s well-being, but why? The pathway from insult to injury remains something of a black box. To shed light here, we take a deep dive into the uncivil moment—the immediate instance that insult takes place—and the biological, behavioral, and physical effects that follow. We theorize the contours and consequences of how employees react to incivility, in both body and behavior. Does incivility leave traces on the body?¹ What is the typical target reaction (retreat? retaliate? affiliate?), and does that reaction also affect the body? How might uncivil moments accumulate over time to undermine workforce well-being? Biobehavioral response, we argue, could be the missing link between everyday workplace indignity and eventual health injury.

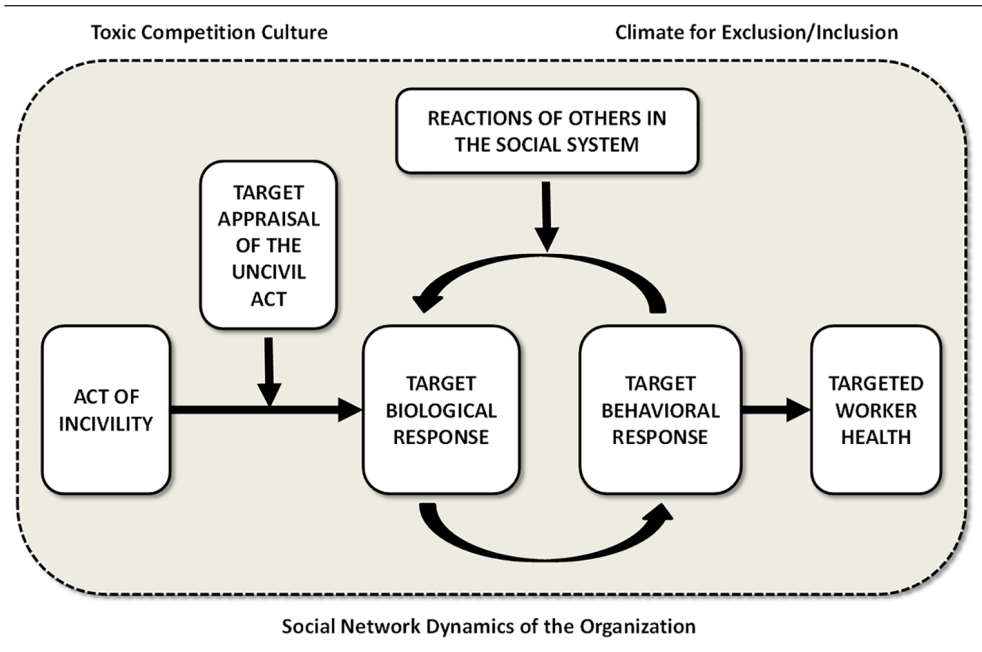
This article makes several key contributions to the workplace incivility literature. First, we detail how uncivil situations (appraised as threatening) can get into the bodies of targeted employees, activating multiple components of physiological stress. We propose that these biological responses drive behavioral responses, which in turn loop back into biology to influence further change within the body. Target actions amounting to reciprocation or retreat may prolong physiological stress, whereas affiliative attempts to fix relationships or find support may promote physiological recovery. We focus in particular on biological stress pathways that allow for measurement of chronic activation, as with inflammation or allostatic load, shedding light on the cumulative burden of incivility over time.

In a second contribution, we propose a multifaceted, multilayered framework to capture the diverse strategies workers deploy to deal with uncivil treatment. This classification system spans two dimensions (approach and affiliation), yields four quadrants of action (reciprocation, retreat, relationship repair, and recruitment of support), and ties in to biology (exacerbating or attenuating physiological stress). This multidimensional system can bring theoretical coherence to this area of study. It can also expand the science of incivility, calling attention to categories of response that merit more scholarly attention. With this framework, we hope to motivate management researchers to move beyond escalating spirals of attack when investigating employee reactions to rudeness on the job.

A third contribution of our article is insight into how the social and cultural context can intensify—or conversely, lessen—the harms of incivility. After highlighting the healing properties of affiliation, we pinpoint a problem: Some environments leave some employees (particularly those holding marginalized identities) with less access to affiliation and its stress-buffering benefits. These same workers tend to receive more uncivil treatment than others. Solutions to these problems, we show, lie not just in interventions preventing incivility but also in programs promoting inclusion—ensuring that employees of all identities are meaningfully supported, integrated, and appreciated within the organization.

To set the stage for our theory, we synthesize concepts from organizational behavior, biological anthropology, and psychophysiology. We start with a brief overview of workplace incivility research. Next comes coverage of the behavioral biology of stress and coping—from fight to flight to freeze to affiliation. We posit that these responses hinge on threat appraisal and have implications for physiology (in the moment) and physical health (down the line). These are individual-level processes, but we demonstrate how they can be shaped by the surrounding social context. Bringing together these various lines of research, we build a model of biobehavioral response to workplace incivility. Figure 1 displays this model,

Figure 1
Holistic Model of the Process That Translates Workplace Incivility Into Worker Health Injury



which maps our theoretical propositions. We conclude by advancing a specific agenda for future science and practice surrounding incivility in organizations.

Background: Incivility in Organizations

Incivility Defined

Incivility encompasses everything “from breaches of etiquette to professional misconduct, from general civil unrest to moral decay” (Andersson & Pearson, 1999: 455). Applied to settings of work, incivility involves seemingly small acts of rudeness that violate basic organizational standards of respect. Porath and Pearson (2009) have conducted excellent foundational work in this area, proposing three key features of workplace incivility: norm violation, ambiguous intent, and low intensity.

Descriptors such as “low intensity” characterize isolated uncivil behaviors. However, over time, these small acts can accumulate to create large costs for targeted individuals and their institutions. For example, research has found links between uncivil experiences and employee distress, dissatisfaction, and absenteeism; substance abuse and other counterproductive work behaviors; decreases in creativity, commitment, and performance; and increases in turnover (for reviews, see Cortina, Kabat-Farr, Magley, & Nelson, 2017; Schilpzand, De Pater, & Erez, 2016). These consequences can take a toll on the bottom line, such that “organizations lose financially when they allow rudeness to run rampant” (Porath, 2016: 2).

Beyond the study of outcomes, research has also examined how employees react to uncivil treatment, including work on retaliation and reconciliation (discussed later). Those behavioral reactions, we argue, are both preceded and followed by biological ones. Next, we explain how incivility can trigger a physiological stress response in targets. Their subsequent behaviors can upregulate (i.e., ratchet up further) or downregulate (calm) that stress response.

Target Responses to Incivility

Activation of the Physiological Stress Response

Triggered by threats both large and small, the *physiological stress response* recruits energy to make many behaviors possible (e.g., Sapolsky, 2009). Two biological systems play central roles here: the sympathetic nervous system (SNS) and the hypothalamic-pituitary-adrenal (HPA) axis. SNS activation produces bursts of epinephrine and norepinephrine, resulting in increased heart rate, blood flow to muscle, and secretion of glucose from energy stores. HPA axis activation triggers release of glucocorticoids (e.g., cortisol), which supports the continued activation of the SNS. These physiological changes facilitate rapid and intense physical activity, enabling the body to take behavioral steps to survive an immediate threat. However, the activation of the physiological stress response is just that: activation. It mobilizes resources for immediate responding to a threat but does not require the target to use those resources toward any specific behavior. Various actions are possible, including doing nothing at all.

By definition, the physiological stress response moves the body away from its biological baseline, termed *homeostasis*. The concept of homeostasis arises across many fields (e.g., environmental science, labor economics), but it originated within biology (e.g., Sapolsky, 2009; Sterling & Eyer, 1988). Applied to the human body, this describes the stable physiological conditions required for life (for example, characterizing the systems that work together to maintain a steady body temperature).²

The shift toward the biological state for fleeing danger, which involves upregulation of the physiological stress response, occurs under threat of physical harm (e.g., trying to escape a predator, navigating a possible traffic accident). But for humans and other social animals, nonphysical threats can trigger this response, as well (Sapolsky, 2009). Some empirical evidence, scattered across several literatures, suggests that subtle slights and indignities might provoke a similar activation of stress physiology. For instance, researchers have found that experiences of disrespect or ostracism can affect people's concentrations of cortisol (Hogh, Hansen, Mikkelsen, & Persson, 2012; Saxbe, Repetti, & Nishina, 2008), C-reactive protein levels (Kelly, McDonald, & Rushby, 2012; Lewis, Aiello, Leurgans, Kelly, & Barnes, 2010), skin conductance (Kelly et al., 2012; Kouchaki & Wareham, 2015), and cardiovascular activity (K. Schneider, Tomaka, & Palacios, 2001). Biomarkers such as these can signal upregulation of the body away from homeostasis (and sometimes downstream effects of that upregulation). Workplace incivility, by definition, involves no physical harm, but it can contain other powerful threats (described further later). Synthesizing these theories and findings, we posit the following:

Proposition 1: Workplace incivility can trigger a physiological stress response in the bodies of targets, revolving around activation of the SNS and the HPA axis. These physiological changes move the body out of homeostasis, recruiting the energy needed to take immediate action.

Fight and Flight Responses to Incivility: Upregulation of the Body

In the preceding section, we argued that uncivil treatment can get into the bodies of targeted workers, activating a physiological stress response. This supposes that targets have noticed the incivility and appraised it as a threat (more on appraisal later). The activation of certain biological systems makes it possible for targets to engage in a variety of actions to deal with the incivility. What actions are most likely, and why?

The incivility spiral. Andersson and Pearson (1999) theorized that incivility can trigger an escalating spiral of conflict. They argued that when targeted with incivility, employees might return the rudeness to the instigator, who may then respond with further incivility. The exchange of disrespect can continue and escalate, ultimately culminating in a tipping point when one person's last insult provokes vengeful aggression from the other. According to this model, incivility begets incivility, aggression, and possibly even violence. This spiral theory has inspired many studies of reciprocation and aggression in response to workplace incivility (e.g., Cameron & Webster, 2011; Gallus, Bunk, Matthews, Barnes-Farrell, & Magley, 2014; Hershcovis, Reich, Parker, & Bozeman, 2012; Pearson, Andersson, & Porath, 2000; Porath & Pearson, 2013; Porath, Overbeck, & Pearson, 2008; S. G. Taylor & Kluepfer, 2012). The idea of an incivility spiral is consistent with a fight response in the classic fight-or-flight model of stress.

Biological influences on behavior. *Fight-or-flight*, a term coined over a century ago, describes two initial biobehavioral reactions to stressors. According to this model, in times of perceived attack or threat to survival, humans (and other animals) can respond by fighting or fleeing the threat. The energy recruited through SNS and HPA activation makes those behaviors possible, enabling the individual to either confront the danger or run away to safety. The choice of behavior depends in part on the nature of the stressor: When contextual factors indicate the best strategy is to overcome the stressor via a fight behavior, we may do so. In contrast, when the threat seems too formidable, or the fight response too risky or inappropriate, we are more likely to run away (flight; for a meta-analytic review, see Segerstrom & Miller, 2004). Some researchers have expanded on this classic model, arguing that the initial response to threat is often an absence of behavior—a *freeze* response—which reflects the vigilance needed for threat appraisal. Fight or flight may follow from freezing but not always (Bracha, Williams, & Bracha, 2004; Hagensars, Oitzl, & Roelofs, 2014).

Some workers respond to incivility with reciprocation or aggression, as noted already. But when research has considered a broader range of reactions, it has shown nonretributive, non-aggressive responses to be more the norm. For instance, in Cortina and Magley's (2009) study of three organizations, over 70% of targets ignored or "just put up with" uncivil treatment. Similarly, Beattie and Griffin (2014) found that targets ignored or avoided their instigators in over 70% of uncivil incidents. Likewise, Porath and Pearson (2013) polled 800 people across 17 industries, reporting that nearly two-thirds of incivility targets had lost time from work in their efforts to avoid the uncivil individual. Hershcovis and colleagues also found avoidance more common than confrontation in a three-wave study of employee response to incivility (Hershcovis, Cameron, Gervais, & Bozeman, 2018). These descriptive data do not suggest a pattern of escalating insult or aggression. Rather than attempting to fight their offenders, it appears far more typical for workers to walk away (a flight behavior).

Andersson and Pearson's (1999) primary focus was the spiral model, but importantly, they acknowledged that the spiraling of behavior from incivility to intentional infliction of harm is "relatively infrequent" (p. 462). Rather than reciprocate or ratchet up the rudeness, targets can depart from the uncivil encounter. That is, they can ignore, reinterpret, or exit the situation. When instigators apologize, targets may forgive the transgression. In these scenarios, hostilities do not escalate and erupt into major conflict. Andersson and Pearson (1999: 461) wrote briefly but cogently about these "points of departure" from uncivil moments. In the subsequent decades, many incivility researchers have dwelled on the spiral piece of Andersson and Pearson's theorizing, neglecting the notion of departure points.

Departure, or retreat from the uncivil situation, deserves more scholarly attention, as the aforementioned evidence suggests it to be common—perhaps even modal—as a response to workplace incivility. This response makes particular sense within organizations, where long-term relationships and resources are at stake. As Baumeister and Leary (1995) note, interactions among people in the context of ongoing relationships are qualitatively different from (and more emotionally meaningful than) interactions among strangers or distant acquaintances. Targets might anticipate working with, depending on, or reporting to their offender for years to come, so it may be in their own self-interest to avoid damaging that relationship (Hershcovis et al., 2012). Moreover, negatively charged altercations with work colleagues can be emotionally distressing and draining (Cortina & Magley, 2009; Robertson & O'Reilly, 2020). One's own work and well-being can then suffer; for instance, negative emotional experiences (e.g., feeling angry or irritated) on the job predict accidents, absences, turnover, and increased alcohol consumption (O'Neill, Vandenberg, DeJoy, & Wilson, 2009). Often the most self-protective response is to extricate oneself from an unpleasant workplace situation, not escalate it. These theoretical considerations, combined with the descriptive findings reviewed earlier, lead us to posit the following:

Proposition 2: Retreat (e.g., walking away, avoiding the instigator) is a more common behavioral response to workplace incivility, compared with reciprocation or escalation.

Behavioral influences on biology. Proposition 1 theorizes that incivility activates a physiological stress response in targets, preparing them for action, and Proposition 2 argues that this action is more frequently flight than fight. We posit that these behaviors can have biological consequences, as illustrated by the feedback loop (from behavior back to biology) at the center of Figure 1. This aligns with research showing that not only does biology affect behavior, behavior also affects biology (e.g., S. E. Taylor, Klein, & Lewis, 2000). In the case of workplace incivility, after an initial physiological stress reaction, targeted workers' subsequent behaviors should influence the course of their physiological response. Behaviors that reciprocate or escalate the insult may prolong or even amplify physiological upregulation, and sustained upregulation can be harmful to the body. *Acute* activation of the physiological stress response prepares the body for a variety of reactions and so can enhance memory, shunt resources to the limbs, and halt or slow maintenance processes like digestion. But when *chronically* activated, the physiological stress response impairs memory, interferes with insulin production, and can even change the gut microbiome (Cui, Gai, She, Wang, & Xi, 2016; Tamashiro, Sakai, Shively, Karatsoreos, & Reagan, 2011). Matching or escalating conflict would be likely to maintain an elevated physiological stress response. As a result of fighting back, then, the target's body may stay in a state of high alert, unable to wind down, recover,

and return to its biological baseline (homeostasis). This provides another explanation for the relative rarity of reciprocation or escalation in uncivil workplace situations: Conflict comes with costs, both social and physiological.

When a worker reacts to incivility not with reciprocation but, rather, with retreat (e.g., leaving the scene, avoiding the offender), this would be evidence of a flight response in the fight-or-flight framework. Fight and flight manifest in different behaviors, but the underlying biology is the same: The body halts physiological processes that are unnecessary in the moment and recruits the rapid energy needed to either battle or break away from danger. This means that even when walking away from an uncivil moment, the physiological systems implicated in stress may remain activated. If the target never again encounters that stressor (or in this case, that instigator), the threat and its biological effects should dissipate. This is less likely, however, when the incivility comes from another member of the organization and the employee stays with that organization. Retreat may then become an ongoing challenge, requiring targets to remain on high alert when interacting with (or attempting to avoid interacting with) the offender. This need to be vigilant about instigator movements may fuel worry or rumination. Moreover, retreat reactions may not allow targeted employees to let go of emotions surrounding the sense of insult. It may cut off opportunities to voice concerns, repair relationships, or take other steps to resolve the underlying stressor. Consistent with this theorizing, Hershcovis et al. (2018) found that when incivility targets avoided their instigator, they experienced higher emotional exhaustion on the job. This could potentially be an indicator of prolonged physiological upregulation, keeping the body in a stressed state and out of its homeostatic norm (note, however, that Hershcovis et al. did not include any physiological measures in their study). Taken together, this evidence suggests that retreat from incivility may sometimes extend stress rather than relieve it, contrary to popular wisdom. In summary, we propose the following:

Proposition 3: When workers respond to uncivil treatment with acts of either fight (reciprocation, escalation) or flight (retreat), this may prolong or amplify physiological upregulation, preventing their bodies from recovering and returning to homeostasis.

Affiliative Responses to Incivility: Downregulation of the Body

Research reviewed in the preceding section suggests that workplace incivility may escalate under a narrow set of circumstances—bringing out a fight response in the target—but flight is more likely. Fighting and fleeing, however, are not the only ways humans respond to conflict. Reconciling with the instigator and bonding with bystanders, friends, and family are postconflict responses that prioritize *affiliation*, or pursuing social connection with others (Katsu, Yamada, & Nakamichi, 2018; Palagi, Leone, Demuru, & Ferrari, 2018; Silk, 1997; Silk, Cheney, & Seyfarth, 2013). S. E. Taylor and colleagues (S. E. Taylor, 2006; S. E. Taylor et al., 2000; S. E. Taylor & Gonzaga, 2007; S. E. Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004) organize these behaviors around “tending” (nurturing and protecting offspring) and “befriending” (reaching out to a social network for support). These affiliative activities satisfy a fundamental human need for rewarding social relationships (Baumeister & Leary, 1995). S. E. Taylor (2006) originally offered *tend and befriend* as a model of stress response in women, but researchers have since documented similar patterns across genders (e.g., Von Dawans, Fischbacher, Kirschbaum, Fehr, & Heinrichs, 2012).

As with fight and flight, affiliation ties in to physiology. When we affiliate with others following a conflict, we seek social connection, which may help downregulate our stress response (Katsu et al., 2018; Palagi et al., 2018; Rodrigues, 2013; Silk, 1997). Then our cortisol levels lessen, heart rate declines, and HPA and SNS systems return to biological baselines. The result is a shorter duration of our bodies being out of homeostasis, which should reduce risk for downstream health effects (more on health later). This physiological downregulation is antithetical to fight-or-flight behaviors: The body is winding down, not gearing up to engage in combat or flee (S. E. Taylor, 2006, 2007; S. E. Taylor et al., 2000). Theories such as tend and befriend, centering the behavioral biology of affiliation, could bring new clarity and coherence to the study of individual response to incivility in organizations.

Affiliative responses to uncivil treatment may manifest in many ways, including recruitment of support. Seeking out others for advice, solace, insight, or information seems especially likely as a behavioral reaction to incivility, which is by definition ambiguous with respect to intent. The target might talk to colleagues or family in efforts to make sense of the behavior, sort through its possible causes, and decide a course of action. Indeed, one of the most common strategies employees use to cope with uncivil and harassing treatment is to mobilize informal networks (Beattie & Griffin, 2014; Cortina, 2004; Cortina & Magley, 2009). Targets may also seek formal support by talking to managers or union representatives in efforts to solicit advice or prompt action on the part of leadership (Cortina, 2004; Olson-Buchanan & Boswell, 2008). Such affiliative responses may be especially likely when incivility impedes a target's feeling of belongingness at work (Hershcovis, Ogunfowora, Reich, & Christie, 2017). Support-seeking behaviors are adaptive when successful—resulting in others providing aid, comfort, information, or intervention—with a greater chance that one's well-being will remain intact.

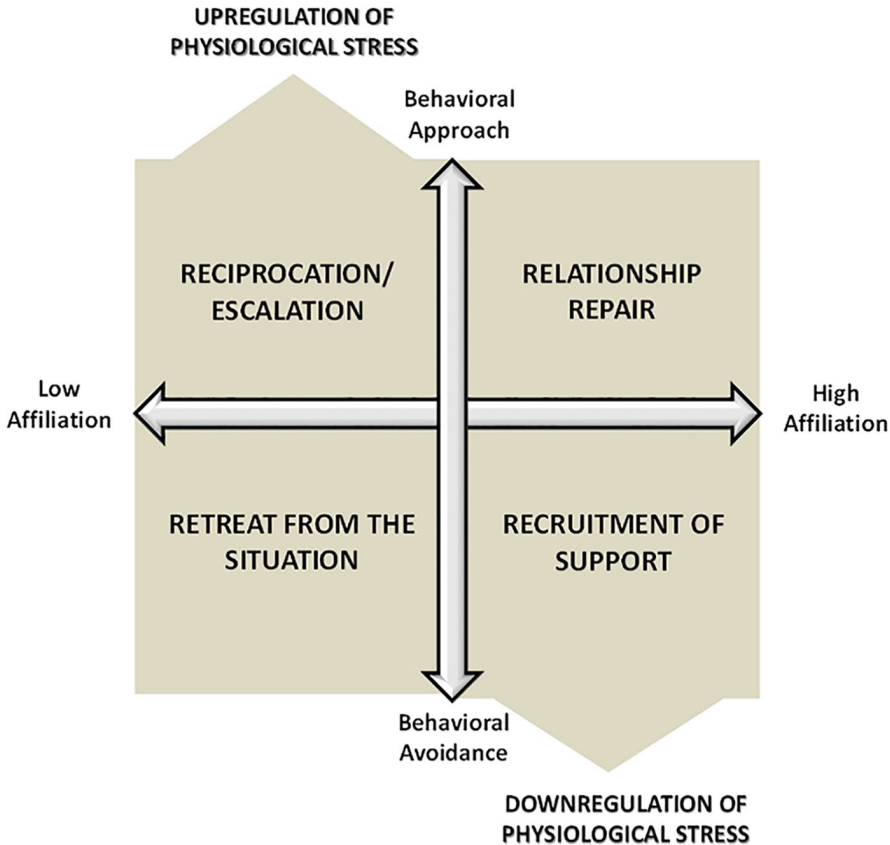
Affiliation may also manifest as actions taken to repair the relationship and rebuild rapport with the instigator so that productive work may resume. This follows from research on *reconciliation*—or restoration of a relationship—after workplace injustice (e.g., Andiappan & Treviño, 2011; Palanski, 2012). The focus is repair of social injury. Anthropologists have observed such “making amends” as a response to interpersonal conflict across many primate societies, especially when there are stable social groups and important relationships at stake (Aureli, Cords, & Van Schaik, 2002). In the specific case of incivility in work organizations, relationship repair may be especially logical if the instigator has influence over the target's quality of work life by virtue of the formal hierarchy (e.g., the instigator is the target's boss), work arrangements (e.g., the target and instigator work on the same team), or socioeconomic realities (e.g., the target cannot afford to leave that team or quit that job). These various studies of affiliative behavior and biology lead us to posit the following:

Proposition 4: A frequent response to workplace incivility involves attempts at affiliation directed at the instigator (relationship repair) or the social network (recruitment of support, either informal or formal). When successful, these affiliative responses may promote physiological downregulation, recovery, and return to homeostasis.

A Multifaceted Framework

The preceding sections discussed a range of biological and behavioral responses to workplace incivility. One can think of the behavioral reactions—reciprocate hostilities, retreat from

Figure 2
Multidimensional System for Classifying Biobehavioral Responses to Workplace Incivility



the situation, recruit social support, and repair the relationship—as components of a multidimensional system. As Figure 2 illustrates, these behaviors have implications for biology.

Dimensions of Approach and Affiliation

We propose that biobehavioral responses to incivility vary along two broad dimensions: approach and affiliation. Appearing in the top half of Figure 2, actions that challenge the offender (reciprocation, escalation) or make amends with that person (relationship repair) share a common feature in that they directly approach the uncivil situation or its instigator. High-approach behaviors are oriented toward the threat, involving direct efforts to address (either constructively or destructively) the conduct of the transgressor. Following classic conceptualizations of coping (e.g., Holahan & Moos, 1985; Roth & Cohen, 1986), we label this dimension of target response *behavioral approach*. At the other end of this dimension is *behavioral avoidance*, including actions that remove the target from the uncivil situation or seek out support

from others (bottom half of Figure 2). Although support seeking is often active and deliberate, it falls into the avoidance side of the model because it is behaviorally oriented away from the threat, for the moment at least (Holahan & Moos, 1985; Roth & Cohen, 1986). Discussing the situation with people outside of it does not deal with the offender or the offensive conduct directly (though it might lead to that approach-oriented behavior later). One dimension of our framework, therefore, is a behavioral *approach–avoidance* continuum.

A second dimension entails actions that vary in affiliative goals. As noted earlier, affiliation involves efforts to pursue positive social connection; in this case, the focus is either the instigator or members of a support system. When people reach out to informal or formal resources for support, their objectives are typically affiliative. The same is true of reconciliation, because it aims at repairing the relationship with the instigator and reestablishing rapport. Reciprocation and retreat, on the other hand, run counter to affiliation; social connection is not an immediate goal. In fact, the fight response (e.g., escalation, retribution) is often *antisocial*, further damaging one's relationship with the uncivil person. Flight can also work against affiliation, putting distance between the target and some members of the social network (e.g., the instigator, witnesses, others in the vicinity). It is of course conceivable that one could flee an uncivil situation and then seek out friends for support; these actions are not mutually exclusive. The act of flight in and of itself, however, is not affiliative. Retreat from incivility can sometimes have an ultimate goal of protecting the target's relationship with the instigator. For example, a target can walk away to end the altercation and shield the relationship from damage. In these cases, retreat does not aim directly for social connection, even if it has longer-term social goals. In summary, this dimension reflects a range of behaviors that vary in *affiliation*.

Our multidimensional model suggests four quadrants of action: (a) *reciprocate* (e.g., return or escalate the insult), (b) *retreat* (flee the scene), (c) *repair* (the relationship with the instigator), and (d) *recruit support* (aimed at others). These behaviors have strikingly different implications for biology, as noted earlier. In Figure 2, the left-side behaviors (reciprocation, escalation, and retreat) are more likely to prolong or even amplify the upregulated stress response. They keep the gas pedal pressed down on certain physiological systems, maintaining or increasing SNS and HPA activation. In contrast, the affiliative strategies on the right (repairing relationships and recruiting support) have the opposite effect, potentially downregulating stress response systems. Positive affiliation releases the physiological gas pedal (decreasing SNS and HPA activation) to enable the body to recover and return to homeostasis.

With this model we in no way mean to imply an “either/or” framework; our claim is not that the prototypical response to incivility is simple, involving only one of the four quadrants depicted in Figure 2. We expect complexity in incivility response patterns, including a range of actions that can shift and evolve if the incivility continues over time. In fact, movement across the quadrants of Figure 2 could be more the rule than the exception, especially when incivility persists and becomes an enduring feature of organizational life. The multifaceted nature of such a response pattern aligns with studies of coping with chronically stressful situations (e.g., Gottlieb, 1997; Lazarus & Folkman, 1984), including incivility (Cortina & Magley, 2009). Integrating these biological and behavioral perspectives, we propose the following:

Proposition 5: Target responses to incivility vary along dimensions of approach and affiliation. Low-affiliation behaviors (e.g., reciprocation, escalation, retreat) are more likely to prolong or amplify an upregulated physiological stress response (Proposition 5a). High-affiliation behaviors (relationship repair, recruitment of support) are more likely to promote physiological downregulation and recovery (Proposition 5b).

Reactions of Others in the Social System

The framework depicted in Figure 2 presents different behavioral choices—with biological consequences—from the perspective of the incivility target. Importantly, some of these target actions keep or draw others into the uncivil moment. The high-approach behaviors involve instigators, either directing negative actions at those persons (reciprocation, escalation) or mending connections with them (relationship repair). If the goal of behavior in the upper-left quadrant is to continue the conflict, the target's body may stay upregulated, ready for combat. The instigator could reply in many ways, including ongoing offense (extending or exacerbating upregulation). Or the instigator could respond with remorse, apology, and attempts to make amends. This could move the target out of reciprocation mode and into relationship repair—from the upper-left to the upper-right quadrant of Figure 2—promoting physiological downregulation.

Likewise, recruitment of support, by definition, involves others: colleagues, friends, family members, managers, ombudspersons, union representatives, and so on. Mistreated employees can reach out to any number of individuals to mobilize assistance, advice, comfort, information, or intervention (Cortina, 2004; Olson-Buchanan & Boswell, 2008). Support pursuit, however, does not always yield support provision. As Olson-Buchanan and Boswell (2008) explain, employee efforts to recruit support may be met with a range of reactions. Some are positive and may help downregulate the target's physiological stress: vocal support, sympathy, or advocacy. Other times, though, people respond negatively when victims seek support—for example, by blaming, rejecting, or retaliating against the target for speaking out (Cortina & Magley, 2003; Olson-Buchanan & Boswell, 2008). Such negative social reactions are more likely when others feel threatened by the target's behavior (e.g., when a target's complaint could cause trouble for the company) or when the situation involves interpersonal difficulty (Cortina, 2004). We expect that if others respond to targets' support seeking with indifference, blame, or hostility, there will be no positive social connection or downregulation of physiological stress. When attempts at affiliation produce negative social responses, this can exacerbate physiological upregulation (S. E. Taylor, 2006). In these cases, there is a mismatch between the intended and actual outcomes of support seeking, amplifying the target's stress rather than alleviating it.

The behavior in the lower-left quadrant of Figure 2—retreat—stands out for its solitary nature: The act of walking away often includes nobody but the target. For the reasons outlined earlier, there may be physiological costs that accompany this action. The target's goal in retreating from the situation may be social isolation, an outcome known to exacerbate stress among humans and other social animals (Sapolsky, Alberts, & Altmann, 1997). However, we again note a possible mismatch between the intended and actual outcomes of the target's behavior. An employee who feels slighted by a supervisor may leave work for the day with the intention of going home and spending the evening in solitude. Friends may intervene, however, taking the target out to dinner and providing reassurance about the supervisor's conduct. Again, this could move the target from one quadrant of behavior (retreat) into another one (support), promoting physiological downregulation. This theorizing leads us to posit the following:

Proposition 6: Following a target's behavioral response to incivility, up- and downregulation of physiological stress depend in part on the reactions of others in the social system. Supportive social reactions may alleviate the target's stress (Proposition 6a), whereas unsupportive social reactions may exacerbate it (Proposition 6b).

Predicting Incivility Response: Appraisals of Threat

A logical next question in this line of inquiry is what modulates biobehavioral reactions to workplace incivility. As Figure 1 illustrates, we propose that these reactions hinge on a target's *appraisal* of the uncivil act, following classic stress-and-coping theory (e.g., Lazarus, 1999; Lazarus & Folkman, 1984). This theory holds that when we encounter a potential stressor, this triggers a cognitive-emotional appraisal process. That is, we appraise the situation to determine the degree of harm, threat, or challenge it poses to the self, assessing it both cognitively and emotionally. If we determine that we have sustained injury, or are likely to sustain future injury, then we move into a state of stress.

Applied to settings of work, Cortina and Magley (2009) investigated how employees appraise incivility across three organizations; they found that negative appraisals (evaluating the conduct as offensive, annoying, frustrating, etc.) are most likely when the incivility has been varied and frequent over time and its instigator is powerful. Marchiondo, Cortina, and Kabat-Farr (2018) add that workers appraise incivility more negatively when they perceive instigators to have acted deliberately and maliciously. But because incivility is both subtle and ambiguous, appraisals can be wide-ranging, sometimes even positive (e.g., viewing incivility as a learning opportunity; Marchiondo et al., 2018). Other times, targets form no particular appraisal, negative or positive, not having noticed the low-level insult. Absent negative appraisal, workplace incivility should not catalyze the cascade of biobehavioral stress effects depicted in Figure 1. From here on out, we focus on incivility that targets have detected and appraised negatively.

We propose that incivility appraisals can be classified into (at least) two subtypes: threat to one's relationships or to one's rank. Relationships and rank are deeply important in organizations and to social animals more broadly. Humans have a powerful need for social relationships and belonging in groups (Baumeister & Leary, 1995) and are highly attentive to cues about their rank within the hierarchies of those groups (Tyler & Lind, 1992). When one's relationships or rank seems threatened, this can catalyze protective responses (Berdahl, 2007). Specific responses may depend on which threat is most salient in the moment. We discuss each threat in turn.

Threat to relationships. The need for social connection is especially high for those with a relationist orientation, meaning they attach great importance to interpersonal relationships and have a strong desire to maintain those relationships (Cooper & Thatcher, 2010: 520). Relationships are vital for the survival of many species, for example, by reducing the need for predator vigilance, enabling coordination of foraging or hunting, allowing for collaborative infant care, and facilitating mate encounters (Mitani, Call, Kappeler, Palombit, & Silk, 2012). Indeed, social affiliation predicts a higher rate of survival in long-term studies of group-living primates (Archie, Tung, Clark, Altmann, & Alberts, 2014; Ellis, Snyder-Mackler, Ruiz-Lambides, Platt, & Brent, 2019). As group members can be competitors for resources as well as cooperators, the behavioral milieu is as complicated in the wild as it is in the workplace. Those who experience aggression or conflict from other group members can, over time, show more submissive behaviors, lower cortisol concentrations (indicating altered HPA reactivity), and even higher susceptibility to infection (Cohen, Line, Manuck, Rabin, Heise, & Kaplan, 1997; Shively & Kaplan, 1984; Tamashiro, Nguyen, & Sakai, 2005). Thus social animals (including humans) are motivated to develop and maintain positive social connections, for reasons both behavioral and biological.

Workplace incivility, by its nature, can threaten social connections. People care about maintaining and enhancing social bonds within groups and are attentive to signals about their own belongingness within those groups. Rude or insensitive treatment by other group members can send messages that one has low social value within that context, which can be troubling (Lind & Tyler, 1988; Tyler & Lind, 1992). Indeed, in a study conducted by Hershcovis et al. (2017), incivility from coworkers predicted lower feelings of belongingness and increased feelings of embarrassment among targets. Similarly, Schilpzand and Huang (2018) found that uncivil treatment can make employees feel socially rejected or excluded, especially if they derive high levels of meaning and identification from their workplace relationships. Caza and Cortina (2007) also reported links between experienced incivility and felt social rejection, with uncivil treatment explaining over 40% of the variance in rejection perceptions. This scholarship suggests that incivility can trigger a sense of threat to social relationships.

What might this mean for worker response to incivility? When people encounter threats to their social relationships, this can trigger affiliative efforts to remedy the social situation and downregulate stress physiology. If they are able to (re)establish warm, positive social connections, stress lessens and the body recovers and returns to homeostasis. In this way, affiliative reactions to relationship threats are part of a larger defense system, one that attends to both social relationships in the world and physiological processes in the body (S. E. Taylor, 2006, 2007).

Attempts to reconnect socially are particularly likely when the signals of exclusion are weak or ambiguous (Derfler-Rozin, Pillutla, & Thau, 2010), as is the case with workplace incivility. An act of incivility is, by definition, subtle and ambiguous. It can create a feeling of social rejection in targets but leaves open the possibility that a target's prosocial response could repair the social damage and reestablish a sense of social inclusion. In contrast, a target's antisocial response (e.g., reciprocation or escalation) can be self-defeating, potentially yielding further social rejection (Blackhart, Baumeister, & Twenge, 2006). Thus, when targets appraise incivility primarily as a relationship threat, they may be more likely to seek out social belonging by engaging in conduct falling into the right half of Figure 2. They might attempt relationship repair, striving to ease social tensions and rebuild rapport with the instigator. They might reach out to others for support, solace, advice, information, or intervention. Following Schilpzand and Huang (2018) and Cooper and Thatcher (2010), these responses are especially likely when targets attach great importance or high meaning to the threatened relationships. If successful, attempts at affiliation should benefit the body, helping it recover from the stress and return to homeostasis. In sum, we propose the following:

Proposition 7: When targets appraise incivility primarily as a threat to social relationships, affiliative responses and downregulation of physiological stress are more likely. This will be especially true when targets attach great importance or high meaning to the threatened relationships.

Threats to rank. As noted previously, incivility can communicate to targeted employees that they are not valued. This signal of low value can be appraised primarily as a threat to one's relationships (as noted earlier) or primarily as a threat to one's standing in a status hierarchy—that is, a threat to one's rank (Porath et al., 2008). The distinction between threat to relationships versus threat to rank is subtle and lies in the target's estimation of the

potential outcome. With a relationship threat, the target is concerned about a possible loss in social belongingness or social connection in a group. With a rank threat, the target is concerned about a loss in social position, prestige, or influence within a group.

The broader primate literature has shown that one's rank within a status hierarchy relates to both behavior and biology, in ways that differ depending on the type of hierarchy and the individual's original position within it (Abbott et al., 2003; Czoty, Gould, & Nader, 2009). In one study, the gene expression of peripheral blood mononuclear cells (a broad category of immune cells) predicted rank in a group of macaques with 80% accuracy (Tung et al., 2012). In studies that experimentally manipulated the dominance rank of female macaques, the expression of natural killer cells (NK) and helper T-cells (cell types crucial to immune function) changed with rank, where lower-ranked animals tended toward a more proinflammatory phenotype (Snyder-Mackler et al., 2016). Much of the variation in NK and helper T-cell expression among these monkeys related not only to rank but also to the degree of harassment and amount of grooming (in opposing directions) received. This aligns with meta-analytic findings about how treatment by others affects stress physiology and downstream health (Abbott et al., 2003). The changes in immune function documented in these studies and others are quite mutable, suggesting an ability to change rapidly with changing social conditions.

An appraisal of uncivil conduct primarily as a threat to rank may make fight-or-flight behavioral reactions more likely. When people perceive that their rank or status is threatened, they are more likely to undermine others (e.g., Campbell, Liao, Chuang, Zhou, & Dong, 2017). For instance, when employees compare themselves with others and feel envious of differences in relative superiority, they are more likely to engage in behaviors that undermine the success of referent others (Duffy, Scott, Shaw, Tepper, & Aquino, 2012). People care about maintaining their rank (Pettit, Yong, & Spataro, 2010; Scheepers, Ellemers, & Sintemaartensdijk, 2009) and can take destructive action to establish that rank (Pettit, Doyle, Lount, & To, 2016; Reh, Tröster, & Van Quaquebeke, 2018). So when workers appraise incivility primarily as a threat to their own rank within a status hierarchy, they may be more likely to take destructive action (reciprocating or escalating hostilities) to maintain or reclaim that rank.

Alternatively, if targets appraise incivility as a threat to their rank but worry that reciprocation or escalation could amplify the threat, they may instead retreat from the situation. In other words, there may be a higher chance that they break away from the situation to protect against further losses in rank. People not only care about maintaining their status; they are also motivated to avoid status loss (Bothner, Kang, & Stuart, 2007; Scheepers et al., 2009). Some research suggests people are more motivated to avoid status loss than to achieve a status gain (Pettit et al., 2016). Therefore, if they think that "fighting back" might further diminish their position in a hierarchy, they may choose to walk away. The choice of action—fight versus flight—is likely to depend on how winnable the fight feels to the target; when reciprocation/escalation feels futile or dangerous, then retreat may be more likely. In short, a perceived threat to one's standing in a status hierarchy (i.e., threat to rank) might focus the behavioral response on the left half of Figure 2, prolonging or amplifying physiological upregulation:

Proposition 8: When targets appraise incivility primarily as a threat to their own rank within a status hierarchy, fight-or-flight responses and upregulation of physiological stress are more likely.

Understanding Bibehavioral Response in Context

Our article addresses biological and behavioral responses to workplace incivility and their impact on long-term somatic health. These dynamics can depend on the social resources, opportunities, and constraints of the context. To demonstrate, we situate incivility responses in the context of two organizational characteristics especially salient to social pain (and social pleasure): (a) organizational culture and climate and (b) social network dynamics.

Organizational Culture and Climate

Cultural features of organizations—and the climates perceived within them—can either thwart or support an affiliative response to workplace incivility. In contemporary scholarship, the term *organizational culture* encompasses the larger values, beliefs, and assumptions of a context. A related but distinct concept is *organizational climate*, referring to perceptions derived from experiences with organizational policies, practices, and procedures combined with observations of what is rewarded, supported, and expected in the organization. These are mutually reinforcing constructs, with climate “providing the behavioral evidence for the culture of a setting” (B. Schneider, Ehrhart, & Macey, 2013: 377).

Features of culture and climate shape social life in organizations. For example, some organizations have cultures of toxic competition that thwart affiliation. Their cultural norms, rituals, and belief systems prize ruthless competition, rejection of vulnerability, and disregard for personal relationships (Berdahl, Cooper, Glick, Livingston, & Williams, 2018; Glick, Berdahl, & Alonso, 2018; Matos, O’Neill, & Lei, 2018). From these cultures arise social norms that define what it takes to succeed in the organization. These norms dictate that employees engage in socially destructive “dog-eat-dog” competition, put the organization first (never allowing social concerns, such as friends or family, to interfere), display no weakness (never disclose doubt, mistake, or vulnerable emotion), and show off their strength and stamina, for instance, by working extreme hours. Scholars refer to these environments as “masculinity contest cultures,” as they embody masculine ideals taken to the dysfunctional extreme. But these toxic cultural environments pressure all workers, regardless of gender, to embrace these ideals (Berdahl, Glick, & Cooper, 2018).

With hostility and one-upmanship mistaken as markers of excellence, masculinity contest cultures can breed incivility. The more that organizations espouse these cultural norms, the more their members report being bullied and harassed (Glick et al., 2018), and the more they describe their leaders as abusive (Matos et al., 2018). In terms of how workers respond to mistreatment, these hypercompetitive cultures may encourage actions that are gendered masculine—angry confrontation, escalation, aggression—even if these behaviors exacerbate stress. At the same time, employees may not feel able to respond to incivility with behaviors that are gendered feminine and therefore viewed as weak. This may work against affiliation (e.g., suppressing attempts to seek emotional support or make amends with the offender) and prompt avoidance, including counterproductive work behaviors that remove the target from the setting (e.g., absenteeism, tardiness, turnover). This speaks to the dysfunctional nature of masculinity contest cultures, cutting off employees from affiliative resources that could defuse difficult situations.

Some organizational cultures/climates can thwart affiliation, but others support affiliation and expand access to meaningful social support. To illustrate, take the concept of “climate for

inclusion.” Increasing diversity, particularly along the lines of gender, race, and ethnicity, has been a goal of many organizations for some time (Mor Barak et al., 2016; Nishii, 2013). But increased demographic diversity, without simultaneous efforts to increase inclusion, can be problematic. Individuals from underrepresented groups may find themselves in an environment of individualism, exclusion, or even ostracism—impeding affiliation.

It has become increasingly clear that organizations must move beyond demographic diversity to foster inclusion, or meaningful integration of all workers into all levels, functions, and decision-making processes (Smith, Morgan, King, Hebl, & Peddie, 2012). Clarifying the distinction between “diversity” and “inclusion,” Roberson (2006: 217) notes that “diversity focuses on organizational demography, whereas inclusion focuses on the removal of obstacles to the full participation and contribution of employees in organizations.” With an inclusion climate, boundaries between groups lessen as people have an easier time relating to each other. This makes it more possible for workers (of all identities) to affiliate and downregulate stress following stressful events, including incivility. In short, we posit the following:

Proposition 9: Organizational cultures and climates that promote toxic competition can thwart employee abilities to affiliate and find meaningful social connection. When treated with incivility, workers in these contexts may be less likely to respond with relationship repair or recruitment of support and more likely to respond with reciprocation, escalation, or retreat. The result may be more frequent and sustained activation of their physiological stress response, to the detriment of long-term health (Proposition 9a). Organizational cultures and climates that promote inclusion may have the opposite effects (Proposition 9b).

Social Networks

Organizations have not only cultures and climates but also complex webs of interrelationships among employees, known as *social networks*. Social networks are based on systems of social ties, interdependencies, and interactions (Granovetter, 1985). Networks have many features, including relationship strength (how strong or weak a tie is between people; Granovetter, 1973), centrality (the number of direct and indirect ties an individual has in a network; Brass, Butterfield, & Skaggs, 1998), status (the relative power of one person over another; Brass et al., 1998), and structural holes (the absence of a connection between individuals; Burt, 2009). These features are not distributed equally in organizations.

Ibarra (1992, 1995) demonstrated that certain groups (women and men of color, white women) often have social network experiences that put them at a disadvantage. Men are more likely than women to network with other men, who are more likely to be in positions of power. As a result, women are often less connected to the powerful, with less access to social support. Ibarra (1995) similarly demonstrated that white workers typically have more racially homogenous (i.e., overwhelmingly white) networks, compared with workers of color, whose networks, on average, have more racial heterogeneity. With white people being more powerful and numerous than people of color in many organizations, this can disadvantage workers of color. These social network dynamics may modulate worker responses to workplace incivility.

First, following Olson-Buchanan and Boswell (2008), the social context can affect how targets make sense of uncivil conduct. In a study of women-of-color scientists, the incivilities

participants disclosed were frequent and varied. When targets had access to social networks of other women of color, they tended to attribute the incivility to external factors, such as structural problems or racism. Those with solo status, in contrast, were more likely to attribute the uncivil treatment internally—to feelings of unworthiness that had been reinforced by interactions with white colleagues (Rodrigues, Mendenhall, & Clancy, 2021). Sensemaking around incivility, in other words, varied depending on the target's social embeddedness in the organization.

Social network dynamics can also stand in the way of affiliation. For instance, in many organizations, women of color are the “only” of their kind. They may have difficulty finding familiar people who care about their welfare and satisfy their need for belongingness, especially because people tend toward homophilous connections (connections to similar others) in social networks (Ibarra, 1995; McPherson, Smith-Lovin, & Cook, 2001). Structural isolation or underrepresentation may limit options for meaningful affiliation among women of color (and members of other marginalized groups), reducing their access to avenues of downregulation following uncivil treatment. An exacerbating factor is the fact that members of underrepresented groups (e.g., LGBTQ individuals, women and men of color, white women) face more frequent insult than those in dominant or privileged groups (Cortina, Kabat-Farr, Leskinen, Huerta, & Magley, 2013; Di Marco, Hoel, Arenas, & Munduate, 2018; Settles & O'Connor, 2014). This means that employees holding marginalized identities may have more need for social support, but less access to it, putting them at greater stress risk. Based on this, we propose the following:

Proposition 10: Social network dynamics may influence options for affiliation (and associated downregulation) as a response to workplace incivility. In particular, marginalized workers may have less access to a supportive network on the job. Combined with more frequent incivility, the result may be more frequent and sustained activation of their physiological stress response, to the detriment of long-term health.

Undermining Workforce Health

We argue that incivility, and its associated responses, can have downstream health effects for targeted workers. Some stress can be a good thing. Low-frequency stress response activation helps the body get better at mobilizing energy to respond to threats and enhances the ability to downregulate once threats have passed. It also increases sensitivity to the possibility of a stressor at key moments and helps people recognize danger in the future (Korte, Koolhaas, Wingfield, & McEwen, 2005). Therefore, occasional activation of the physiological stress response can be highly adaptive. The same is not true, however, of frequent or chronic activation.

Recurrent stress activation—that is, constantly upregulating the HPA and SNS systems and giving them little time or space to downregulate—leads to adaptive shifts in one's physiology as well as the potential for long-term harms to health. Downstream somatic consequences can include cardiovascular disease, insulin-resistant (type 2) diabetes, compromised immunity, gastrointestinal problems, and major depression. There are significant costs to cognition, where chronic stress can make it hard to encode memories and retrieve information. And there are increases in other biological phenomena, like the amount of time it takes to fall asleep and the deposition of central fat, which elevate risk for further complications

down the line (Kudielka & Wüst, 2010; Lupien, McEwen, Gunnar, & Heim, 2009; Sapolsky, 2009). Moreover, not only stressors but also anticipation of stressors (including workplace mistreatment) can affect physiology (McCluney, Robotham, & Hicken, 2017). When people work in environments rife with incivility, requiring ongoing vigilance, their stress response systems may become perpetually upregulated away from homeostasis. The result over time may be damage to their somatic health, as displayed in Figure 1.

Earlier we theorized that employees' biological responses to incivility recruit energy to enable behavioral response, and that response can vary on the dimensions of approach and affiliation. These behaviors, we maintain, feed back into biology, further up- and downregulating physiological stress systems. When repeated over time, these biobehavioral processes may take a toll on somatic health in a variety of ways. To move forward, the field needs integrative frameworks within which to understand these health implications of insult. Two holistic health concepts present promising starting points: allostatic overload and systemic inflammation.

A valuable framework within which to conceptualize long-term health consequences of incivility is *allostatic overload*. This refers to the wear and tear or "weathering" of brain and body that occurs when systems are chronically activated in response to frequent, ongoing stressors (e.g., Bellingrath, Weigl, & Kudielka, 2009; Juster, McEwen, & Lupien, 2010; Mauss, Li, Schmidt, Angerer, & Jarczok, 2015). The concept of allostatic overload captures the physiological costs that accompany chronic exposure to a stressful environment. As McEwen (2005: 317) explains, "Allostatic overload serves no useful purpose and predisposes the individual to disease." Researchers generally assess allostatic overload via a composite of indicators of cumulative strain across several biological systems. These can include markers of cardiovascular health (e.g., blood pressure, cholesterol), HPA axis effects (e.g., cortisol or other glucocorticoids), SNS activation (e.g., norepinephrine and epinephrine), or metabolic effects (e.g., glucose, waist-to-hip ratio). Allostatic overload provides a framework within which to understand health effects of frequent exposure to mundane indignities (Allen et al., 2019; Goosby, Cheadle, & Mitchell, 2018; Hill, Hoggard, Richmond, Gray, Williams, & Thayer, 2017).

A second useful framework for conceptualizing long-term health effects of incivility is *systemic inflammation*. The activation of inflammatory processes can occur as a response to a range of stressors, from physical injuries to pathogens. Inflammation is a way the body tries to remove harmful stimuli and begin the healing process. Acute stimulation of inflammatory processes is beneficial to the immune system, but chronic stimulation strains somatic resources and yields negative health outcomes (Brody, Yu, Miller, & Chen, 2015; Clancy, 2012; Hope, Hoggard, & Thomas, 2015). This is why we tend to see elevated systemic inflammation as a precursor to many metabolic conditions, including cardiovascular disease (Aiello et al., 2009; Pradhan, Manson, Rifai, Buring, & Ridker, 2001; S. E. Taylor, Lehman, Kiefe, & Seeman, 2006).

Systemic inflammation is a concept well suited to capturing the long-term health impact of working in hostile environments. Markers of systemic inflammation, such as C-reactive protein (CRP), elevate in response to stressor exposure and can remain elevated with repeated exposure. CRP and other inflammatory biomarkers would make it possible to gauge the impact of uncivil treatment, capturing a range of downstream somatic health consequences (e.g., Clancy, Klein, Ziomkiewicz, Nenko, Jasienska, & Bribiescas, 2013). CRP profiles

could also shed light on the extent to which affiliative strategies are effective in downregulating physiological stress.

Implications for Science and Practice

Our article proposes ways in which biology and behavior work in tandem to shape worker responses to incivility—responses that vary in affiliation and approach. We theorize that these responses hinge on appraisals of threat and features of the social/organizational context. In this process, biology influences behavior and vice versa. These dynamics explain how uncivil treatment can get “under the skin” of targeted employees, potentially harming their somatic health over the long run. In shedding light on these processes, we unpack the black box between everyday workplace incivility and eventual health injury. Rather than trying to solve the incivility response puzzle, our goal is to call attention to its complexity and, in doing so, carve out new directions for science and practice in organizations.

New Directions for the Scientific Study of Workplace Incivility

This article shines a constructive spotlight on the “departure points” identified by Andersson and Pearson (1999), advancing novel propositions about how workers respond to uncivil treatment. We aim to spark new scholarship on the myriad ways people react, in both body and behavior, to everyday insult. Though our propositions center around incivility, our theory may extend to biobehavioral responses to many manifestations of mistreatment, be it bullying, abusive supervision, or identity-based harassment (e.g., based on race or gender).

This article moves beyond purely behavioral understandings of incivility response to ask new questions about biology. We offer propositions about ways in which incivility, and behavioral responses to it, leave traces on the body. If a targeted employee appraises an act of incivility negatively, this can spark a physiological stress response that recruits the energy needed to take action. Importantly, that action shapes what happens next within biological systems. A fight-or-flight response may prolong physiological reactivity, but an affiliative response may (depending on reactions of others) promote physiological recovery. In these ways, incivility experiences and responses reverberate within the bodies of workers well beyond the initial slight. With these new insights, we help explain why such seemingly small indignities sometimes have not-so-small effects.

We also shed light on why—at other times—these small insults stay small. We bring appraisal to the fore, arguing that biobehavioral responses vary depending on whether targets (a) notice the incivility and (b) appraise it as a threat to valued social relationships or a threat to rank in a status hierarchy. Absent a sense of threat, the physiological stress response does not activate. When biological stress systems do mobilize, we show how affiliative reactions may facilitate stress downregulation and recovery. We also theorize how the social and cultural context are critical to these benefits. This can help organizations understand conditions under which workers can emerge from uncivil encounters relatively unscathed, psychologically and physiologically.

Given the potential benefits of affiliation, this response to incivility merits further investigation. What factors influence whether an employee pursues affiliation? Which insulted workers attempt relationship repair, under what conditions, and with what effects? How can

organizations strengthen social and emotional support structures for employees, especially those from underrepresented groups? Do formal support resources (e.g., managers, unions, human resource departments) ameliorate or exacerbate stress, and why?

In addition, our article highlights holistic health concepts that could frame future incivility research. We resist the urge to oversimplify by suggesting a narrow set of physiological response patterns. Human biology is more complicated than that, and chronic stress is best understood via integrative models (such as allostatic overload and systemic inflammation) that capture effects across multiple physiological systems, over time periods that extend beyond a single uncivil moment.

There are a number of other fruitful avenues for future inquiry that follow from our propositions. First, though we focus on target responses to workplace insult, many of the same arguments would apply to bystanders. Different bystander interventions may up- or down-regulate their own physiology. Confrontation, for instance, may exacerbate the conflict, and retreat may cause bystanders to ruminate on what they could have done differently. Both strategies could contribute to biological stress in the bodies of bystanders. Second, researchers could extend Porath et al. (2008) scholarship on gender differences in worker response to incivility. For example, gender norms may inhibit men from seeking social support while pressuring women to walk away and avoid conflict. These gender dynamics may be especially likely to play out in certain contexts (e.g., masculinity contest cultures). Third, scientists should identify additional factors that moderate biobehavioral response to workplace incivility. We delineate several such factors (e.g., appraisal, climate, culture), but many more are likely. This includes attribution, which is central to sensemaking as noted earlier (Rodrigues et al., 2020). These possibilities present promising directions for future research.

New Directions for Incivility Intervention

Insights into how workers respond to insult also have practical implications for organizations. By showing how incivility can translate into health injury, but affiliation can protect against that injury, our theory may encourage more organizations to work on preventing incivility and promoting inclusion. To foster inclusion, experts recommend that organizations take steps to help workers from all backgrounds feel appreciated and meaningfully integrated into all aspects of organizational life (e.g., Mor Barak et al., 2016; Nishii, 2013; Roberson, 2006; Smith et al., 2012). Mor Barak et al. (2016) emphasize the need for practices that increase inclusion across all ranks and roles, such as reductions in structural inequalities and exclusionary decision making. Of course, the cultivation of a genuinely inclusive climate is no simple feat, necessitating “ongoing commitment (both top-down and bottom-up) to recognizing, respecting, and valuing differences” (Cheng, Corrington, King, & Ng, 2020: 253).

In addition to promoting inclusion, organizations can curb toxic competition cultures that breed abuse and block affiliation (Glick et al., 2018; Matos et al., 2018). To roll back these cultures, Berdahl, Glick, et al. (2018b) recommend that leaders publicly reject belief systems that valorize “win-or-die” dominance contests. They add that, to be effective, interventions must connect with core organizational values and goals. Leaders must emphasize ways in which trainings are mission relevant, not solely for the benefit of the mistreated or the marginalized. It is also critical that organizations modify reward and penalty systems to discourage destructive displays of dominance and toxic masculinity (Berdahl, Glick, et al., 2018).

Even the most forward-thinking organization, however, can never eliminate every instance of incivility. For those indignities that will no doubt remain, we show how positive social connections (i.e., successful affiliation) may help targeted workers heal, downregulate, and move on. However, affiliative avenues are not equally available to all employees. Workers with underrepresented identities may find themselves outside of dominant social networks, limiting their options for affiliation and leaving them at greater stress risk. Organizations should pay particular attention to these isolated individuals and bolster their support and integration. For example, affinity groups can create connections among workers with shared identities. Team-building programs can cultivate meaningful relationships across identity groups. And mentors can help protégées broaden and strengthen ties within professional networks. This attention to the relational and inclusive side of work could make affiliation more available to all employees, potentially making workplace mistreatment (such as incivility) less stressful.

Closing Thoughts

The past two decades have witnessed great strides in our understanding of workplace incivility. Once dismissed as trivial, incivility is now squarely “on the map” as a real stressor that brings real harm to people and their places of work. We can now take a deeper dive into the uncivil moment, looking more closely at how it unfolds for the targeted worker, biologically and behaviorally. Our incivility-response theory is, like organizational life, anything but simple. But it may help explain how seemingly small insults can sometimes have large effects, ultimately undermining workforce well-being.

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Notes

1. We acknowledge that the term *incivility* is not without its history of harm. The concept of incivility is inherently a colonial one, and norms for what constitutes “civil” behavior are often dictated by those in power. This is how we end up with the “civilizing” of Indigenous peoples that included erasing Indigenous culture, displacing and murdering Indigenous populations, and kidnapping Indigenous children for Indian residential schools. Dominant civility norms are also how we have modern free-speech protections for those who practice hate speech and invocations of “civility” toward those who protest that hate speech. For the sake of clarity and consistency with the research record, we use the term *incivility* throughout this article but recognize its shortcomings.

2. Note that life-sustaining stability looks different depending on the context (e.g., a normal and appropriate heart rate will look different at rest vs. during exercise). *Allostasis* refers to the process of achieving that stability (Sterling & Eyer, 1988).

References

- Abbott, D. H., Keverne, E. B., Bercovitch, F. B., Shively, C. A., Mendoza, S. P., Saltzman, W., Snowdon, C. T., Ziegler, T. E., Banjevic, M., & Garland, T., Jr. 2003. Are subordinates always stressed? A comparative analysis of rank differences in cortisol levels among primates. *Hormones and Behavior*, 43: 67-82.

- Aiello, A. E., Diez-Roux, A., Noone, A. M., Ranjit, N., Cushman, M., Tsai, M. Y., & Szklo, M. 2009. Socioeconomic and psychosocial gradients in cardiovascular pathogen burden and immune response: The multi-ethnic study of atherosclerosis. *Brain, Behavior, and Immunity*, 23: 663-671.
- Allen, A. M., Wang, Y., Chae, D. H., Price, M. M., Powell, W., Steed, T. C., Rose Black, A., Dhabhar, F. S., Marquez-Magaña, L., & Woods-Giscombe, C. L. 2019. Racial discrimination, the superwoman schema, and allostatic load: Exploring an integrative stress-coping model among African American women. *Annals of the New York Academy of Sciences*, 1457: 104-127.
- Andersson, L. M., & Pearson, C. M. 1999. Tit for tat? The spiraling effect of incivility in the workplace. *Academy of Management Review*, 24: 452-471.
- Andiappan, M., & Treviño, L. K. 2011. Beyond righting the wrong: Supervisor-subordinate reconciliation after an injustice. *Human Relations*, 64: 359-386.
- Archie, E. A., Tung, J., Clark, M., Altmann, J., & Alberts, S. C. 2014. Social affiliation matters: Both same-sex and opposite-sex relationships predict survival in wild female baboons. *Proceedings of the Royal Society B*, 281: 20141261.
- Aureli, F., Cords, M., & Van Schaik, C. P. 2002. Conflict resolution following aggression in gregarious animals: A predictive framework. *Animal Behaviour*, 64: 325-343.
- Baumeister, R. F., & Leary, M. R. 1995. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117: 497.
- Beattie, L., & Griffin, B. 2014. Accounting for within-person differences in how people respond to daily incivility at work. *Journal of Occupational and Organizational Psychology*, 87: 625-644.
- Bellingrath, S., Weigl, T., & Kudielka, B. M. 2009. Chronic work stress and exhaustion is associated with higher allostatic load in female school teachers. *Stress*, 12: 37-48.
- Berdahl, J. L. 2007. Harassment based on sex: Protecting social status in the context of gender hierarchy. *Academy of Management Review*, 32(2): 641-658.
- Berdahl, J. L., Cooper, M., Glick, P., Livingston, R. W., & Williams, J. C. 2018. Work as a masculinity contest. *Journal of Social Issues*, 74: 422-448.
- Blackhart, G., Baumeister, R., & Twenge, J. 2006. Rejection's impact on self-defeating, prosocial, antisocial, and self-regulatory behaviors. In K. D. Vohs & E. J. Finkel (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes*: 237-253; New York: Guilford Press.
- Bothner, M. S., Kang, J.-h., & Stuart, T. E. 2007. Competitive crowding and risk taking in a tournament: Evidence from NASCAR racing. *Administrative Science Quarterly*, 52: 208-247.
- Bracha, S., Williams, A. E., & Bracha, A. S. 2004. Does "fight or flight" need updating? *Psychosomatics*, 45: 448-449.
- Brass, D. J., Butterfield, K. D., & Skaggs, B. C. 1998. Relationships and unethical behavior: A social network perspective. *Academy of Management Review*, 23: 14-31.
- Brody, G. H., Yu, T., Miller, G. E., & Chen, E. 2015. Discrimination, racial identity, and cytokine levels among African-American adolescents. *Journal of Adolescent Health*, 56: 496-501.
- Burt, R. S. 2009. *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Cameron, A. F., & Webster, J. 2011. Relational outcomes of multicomunicating: Integrating incivility and social exchange perspectives. *Organization Science*, 22: 754-771.
- Campbell, E. M., Liao, H., Chuang, A., Zhou, J., & Dong, Y. 2017. Hot shots and cool reception? An expanded view of social consequences for high performers. *Journal of Applied Psychology*, 102: 845-866.
- Caza, B., & Cortina, L. 2007. From insult to injury: Explaining the impact of incivility. *Basic and Applied Social Psychology*, 29: 335-350.
- Cheng, S., Corrington, A., King, E., & Ng, L. 2020. Changes in worker demographics. In *The Cambridge handbook of the changing nature of work*: 237-260. Cambridge, UK: Cambridge University Press.
- Clancy, K. B. H. 2012. Inflammation, reproduction, and the Goldilocks principle. In K. B. H. Clancy, K. Hinde, & J. R. Rutherford (Eds.), *Building babies: Primate development in proximate and ultimate perspective*: 3-26. New York, NY: Springer.
- Clancy, K. B. H., Klein, L. D., Ziolkiewicz, A., Nenko, I., Jasienska, G., & Bribiescas, R. G. 2013. Relationships between biomarkers of inflammation, ovarian steroids, and age at menarche in a rural Polish sample. *American Journal of Human Biology*, 25: 389-398.
- Cohen, S., Line, S., Manuck, S. B., Rabin, B. S., Heise, E. R., & Kaplan, J. R. 1997. Chronic social stress, social status, and susceptibility to upper respiratory infections in nonhuman primates. *Psychosomatic Medicine*, 59: 213-221.

- Cooper, D., & Thatcher, S. M. 2010. Identification in organizations: The role of self-concept orientations and identification motives. *Academy of Management Review*, 35: 516-538.
- Cortina, L. M. 2004. Hispanic perspectives on sexual harassment and social support. *Personality and Social Psychology Bulletin*, 30: 570-584.
- Cortina, L. M., Kabat-Farr, D., Leskinen, E. A., Huerta, M., & Magley, V. J. 2013. Selective incivility as modern discrimination in organizations: Evidence and impact. *Journal of Management*, 39: 1579-1605.
- Cortina, L. M., Kabat-Farr, D., Magley, V. J., & Nelson, K. 2017. Researching rudeness: The past, present, and future of the science of incivility. *Journal of Occupational Health Psychology*, 22: 299.
- Cortina, L. M., & Magley, V. J. 2003. Raising voice, risking retaliation: Events following interpersonal mistreatment in the workplace. *Journal of Occupational Health Psychology*, 8: 247.
- Cortina, L. M., & Magley, V. J. 2009. Patterns and profiles of response to incivility in the workplace. *Journal of Occupational Health Psychology*, 14: 272.
- Cui, B., Gai, Z., She, X., Wang, R., & Xi, Z. 2016. Effects of chronic noise on glucose metabolism and gut microbiota-host inflammatory homeostasis in rats. *Scientific Reports*, 6: 36693.
- Czoty, P. W., Gould, R. W., & Nader, M. A. 2009. Relationship between social rank and cortisol and testosterone concentrations in male cynomolgus monkeys (*Macaca fascicularis*). *Journal of Neuroendocrinology*, 21: 68-76.
- Derfler-Rozin, R., Pillutla, M., & Thau, S. 2010. Social reconnection revisited: The effects of social exclusion risk on reciprocity, trust, and general risk-taking. *Organizational Behavior and Human Decision Processes*, 112: 140-150.
- Di Marco, D., Hoel, H., Arenas, A., & Munduate, L. 2018. Workplace incivility as modern sexual prejudice. *Journal of Interpersonal Violence*, 33: 1978-2004.
- Duffy, M. K., Scott, K. L., Shaw, J. D., Tepper, B. J., & Aquino, K. 2012. A social context model of envy and social undermining. *Academy of Management Journal*, 55: 643-666.
- Ellis, S., Snyder-Mackler, N., Ruiz-Lambides, A., Platt, M. L., & Brent, L. J. 2019. Deconstructing sociality: The types of social connections that predict longevity in a group-living primate. *Proceedings of the Royal Society B*, 286: 20191991.
- Gallus, J. A., Bunk, J. A., Matthews, R. A., Barnes-Farrell, J. L., & Magley, V. J. 2014. An eye for an eye? Exploring the relationship between workplace incivility experiences and perpetration. *Journal of Occupational Health Psychology*, 19: 143.
- Glick, P., Berdahl, J. L., & Alonso, N. M. 2018. Development and validation of the masculinity contest culture scale. *Journal of Social Issues*, 74: 449-476.
- Goosby, B. J., Cheadle, J. E., & Mitchell, C. 2018. Stress-related biosocial mechanisms of discrimination and African American health inequities. *Annual Review of Sociology*, 44: 319-340.
- Gottlieb, B. H. 1997. Conceptual and measurement issues in the study of coping with chronic stress. In B. Gottlieb (Ed.), *Coping with chronic stress*: 3-40. Boston: Springer.
- Granovetter, M. 1973. The power of weak ties. *American Journal of Sociology*, 78: 1360-1380.
- Granovetter, M. 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91: 481-510.
- Hagenaars, M. A., Oitzl, M., & Roelofs, K. 2014. Updating freeze: Aligning animal and human research. *Neuroscience & Biobehavioral Reviews*, 47: 165-176.
- Hershcovis, M. S., Cameron, A.-F., Gervais, L., & Bozeman, J. 2018. The effects of confrontation and avoidance coping in response to workplace incivility. *Journal of Occupational Health Psychology*, 23: 163.
- Hershcovis, M. S., Ogunfowora, B., Reich, T. C., & Christie, A. M. 2017. Targeted workplace incivility: The roles of belongingness, embarrassment, and power. *Journal of Organizational Behavior*, 38: 1057-1075.
- Hershcovis, M. S., Reich, T. C., Parker, S. K., & Bozeman, J. 2012. The relationship between workplace aggression and target deviant behaviour: The moderating roles of power and task interdependence. *Work & Stress*, 26: 1-20.
- Hill, L. K., Hoggard, L. S., Richmond, A. S., Gray, D. L., Williams, D. P., & Thayer, J. F. 2017. Examining the association between perceived discrimination and heart rate variability in African Americans. *Cultural Diversity and Ethnic Minority Psychology*, 23: 5.
- Hogh, A., Hansen, Å. M., Mikkelsen, E. G., & Persson, R. 2012. Exposure to negative acts at work, psychological stress reactions and physiological stress response. *Journal of Psychosomatic Research*, 73: 47-52.
- Holahan, C. J., & Moos, R. H. 1985. Life stress and health: Personality, coping, and family support in stress resistance. *Journal of Personality and Social Psychology*, 49: 739-747.

- Hope, E. C., Hoggard, L. S., & Thomas, A. 2015. Emerging into adulthood in the face of racial discrimination: Physiological, psychological, and sociopolitical consequences for African American youth. *Translational Issues in Psychological Science*, 1: 342.
- Ibarra, H. 1992. Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, 37: 422-447.
- Ibarra, H. 1995. Race, opportunity, and diversity of social circles in managerial networks. *Academy of Management Journal*, 38: 673-703.
- Juster, R. P., McEwen, B. S., & Lupien, S. J. 2010. Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience and Biobehavioral Reviews*, 35: 2-16.
- Katsu, N., Yamada, K., & Nakamichi, M. 2018. Functions of post-conflict affiliation with a bystander differ between aggressors and victims in Japanese macaques. *Ethology*, 124: 94-104.
- Kelly, M., McDonald, S., & Rushby, J. 2012. All alone with sweaty palms: Physiological arousal and ostracism. *International Journal of Psychophysiology*, 83: 309-314.
- Korte, S., Koolhaas, J., Wingfield, J., & McEwen, B. 2005. The Darwinian concept of stress: Benefits of allostasis and costs of allostatic load and the trade-offs in health and disease. *Neuroscience and Biobehavioral Reviews*, 29: 3-38.
- Kouchaki, M., & Wareham, J. 2015. Excluded and behaving unethically: Social exclusion, physiological responses, and unethical behavior. *Journal of Applied Psychology*, 100: 547.
- Kudielka, B. M., & Wüst, S. 2010. Human models in acute and chronic stress: Assessing determinants of individual hypothalamus-pituitary-adrenal axis activity and reactivity. *Stress*, 13: 1-14.
- Lazarus, R. S. 1999. *Stress and emotion: A new synthesis*. New York: Springer.
- Lazarus, R. S., & Folkman, S. 1984. *Stress, appraisal, and coping*. New York: Springer.
- Lewis, T. T., Aiello, A. E., Leurgans, S., Kelly, J., & Barnes, L. L. 2010. Self-reported experiences of everyday discrimination are associated with elevated C-reactive protein levels in older African-American adults. *Brain, Behavior, and Immunity*, 24: 438-443.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Springer Science & Business Media.
- Lupien, S. J., McEwen, B. S., Gunnar, M. R., & Heim, C. 2009. Effects of stress throughout the lifespan on the brain, behaviour and cognition. *Nature Reviews Neuroscience*, 10: 434-445.
- Marchiondo, L. A., Cortina, L. M., & Kabat-Farr, D. 2018. Attributions and appraisals of workplace incivility: Finding light on the dark side? *Applied Psychology: An International Review*, 67: 369-400.
- Matos, K., O'Neill, O., & Lei, X. 2018. Toxic leadership and the masculinity contest culture: How "win or die" cultures breed abusive leadership. *Journal of Social Issues*, 74: 500-528.
- Mauss, D., Li, J., Schmidt, B., Angerer, P., & Jarczok, M. N. 2015. Measuring allostatic load in the workforce: A systematic review. *Industrial Health*, 53: 5-20.
- McCluney, C., Robotham, K. J., & Hicken, M. T. 2017. *Physiological health effects of inclusive work environments*. Paper presented at the annual meeting of the Society for Industrial and Organizational Psychology, Orlando, FL.
- McEwen, B. S. 2005. Stressed or stressed out: What is the difference? *Journal of Psychiatry & Neuroscience: JPN*, 30: 315-318.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. 2001. Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27: 415-444.
- Mitani, J. C., Call, J., Kappeler, P. M., Palombit, R. A., & Silk, J. B. 2012. *The evolution of primate societies*. Chicago: University of Chicago Press.
- Mor Barak, M. E., Lizano, E. L., Kim, A., Duan, L., Rhee, M.-K., Hsiao, H.-Y., & Brimhall, K. C. 2016. The promise of diversity management for climate of inclusion: A state-of-the-art review and meta-analysis. *Human Service Organizations: Management, Leadership & Governance*, 40: 305-333.
- Nishii, L. H. 2013. The benefits of climate for inclusion for gender-diverse groups. *Academy of Management Journal*, 56: 1754-1774.
- Olson-Buchanan, J. B., & Boswell, W. R. 2008. An integrative model of experiencing and responding to mistreatment at work. *Academy of Management Review*, 33: 76-96.
- O'Neill, O. A., Vandenberg, R. J., DeJoy, D. M., & Wilson, M. G. 2009. Exploring relationships among anger, perceived organizational support, and workplace outcomes. *Journal of Occupational Health Psychology*, 14: 318.
- Palagi, E., Leone, A., Demuru, E., & Ferrari, P. F. 2018. High-ranking geladas protect and comfort others after conflicts. *Scientific Reports*, 8: 1-12.

- Palanski, M. E. 2012. Forgiveness and reconciliation in the workplace: A multi-level perspective and research agenda. *Journal of Business Ethics*, 109: 275-287.
- Pearson, C. M., Andersson, L. M., & Porath, C. L. 2000. Assessing and attacking workplace incivility. *Organizational Dynamics*, 29: 123-137.
- Pettit, N. C., Doyle, S. P., Lount, R. B., Jr, & To, C. 2016. Cheating to get ahead or to avoid falling behind? The effect of potential negative versus positive status change on unethical behavior. *Organizational Behavior and Human Decision Processes*, 137: 172-183.
- Pettit, N. C., Yong, K., & Spataro, S. E. 2010. Holding your place: Reactions to the prospect of status gains and losses. *Journal of Experimental Social Psychology*, 46: 396-401.
- Porath, C. 2016. *Mastering civility: A manifesto for the workplace*. New York: Grand Central Publishing.
- Porath, C. L., Overbeck, J. R., & Pearson, C. M. 2008. Picking up the gauntlet: How individuals respond to status challenges. *Journal of Applied Social Psychology*, 38: 1945-1980.
- Porath, C. L., & Pearson, C. M. 2009. *The cost of bad behavior: How incivility is damaging your business and what to do about it*. New York, NY: Portfolio, a Penguin Group.
- Porath, C., & Pearson, C. M. 2013. The price of incivility. *Harvard Business Review*, 91: 115-121.
- Pradhan, A. D., Manson, J. E., Rifai, N., Buring, J. E., & Ridker, P. M. 2001. C-reactive protein, interleukin 6, and risk of developing type 2 diabetes mellitus. *JAMA*, 286: 327-334.
- Reh, S., Tröster, C., & Van Quaquebeke, N. 2018. Keeping (future) rivals down: Temporal social comparison predicts coworker social undermining via future status threat and envy. *Journal of Applied Psychology*, 103: 399.
- Roberson, Q. M. 2006. Disentangling the meanings of diversity and inclusion in organizations. *Group & Organization Management*, 31: 212-236.
- Robertson, K., & O'Reilly, J. 2020. "Killing them with kindness"? A study of service employees' responses to uncivil customers. *Journal of Organizational Behavior*, 41: 797-813.
- Rodrigues, M. A. 2013. *Stress and sociality in a patrilocal primate: Do female spider monkeys tend-and-befriend?* Unpublished doctoral thesis, The Ohio State University, Columbus.
- Rodrigues, M. A., Mendenhall, R., & Clancy, K. B. H. 2021. "There's realizing, and then there's realizing": How social support can counter gaslighting of women of color scientists. *Journal of Women and Minorities in Science and Engineering*, 27(2): 1-23.
- Roth, S., & Cohen, L. J. 1986. Approach, avoidance, and coping with stress. *American Psychologist*, 41: 813.
- Sapolsky, R. M. 2009. *Why zebras don't get ulcers*. New York: Henry Holt.
- Sapolsky, R. M., Albers, S. C., & Altmann, J. 1997. Hypercortisolism associated with social subordination or social isolation among wild baboons. *Archives of General Psychiatry*, 54: 1137-1143.
- Saxbe, D. E., Repetti, R. L., & Nishina, A. 2008. Marital satisfaction, recovery from work, and diurnal cortisol among men and women. *Health Psychology*, 27: 15.
- Scheepers, D., Ellemers, N., & Sintemaartensdijk, N. 2009. Suffering from the possibility of status loss: Physiological responses to social identity threat in high status groups. *European Journal of Social Psychology*, 39: 1075-1092.
- Schilpzand, P., De Pater, I. E., & Erez, A. 2016. Workplace incivility: A review of the literature and agenda for future research. *Journal of Organizational Behavior*, 37: S57-S88.
- Schilpzand, P., & Huang, L. 2018. When and how experienced incivility dissuades proactive performance: An integration of sociometer and self-identity orientation perspectives. *Journal of Applied Psychology*, 103: 828-841.
- Schneider, B., Ehrhart, M. G., & Macey, W. H. 2013. Organizational climate and culture. *Annual Review of Psychology*, 64: 361-388.
- Schneider, K. T., Tomaka, J., & Palacios, R. 2001. Women's cognitive, affective, and physiological reactions to a male coworker's sexist behavior. *Journal of Applied Social Psychology*, 31: 1995-2018.
- Segerstrom, S. C., & Miller, G. E. 2004. Psychological stress and the human immune system: A meta-analytic study of 30 years of inquiry. *Psychological Bulletin*, 130: 601-630.
- Settles, I. H., & O'Connor, R. C. 2014. Incivility at academic conferences: Gender differences and the mediating role of climate. *Sex Roles*, 71: 71-82.
- Shively, C., & Kaplan, J. 1984. Effects of social factors on adrenal weight and related physiology of *Macaca fascicularis*. *Physiology & Behavior*, 33: 777-782.
- Silk, J. B. 1997. The function of peaceful post-conflict contacts among primates. *Primates*, 38: 265-279.
- Silk, J., Cheney, D., & Seyfarth, R. 2013. A practical guide to the study of social relationships. *Evolutionary Anthropology: Issues, News, and Reviews*, 22: 213-225.

- Smith, A. N., Morgan, W. B., King, E. B., Hebl, M. R., & Peddie, C. I. 2012. The ins and outs of diversity management: The effect of authenticity on outsider perceptions and insider behaviors. *Journal of Applied Social Psychology, 42*: 21-55.
- Snyder-Mackler, N., Sanz, J., Kohn, J. N., Brinkworth, J. F., Morrow, S., Shaver, A. O., Grenier, J.-C., Pique-Regi, R., Johnson, Z. P., & Wilson, M. E. 2016. Social status alters immune regulation and response to infection in macaques. *Science, 354*: 1041-1045.
- Sterling, P., & Eyer, J. 1988. Allostasis: A new paradigm to explain arousal pathology. In S. Fisher & J. Reason (Eds.), *Handbook of life stress, cognition and health*: 629-649. New York: John Wiley & Sons.
- Tamashiro, K. L., Nguyen, M. M., & Sakai, R. R. 2005. Social stress: From rodents to primates. *Frontiers in Neuroendocrinology, 26*: 27-40.
- Tamashiro, K., Sakai, R., Shively, C., Karatsoreos, I., & Reagan, L. 2011. Chronic stress, metabolism, and metabolic syndrome. *Stress, 14*: 468-474.
- Taylor, S. E. 2006. Tend and befriend: Biobehavioral bases of affiliation under stress. *Current Directions in Psychological Science, 15*: 273-277.
- Taylor, S. E. 2007. Social support. In H. Friedman & R. Silver (Eds.), *Foundations of health psychology*: 145-171. New York: Oxford University Press.
- Taylor, S. E., & Gonzaga, G. C. 2007. Affiliative responses to stress. In E. Harmon-Jones & P. Winkielman (Eds.), *Social neuroscience: Integrating biological and psychological explanations of social behavior*: 454-473. New York: Guilford Press.
- Taylor, S. E., Klein, L. C., & Lewis, B. P. 2000. Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review, 107*: 411-429.
- Taylor, S. E., Lehman, B. J., Kiefe, C. I., & Seeman, T. E. 2006. Relationship of early life stress and psychological functioning to adult C-reactive protein in the coronary artery risk development in young adults study. *Biological Psychiatry, 60*: 819-824.
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. 2004. Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology, 87*: 354.
- Taylor, S. G., & Kluemper, D. H. 2012. Linking perceptions of role stress and incivility to workplace aggression: The moderating role of personality. *Journal of Occupational Health Psychology, 17*: 316.
- Tung, J., Barreiro, L. B., Johnson, Z. P., Hansen, K. D., Michopoulos, V., Toufexis, D., Michelini, K., Wilson, M. E., & Gilad, Y. 2012. Social environment is associated with gene regulatory variation in the rhesus macaque immune system. *Proceedings of the National Academy of Sciences of the United States of America, 109*: 6490-6495.
- Tyler, T. R., & Lind, E. A. 1992. A relational model of authority in groups. In M. Zanna (Ed.), *Advances in experimental social psychology*: Vol. 25, 115-192. New York: Academic Press.
- Dawans, B., Fischbacher, U., Kirschbaum, C., Fehr, E., & Heinrichs, M. 2012. The social dimension of stress reactivity: Acute stress increases prosocial behavior in humans. *Psychological Science, 23*: 651-660.