Viewing the interpersonal mistreatment literature through a temporal lens

Michael S. Cole
Texas Christian University, USA

Abbie J. Shipp
Texas Christian University, USA

Shannon G. Taylor
University of Central Florida, USA

Abstract
Given increasing awareness of time’s critical role, we assess the current position of time in the workplace mistreatment literature. Focusing on four mistreatment constructs (viz., abusive supervision, workplace bullying, workplace incivility, and social undermining) found in the organizational psychology literature, our search revealed 266 studies that have empirically examined the consequences of these forms of interpersonal mistreatment. We examine and critique these studies, finding that with a few exceptions, most have failed to design and test theoretical relationships in a manner consistent with construct definitions. As interpersonal mistreatment research has neglected the role of time, we conclude that the substantial number of existing studies offer limited insight into the true nature of mistreatment’s consequences over time. We go on to elaborate on the types of theoretical insights that might emerge when a temporal lens (objective time and/or subjective time) is adopted by mistreatment researchers.

Keywords
Abusive supervision, bullying, incivility, interpersonal mistreatment, longitudinal, objective time, subjective time, temporal lens, time, undermining

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Corresponding author:
Michael S. Cole, Department of Management, Entrepreneurship, and Leadership, Neeley School of Business, Texas Christian University, Fort Worth, TX 76129, USA.
Email: m.s.cole@tcu.edu
Over the past two decades, research on the topic of interpersonal mistreatment at work has increased exponentially. In doing so, researchers interested in studying workplace mistreatment have proposed several concepts designed to tap different aspects of this harmful work behavior, including abusive supervision (Tepper, 2000), bullying (Einarsen, 1999), incivility (Andersson & Pearson, 1999), and social undermining (Duffy, Ganster, & Pagon, 2002). Abusive supervision, for example, refers to hostile verbal and nonverbal supervisory behaviors (Tepper, 2000) and is estimated to cost U.S. businesses (in terms of absenteeism, health care costs, and lost productivity) more than $20 billion annually (Tepper, 2007). Tracking the adverse consequences of abusive supervision, workplace incivility focuses on a perpetrator’s behavior with an ambiguous intent to harm another (Andersson & Pearson, 1999) and is believed to touch 98% of U.S. employees, with an associated annual cost in the millions (Porath & Pearson, 2013). To be sure, the frequency with which individuals are being mistreated at work, whether by supervisors or their coworkers, suggests it is a serious social problem warranting continued scholarly attention (Hershcovis & Barling, 2010; Tepper, 2007).

Given the importance of this research, we sought to appraise the current state of affairs by determining the extent to which the interpersonal mistreatment literature has generated theoretically substantive findings. Toward this end, we consider that, despite meaningful conceptual differences among the mistreatment constructs (Tepper & Henle, 2011), they all share a key feature—namely, the mistreatment constructs are inherently dynamic and thus change over time. As such, an empirical study on abusive supervision or coworker bullying that treats its focal construct as a static input would not be testing theoretical relationships in a manner prescribed by the construct’s definition. This is potentially problematic because when a study sidesteps issues of temporality (e.g., treating a dynamic phenomenon as static), the most likely consequences are weak hypotheses and ambiguous—if not erroneous—results (Ployhart & Vandenberg, 2010). Clearly, questionable inferences have the potential to denigrate the accumulated knowledge in this important area of research. By the same token, the explicit consideration of time-related issues will result in better theory building and a richer understanding of the phenomena of interest (Mitchell & James, 2001). According to George and Jones (2000), this is because constructs “exist in and through time; time is intimately bound up with the content of human experience [and thus] . . . cannot be separated from it” (p. 666).

With hundreds of published articles on interpersonal mistreatment at work, our main purpose is to take stock of this literature’s knowledge base by evaluating existing research studies through a temporal lens (Ancona, Goodman, Lawrence, & Tushman, 2001). We therefore provide a temporal review of the mistreatment literature. We begin with a brief review of the conceptual definitions and empirical findings associated with the four exemplar mistreatment constructs (viz., abusive supervision, bullying, incivility, and social undermining). Next, we offer a short primer on time to delineate the important aspects of a temporal lens that shape our review and critique of the mistreatment literature. Here, we address the question of “what is time,” observing that time can be viewed in terms of objective (clock) time or subjective (psychological) time. As we detail later in our review, this particular issue has salient implications for how mistreatment researchers conceive, design, and conduct their studies. We then summarize empirical studies that focus on interpersonal mistreatment’s downstream consequences, with special consideration toward the temporal issues raised in this review. As a result of our findings, we articulate how the addition of objective and subjective time can change the way mistreatment is studied,
offering interesting new research questions. Finally, we discuss how incorporating time into one’s study requires careful attention to research design, and in doing so, allows for tests of new and interesting research questions.

Overview of interpersonal mistreatment constructs

**Abusive supervision**

Tepper (2000) first introduced the concept of abusive supervision, which he defined as “subordinates’ perceptions of the extent to which supervisors engage in the sustained display [emphasis added] of hostile verbal and nonverbal behaviors, excluding physical contact” (p. 178). According to Tepper’s conceptualization, then, a supervisor’s abusive acts must be recurrently experienced by subordinates. This particular aspect of abusive supervision is noteworthy because it implies that supervisory mistreatment must occur over time. Reviews of the literature have found that abusive supervision has been consistently linked to undesirable levels of subordinate job satisfaction, commitment, and psychological distress (Martinko, Harvey, Brees, & Mackey, 2013; Tepper, 2007). They also find that subordinates of abusive supervisors are more likely to respond with deviant retaliatory acts, fewer citizenship behaviors, and less effort directed at job tasks (Martinko et al., 2013; Tepper, 2007).

**Workplace bullying**

It proved difficult to determine who first introduced the concept of bullying to the organizational psychology literature, although some of the earliest research began appearing in the early 1990s (e.g., Einarsen, Raknes, & Matthiesen, 1994). When placed in the work context, bullying is defined as “instances where an employee is repeatedly and over a period of time [emphasis added] exposed to negative acts” (Hershcovis, 2011, p. 501). The systematic and gradually evolving nature of bullying is a notable hallmark of this mistreatment phenomenon. For example, according to Einarsen (1999), one or two negative experiences cannot be construed as bullying but, rather, repeated exposure on a weekly basis (for several months) is indicative of experienced bullying (p. 16). A recent meta-analysis by Nielsen and Einarsen (2012) provides supportive evidence for the detrimental effects of workplace bullying. It found that employees exposed to bullying are more likely to experience adverse psychological and job-related consequences, including mental and physical health problems, increased intentions to quit, reduced job satisfaction and commitment, and more frequent absenteeism.

**Workplace incivility**

Concerns about civility can be traced as far back as the founding of the United States of America (Washington, 1888/1971). Despite its extensive history in social norms, the notion of incivility at work was first introduced by Andersson and Pearson (1999). They characterized workplace incivility as “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect” (p. 457). In contrast to the other mistreatment constructs which explicitly incorporate time into their definitions, workplace incivility’s definition does not account for its temporal nature. And yet workplace incivility does indeed consider the role of time and its implications. This stems in large part from Andersson and Pearson’s theorizing, in which they describe uncivil behavior as unfolding in a series of “tit-for-tat” exchanges that “spiral” or escalate over time. Andersson and Pearson go on to explicitly assert that workplace incivility has the potential to substantively impact targets’ attitudes towards work because the effects associated with incivility’s low-intensity behaviors are likely to accumulate over time. In such a scenario, initial instances of incivility...
have little to no discernable effect on a target, but eventually a subsequent incivility episode could create significant harm by constituting the proverbial straw that “breaks the camel’s back” (Andersson & Pearson, 1999, p. 462). A number of studies have demonstrated that the experience of incivility is associated with diminished levels of job satisfaction and commitment (e.g., Cortina, Magley, Williams, & Langhout, 2001; Taylor, Bedeian, & Klumpp, 2012), increased physiological and psychological forms of stress and withdrawal (e.g., Bunk & Magley, 2013; Salomon & Jagusztyn, 2008), and more frequent retaliatory acts (e.g., Penney & Spector, 2005; Taylor & Klumpp, 2012). A few studies have examined performance-related outcomes, with incivility experiences correlating with fewer acts of citizenship (e.g., Taylor et al., 2012), decreased task performance (Porath & Erez, 2007), and increased absenteeism (Sliter, Sliter, & Jex, 2011).

Social undermining

The social undermining construct was brought into the work domain by Duffy et al. (2002), though they acknowledge that the term “social undermining” was first introduced by Vinokur and van Ryn (1993). According to Duffy et al. (2002), social undermining is best characterized as “behavior intended to hinder, over time, [emphasis added] the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation” (p. 332). Once again, the passage of time plays a pivotal role in delineating this phenomenon’s episodic qualities. For example, undermining behaviors are assumed to “weaken its target gradually or by degrees” (Duffy, Scott, Shaw, Tepper, & Aquino, 2012, p. 643) but only to the extent one’s efforts are undermined on a recurring basis (Duffy et al., 2002). Moreover, the consequences associated with successive undermining episodes are believed to be subtle but insidious because their effects on targets can add up over time. In this connection, Duffy and her colleagues (2002; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006) have found that social undermining is associated with lower levels of job satisfaction and commitment, and greater intentions to quit. Studies have also found that targets of social undermining experience increased levels of psychological distress (e.g., Nahum-Shani, Henderson, Lim, & Vinokur, 2014), and are likely to engage in retaliation (e.g., Duffy et al., 2002) as well as poor job performance (e.g., Ng & Feldman, 2012).

Issues related to time and use of a temporal lens in mistreatment research

Illustrated by the brief previous overview, it is quite clear (to us) that temporal issues are an integral aspect of all four mistreatment concepts. Such an observation mirrors the organizational psychology literature as a whole. It is widely acknowledged, for example, that time is a critical component of most any topic discussed in organizational psychology and related management disciplines (e.g., Ancona et al., 2001; Bluedorn, 2002; George & Jones, 2000; McGrath & Kelly, 1986; Shipp & Fried, 2014; Sonnentag, 2012). This is because we—as organizational scientists—cannot fully understand why individuals behave as they do without considering the temporal context in which they are embedded (Lewin, 1943; Murray, 1938). Seeing value in the adoption of this perspective, Ancona et al. (2001) were among the first to call for the use of a “temporal lens” when studying human behavior in the work domain. According to these scholars, time “has always been at the foundation of organization theory” but it has only recently moved “from the background to the foreground” (p. 512).

We therefore draw from the work of Ancona et al. (2001), among others (e.g., Fried & Slowik, 2004; Roe, 2008; Shipp & Fried, 2014), to frame our discussion of time-relevant issues.
as they pertain to mistreatment research. In doing so, we begin by introducing the two predominant conceptualizations of time. The first refers to objective time, most commonly represented by the passage of “clock time.” Triggered from the physical universe (e.g., the daily rising and setting of the sun), objective time implies that workplace events flow in an irreversible sequence from past to present to future. Objective time is measured as linear, quantifiable units (e.g., each passing minute is the same as any other minute in time), which leads to the passage of time as an absolute across all individuals and situations (Ancona et al., 2001; Shipp & Fried, 2014). When incorporated into a study on interpersonal mistreatment, the “passage of time” is typically not the study’s primary focus but rather provides the context needed to capture the inherent dynamism in a mistreatment construct or its effects.

The second conceptualization refers to time as a subjective experience based on psychological and sociological constructions (e.g., Rousseau & Fried, 2001; Shipp & Jansen, 2011). That is, individuals are assumed to interpret workplace events based on normative experience (Fried & Slowik, 2004). Individuals’ retrospections and anticipations provide a context for their current experience, meaning that subjective time is not necessarily linear or quantifiable, but instead interpretive and malleable (Shipp & Fried, 2014). When placed into the context of the mistreatment literature, a subjective view of time assumes that a target of mistreatment will mentally “time travel” to recall his or her past experiences when making sense of the present situation. Perhaps more interestingly, the target’s present-day response is shaped not only by remembered past experiences (as contrasted to current levels), but also by his or her anticipated interactions with the alleged perpetrator.

### Current state of the existing literature

Using these temporal conceptualizations as a backdrop, we examined existing studies and determined the extent to which prior research on abusive supervision, bullying, incivility, and undermining has accounted for time when testing theoretical predictions. For instance, a study exploring the relationship between abusive supervision and subordinate job performance might use an experience sampling method to repeatedly assess both variables for an extended period of time (e.g., over a period of days or weeks). Such a study would be considered as having adopted a temporal lens because it uses the objective passage of clock time as the medium through which dynamic relationships are explored. In a similar vein, a study also could be classified as temporal to the extent that it considers a target’s current mistreatment perceptions as well as recollected past mistreatment experiences or anticipations regarding future incidents (i.e., a subjective time lens). Our search of the four mistreatment constructs yielded 545 samples (heretofore referred to as “studies”) from 465 articles. Of these, 266 studies met our inclusion criteria. Table 1 summarizes our classification results.

<table>
<thead>
<tr>
<th>Construct</th>
<th>A-temporal</th>
<th>Objective time</th>
<th>Subjective time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abusive supervision</td>
<td>124</td>
<td>120 (97%)</td>
<td>3 (2%)</td>
</tr>
<tr>
<td>Bullying</td>
<td>79</td>
<td>78 (99%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Incivility</td>
<td>50</td>
<td>42 (84%)</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>Undermining</td>
<td>13</td>
<td>13 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Total</td>
<td>266</td>
<td>253 (95%)</td>
<td>9 (3%)</td>
</tr>
</tbody>
</table>

Note. k = number of studies.
Our review indicates that the mistreatment literature has yet to adopt a temporal lens, with 253 of the 266 studies (95%) neglecting both objective and subjective elements of time. We also noted that 190 of the 253 studies tested their hypotheses using a cross-sectional research design whereas 63 studies employed a time-lagged research design, in which the mistreatment construct and outcome variable(s) were assessed at different times. Although a time-lagged design may help to alleviate common-method variance concerns, it is only capable of capturing between-unit differences (Ployhart & Vandenberg, 2010). In other words, a time-lagged design is similar to a cross-sectional design in that both place the mistreatment variables and their outcomes in static form (Ployhart & Vandenberg, 2010; Ployhart & Ward, 2011).

Another interesting finding was that in over half (54%) of these studies (136 out of 253), the authors were seemingly aware of the limitations associated with their static research design given the repeated calls for future research to use a truly longitudinal design. By “truly longitudinal,” we mean that the focal mistreatment construct and study outcomes are both measured repeatedly for three or more time periods (Chan, 1998; Ployhart & Ward, 2011). Further, 22% of the time-lagged studies (14 out of 63) incorrectly stated that they had used a “longitudinal” design. With very few exceptions, then, when researchers have examined the consequences of interpersonal mistreatment at work, they primarily have done so in a manner that can be classified as a-temporal.

Of the remaining 13 studies that did account for temporal factors, nine studies (3% of 266) examined dynamic longitudinal relationships (Beattie & Griffin, 2014a, 2014b; Meier & Spector, 2013; Taylor, Bedeian, Cole, & Zhang, 2014; Thau & Mitchell, 2010, Study 3; Tuckey & Neall, 2014; A. R. Wheeler, Halbesleben, & Whitman, 2013; Whitman, Halbesleben, & Holmes, 2014; Zhou, Yan, Che, & Meier, 2014) through an objective time lens. We also identified four studies (2% of 266) that we felt somewhat addressed subjective time. In three of these studies (i.e., Cortina & Magley, 2009, Studies 1, 2, and 3), the employee participants were asked to recall a particular mistreatment incident (i.e., retrospective mistreatment) to assist them in narrowing in on past reactions to a specific situation. Only Greenbaum, Hill, Mawritz, and Quade (2014, Study 3) examined how the recollection of past mistreatment influenced current reactions. Finally, we observed that these four studies focused only on retrospected mistreatment and neglected the potential impact of anticipatory mistreatment when asking employee participants to make sense of their current situation.

In summary, a majority of the identified studies on abusive supervision, bullying, workplace incivility, and social undermining employed a static research design. Consequently, it appears that these streams of research have largely failed to design and test conceptual schemes in a manner consistent with the mistreatment constructs’ core definitions and assumptions. This finding was somewhat surprising to us given that these well-known and widely used mistreatment constructs are innately relational and dynamic (e.g., Hershcovis & Reich, 2013). The lack of empirical evidence for the dynamics of mistreatment over time is not just surprising, it also carries with it severe implications. Within the broader organizational psychology literature, scholars have strongly criticized static research because most (if not all) organizational theories and the constructs used to test them are fundamentally dynamic (e.g., Ployhart & Vandenberg, 2010). Consequences associated with putting dynamic phenomena and their associations in static form include ambiguous tests of theory, biased parameter estimates, and quite possibly erroneous inferences made by the researchers (George & Jones, 2000; Maxwell & Cole, 2007; Pitariu & Ployhart, 2010). For example, it has been shown that findings from a static study can reverse in sign or disappear altogether when tested in a dynamic manner that is consistent with...
underlying theory (see, e.g., Vancouver, Tamanini, & Yoder, 2010; Vancouver, Thompson, & Williams, 2001). Given the real possibility of inaccurate conclusions when mistreatment variables and their outcomes are relegated to a static form, the all-too-common practice of recommending a longitudinal research design as “the next researcher’s responsibility” should come to an end. Mistreatment scholars must begin to account for the role of time (e.g., George & Jones, 2000; Mitchell & James, 2001) and incorporate longitudinal research designs (e.g., Chan, 2014; McArdle, 2009) into their work. The need for longitudinal mistreatment research has been consistently acknowledged (e.g., Hershcovis, 2011; Martinko et al., 2013; Tepper, 2007), but it appears that very few scholars have heeded these calls. This observation begs the question of why more mistreatment researchers have not welcomed a temporal lens with open arms.

Methodological challenges and misunderstandings

We attribute the current state of affairs (at least partly) to methodological challenges and the fact that the term “longitudinal” is frequently misunderstood. According to Ployhart and Ward (2011), for example, the term longitudinal “gets tossed about so much that it is confusing to know what is a longitudinal study” (p. 14). Following Chan (1998) and Ployhart and his colleagues (Ployhart & Vandenb eurg, 2010; Ployhart & Ward, 2011), we submit that a study is considered longitudinal when it (a) emphasizes construct change and (b) contains a minimum of three repeated observations. This means that a study measuring the mistreatment variable at Time 1 and the criterion variable at Time 2 does not constitute a longitudinal study. We identified a number of time-lagged studies that separated the timing of such measurements. Although the use of time lags is better than a cross-sectional design (i.e., it helps deal with common method concerns), our analysis found that nearly one quarter of these time-lagged studies wrongly stated that they had used a longitudinal design. The top half of Table 2 shows a few descriptive statistics for the various time lags used by mistreatment researchers. An inspection of this information suggests considerable differences within and across the mistreatment constructs (e.g., time lags ranged from 10 days to 14 months), and we noted that the identified studies rarely justified their time lag choices. As will be discussed in a later section, different time lags can yield substantively different effect sizes even when the same mistreatment–outcome relationships are under study.

We also observed that a-temporal studies, as part of their research design, oftentimes asked individual respondents to summarize their exposure to the negative acts over some specific period of time (e.g., “think back over the past year, how often have you experienced...”) and correlate these summary judgments with focal outcome variables. As shown in the bottom half of Table 2, there is considerable variation in the use of recall instructions within and across the mistreatment constructs. For example, researchers interested in studying incivility typically (79% of the studies) asked participants to report on experienced incivility over a specific period of time; the most frequently used recall timeframe was 1 year, although six studies requested participants to summarize their incivility experiences over a period of 5 years ($M = 540$ days; $SD = 613$ days). About one quarter of bullying and social undermining studies explicitly reported use of a temporal scale (i.e., timeframe under consideration), with bullying scholars occasionally asking participants to think back as far as 5 years into the past and social undermining scholars using recall instructions ranging from 1 week to 1 month. In contrast, there was simply not enough information reported in most of the abusive supervision studies (97%) to determine if recall instructions were used and what the temporal scale for asking about past experiences might
<table>
<thead>
<tr>
<th>Study characteristic</th>
<th>Abusive supervision</th>
<th>Bullying</th>
<th>Incivility</th>
<th>Social undermining</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time lag:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No lag used</td>
<td>68% (81 of 120 studies)</td>
<td>90% (70 of 78 studies)</td>
<td>76% (32 of 42 studies)</td>
<td>54% (7 of 13 studies)</td>
</tr>
<tr>
<td>Yes, lag used</td>
<td>32% (39 of 120 studies)</td>
<td>10% (8 of 78 studies)</td>
<td>24% (10 of 42 studies)</td>
<td>46% (6 of 13 studies)</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>3 months</td>
<td>342 days</td>
<td>88 days</td>
<td>246 days</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>3 months</td>
<td>158 days</td>
<td>67 days</td>
<td>165 days</td>
</tr>
<tr>
<td><strong>Min</strong></td>
<td>10 days</td>
<td>6 months</td>
<td>14 days</td>
<td>1 month</td>
</tr>
<tr>
<td><strong>Max</strong></td>
<td>1 year</td>
<td>2 years</td>
<td>6 months</td>
<td>14 months</td>
</tr>
<tr>
<td><strong>Temporal scale of recall instructions:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not reported</td>
<td>97% (17 of 20 studies)</td>
<td>77% (60 of 78 studies)</td>
<td>21% (9 of 42 studies)</td>
<td>77% (10 of 13 studies)</td>
</tr>
<tr>
<td>Yes, recall instructions were reported</td>
<td>3% (3 of 120 studies)</td>
<td>23% (18 of 78 studies)</td>
<td>79% (33 of 42 studies)</td>
<td>23% (3 of 13 studies)</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>250 days</td>
<td>244 days</td>
<td>540 days</td>
<td>22 days</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>191 days</td>
<td>218 days</td>
<td>613 days</td>
<td>13 days</td>
</tr>
<tr>
<td><strong>Min</strong></td>
<td>1 month</td>
<td>1 month</td>
<td>14 days</td>
<td>7 days</td>
</tr>
<tr>
<td><strong>Max</strong></td>
<td>1 year</td>
<td>5 years</td>
<td>5 years</td>
<td>1 month</td>
</tr>
</tbody>
</table>
have been. We also observed (though not presented in our tables) considerable variation in the design choices (e.g., temporal scale, overall study span) made by mistreatment researchers when developing longitudinal studies (details available from the authors). To illustrate, consider two recent objective time studies on workplace incivility (i.e., Meier & Spector, 2013; Zhou et al., 2014). We find it interesting that both of these repeated-measures studies focused on the consequences associated with incivility change and even used the same incivility instrument, and yet they differ in the slice of time under consideration: a day versus a month. Such differences are important because, although the two research teams were interested in understanding the same phenomenon, the experience of (and responses to) such behavior will certainly have a different meaning when considered daily for 10 days versus monthly for 5 months (interested readers should consult Zaheer, Albert, & Zaheer, 1999, for a detailed discussion on time scales).

We maintain that these relatively subtle design differences can have important theoretical and practical implications, including confused readers and the potential for different conclusions based on study results. When deciding what temporal scale is most appropriate, we encourage researchers to do their homework. One’s theoretical justification for a specific temporal scale could, for example, be supplemented with empirical evidence from prior longitudinal studies that employed the same mistreatment measure. Moreover, when discussing how a study’s results connect with the existing literature, researchers may wish to incorporate a discussion on how their design decisions could have impacted the generalizability of findings. For example, Taylor et al. (2014) clarified how their dynamic mediation model—although receiving empirical support when based on repeated measures data assessed weekly—may not be conceptually fitting for a study focusing on how targets react to incivility incidents as they happen moment by moment.

Finally, we identified very few studies that attempted to understand the mistreatment phenomena through a subjective account of time. Although this finding is consistent with Shipp and Cole’s (2015) review of the micro literature as a whole, we took note of a few important issues that pertain to the mistreatment literature specifically. For instance, while coding the mistreatment studies, we noticed that a study’s instructions quite often requested participants to “think back” or recollect past instances of mistreatment. Yet, these studies were not focusing on retrospected mistreatment as a theoretically meaningful construct. Instead, when researchers asked participants to recollect past mistreatment experiences for a specific period of time, they did so as a means to capture sufficient instances of transient mistreatment (i.e., a form of summary evaluation). It seems that the use of this type of retrospective recall blurs the lines between current and retrospected mistreatment. For this reason, we did not code these studies as adopting a subjective lens.

**Accounting for time when exploring interpersonal workplace mistreatment**

From our review of the literature, it is safe to say that a vast majority of theory testing in the mistreatment literature (i.e., abusive supervision, bullying, incivility, and social undermining) still uses a cross-sectional design, wherein a researcher’s inferences are based on associations between two or more static variables. In this section, we discuss how incorporating one or more temporal lenses promises to open new doors for empirical research on workplace mistreatment. We begin by elaborating on the types of theoretical insights that might emerge when an objective temporal lens is adopted. We then explore areas in which a subjective temporal lens is likely to have the largest impact on mistreatment research. In doing so, we integrate several perspectives on
<table>
<thead>
<tr>
<th>Checklist item</th>
<th>Reasons for importance</th>
<th>Key considerations for implementation</th>
<th>References</th>
</tr>
</thead>
</table>
| Identify the study’s core purpose | ● A longitudinal research design does not, by default, make for a novel theoretical contribution. What is it that you want to accomplish?  
● How will your study on mistreatment contribute to the literature and/or change the conversation? | ● Value added: Are you most interested in descriptive longitudinal research (i.e., fundamental dynamics of the mistreatment construct) or explanatory longitudinal research (i.e., investigating dynamic relationships between a mistreatment construct and outcomes)? | Chan (1998); Ployhart & Vandenberg (2010) |

| Conceptualize (and graph) the predicted form of change | ● Hypothesizing the form of change (e.g., linear vs. nonlinear) is essential for making predictions that are falsifiable.  
● Providing a figure to illustrate the hypothesized form of change will help by graphically depicting the predicted change trend.  
● Developing a theory for mistreatment change will also inform research design issues; for example, if interest is in the growth of abusive supervision perceptions, a researcher may wish to sample only recently hired employees as opposed to employees with varying levels of tenure with a supervisor. | ● Onset, duration, offset: When does mistreatment begin, how long does it last, and when does it end?  
● Trajectory: What is the shape and trend of mistreatment over time? Will there be no change, or will the change increase (upwardly positive) or decrease (downwardly negative)? Could mistreatment change exponentially? Should it plateau with time, or exhibit multiple upturns or downturns over time?  
● Cycles and rhythms: Could mistreatment reoccur over time in a predictable way? Is there a reason to expect mistreatment to spiral in an increasing or decreasing manner over time? | Monge (1990); Pitariu & Ployhart (2010); Ployhart & Vandenberg (2010); Roe (2008) |
| Decide on a data collection schedule | ● The number of repeated measurements and the spacing between measurements (i.e., time interval) will impact the study’s ability to detect and model meaningful forms of change. | ● Incident reporting: Is the exposure to mistreatment triggered by a specific event or does it routinely reoccur?  
● How often and for how long: Include a sufficient number of measurements to appropriately | Fisher & To (2012); Ployhart & Vandenberg (2010); Zaheer et al. (1999) |

(continued)
### Table 3. (continued)

<table>
<thead>
<tr>
<th>Checklist item</th>
<th>Reasons for importance</th>
<th>Key considerations for implementation</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examine the functional form of each dynamic construct</td>
<td>• Predict whether there should be change over time in each focal variable.</td>
<td>• \textit{Disclaimer}: Just because data are collected repeatedly over time does not guarantee that variables will exhibit variability over time.</td>
<td>Grimm et al. (2012)</td>
</tr>
<tr>
<td>Conceptualize the dynamic relationship(s)</td>
<td>• Focus on theorizing why a change in mistreatment will lead to a change in another substantive variable.</td>
<td>• \textit{Time}: When will the relationship exist (e.g., within a day, from yesterday to today, week to week, and so on)? • \textit{Duration}: How long should the dynamic relationship exist? • \textit{Shape}: Will the dynamic relationship steadily increase (or decrease) over time? Or perhaps it will accelerate, decelerate, or even plateau? • \textit{Hypotheses}: Do the formal hypotheses precisely describe the dynamic relationship?</td>
<td>Grimm et al. (2012); Monge (1990); Pitariu &amp; Ployhart (2010)</td>
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<td>Level of analysis</td>
<td>• Longitudinal data are hierarchical, with repeated measures nested within participants. Therefore, the level of change of interest needs to be clearly specified.</td>
<td>• \textit{Single-level model}: A within-person approach acknowledges that individuals may perceive they are mistreated more on some occasions and less on others, and that their attitudes and behaviors may change accordingly.</td>
<td>Singer &amp; Willett (2003)</td>
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2b. Although the descriptive approach sounds interesting, I’m more interested in developing an explanatory longitudinal study to explore dynamic relationships between mistreatment experiences and targets’ responses over objective time. What’s next? 

- Model the hypothesized form of change (e.g., nonlinear change requires more measurements).
- \textit{Practicality}: Given pros and cons of the various sampling approaches, which alternative is most likely to produce valid inferences without overburdening participants?
- \textit{Types of change}: Change in each variable can be constant or proportional (i.e., relative to its previous level).
- \textit{Time}: When will the relationship exist (e.g., within a day, from yesterday to today, week to week, and so on)?
- \textit{Duration}: How long should the dynamic relationship exist?
- \textit{Shape}: Will the dynamic relationship steadily increase (or decrease) over time? Or perhaps it will accelerate, decelerate, or even plateau?
- \textit{Hypotheses}: Do the formal hypotheses precisely describe the dynamic relationship?
- \textit{Level of analysis}: Longitudinal data are hierarchical, with repeated measures nested within participants. Therefore, the level of change of interest needs to be clearly specified.
### Table 3. (continued)

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<th>Key considerations for implementation</th>
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| Decide on a data collection schedule | - Number and spacing of repeated measures must be given careful consideration.  
- The number of repeated measurements and the spacing between measurements (i.e., time interval) has implications for detecting within-construct change, and the spacing between measurements of the different variables (i.e., time lag) has implications for the dynamic relationships between the mistreatment construct and dynamic outcomes. | - **Multilevel model**: A multilevel approach examines the extent to which between-person differences (e.g., in personality or other characteristics) affect within-person changes in mistreatment and/or its dynamic effects.  
- **How often and for how long**: The measurement occasions should occur with enough frequency to be capable of detecting the form of change expected, and the overall study span needs to cover a reasonable duration of time. These decisions should be informed by theoretical and practical considerations.  
- **Justify decisions**: Describe why you measured the variables at the selected intervals, and how this decision provides a good test of the theory and hypotheses.  
- **Statistical power**: Consider power at all relevant levels. Participants need to report a sufficient number of repeated mistreatment incidents to provide the power to test hypotheses at the analysis level of interest. For a multilevel model, also plan for the number of participants needed.  
- **Practicality**: Given pros and cons of the various sampling approaches, which alternative is the most likely to produce valid inferences without overburdening participants (e.g., attrition not at random)? | Bolger, Stadler, & Laurenceau (2012); Monge (1990); Ployhart & Ward (2011); Roe (2008); Zaheer et al. (1999) |
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| Introduce time lags | - The repeated measurement of multiple constructs over time may produce common source bias within a measurement occasion.  
- Incorporating an appropriate time lag addresses many issues regarding causality. | - **Cause and effect**: The time lag needs to fit the theory believed to underlie the dynamic relationship. After mistreatment occurs, how long until the target is most likely to respond? | Chan (2014); Mitchell & James (2001); Zaheer et al. (1999) |
| Consider retrospected and/or anticipated mistreatment | - Subjective time is cyclical and interpretive.  
- People mentally "time travel" among the past, present, and future, so considering mistreatment in the current moment isn’t enough to understand current reactions. | - **Temporal influence**: Retrospected mistreatment and/or anticipated mistreatment could directly impact individuals’ responses to mistreatment (above and beyond current incidents) or alter the relationships between current mistreatment and current outcomes.  
- **Temporal comparison**: The evaluation of current mistreatment in the context of retrospected or anticipated mistreatment could influence an individual’s current reactions. | Albert (1977); Markman & McMullen (2003); Shipp & Jansen (2011) |
| Determine if time perception is relevant | - Subjective time is heterogeneous so individuals interpret and psychologically experience it in different ways.  
- Perception of time duration varies depending upon what is happening (e.g., 1 day of mistreatment may “feel” longer than 1 day of being treated well, and people may act accordingly). | - **Temporal perception**: The interpretation of the perceived passage of time during mistreatment (e.g., quickly, slowly) could affect what individuals do as a result. | McGrath & Rotchford (1983) |
| Incorporate temporal individual differences | - Individuals have different ways of thinking about time. | - **Temporal focus**: The degree to which a person thinks about or focuses on the past, present, Bluedorn (2002); Shipp & Cole (2015); Shipp et al. (2009) |
### Table 3. (continued)

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<td>- The same current situation may be interpreted differently by different people, suggesting that how one characteristically thinks about time may affect their reactions to mistreatment.</td>
<td>or future likely impacts reactions to current mistreatment.</td>
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<td>Temporal depth:</td>
<td>- How far into the past or future a person typically thinks, and how long they hold onto past or future mistreatment perceptions, likely influence their reactions to retrospected, current, and anticipated mistreatment.</td>
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<td>3. What if I want to do it all and take a completely temporal view? Beyond the issues noted before, what else will I need to consider?</td>
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| Grasp the complexity of adopting two temporal lenses | - Neither objective nor subjective time exists in a vacuum; both operate concurrently.  
- A completely temporal view is the most rich and realistic. | - Relative importance: Objective time and subjective time may exert different influences on the way current mistreatment is perceived and impacts outcomes. For instance, some past incidents may linger in an individual’s mind and continue to influence the way he or she reacts to present mistreatment.  
- Nested lenses: Mistreatment experienced over objective time may shape an individual’s conceptions of subjective time. For example, a longer duration or more frequent cycle of mistreatment could trigger an individual to reflect on past mistreatment or to forecast about the potential for future mistreatment.  
- Develop expertise: Conceiving, designing, and successfully publishing a completely temporal mistreatment study will involve an array of theoretical and methodological challenges, including the task of integrating two already complex frameworks. | Shipp & Cole (2015)            |
### Table 3. (continued)

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| Longitudinal research is risky and takes time | Incorporating a temporal lens can be challenging; doing so will require a researcher to account for temporal factors in theory development, research design, and data analysis. | **Resource expenditures**: In addition to the time and effort required to conceive and design a longitudinal study, these studies can be costly in terms of human resources expended to complete surveys repeatedly or the cost of purchasing data from online data panels (e.g., mTurk, Qualtrics).  
**Risk tolerance**: Have a realistic understanding of the challenges associated with longitudinal field research.  
**Be patient**: Don’t rush temporal studies of mistreatment either in conceptual development or in study design. | Bolger et al. (2003); Shipp & Cole (2015) |
| Data analysis | There are many different ways to analyze longitudinal data.  
Decisions about statistical approaches should occur BEFORE data collection. “An ounce of prevention is worth a pound of cure.” | **Theory drives the approach**: Make sure you understand what your theoretical research question is, and how your study design and data analysis will answer this question. | Aguinis & Vandenberge (2014); Chan (2014) |
| Recruitment and training of participants | It can be difficult to find participants willing to complete surveys multiple times per day (or week) and over extended periods of time (months, years). | **Orientation**: When possible, hold an initial orientation meeting to explain study procedures, and answer participants’ questions.  
**Incentives**: Consider offering monetary incentives and linking them to each individual’s participation rate. Nonfinancial incentives like personalized feedback reports are also helpful.  
**Reminders**: Remind participants to respond throughout the study period. Notifications (emails, text messages, etc.) and feedback on response rates can boost responding. | Bolger et al. (2003); Fisher & To (2012) |
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| Participant attrition  | • Attrition will happen; it is not uncommon for the response rate to drop by 50% or more between the first and last measurement occurrence. | • *Systematic nonresponse*: It is important to try and ascertain why attrition is occurring, as the existence of systemic missingness (i.e., missing not at random) may indicate bias in the results.  
• *Sample size and statistical power*: Determine the necessary sample size at the final measurement point, and then work backwards to determine the sample size needed at the first measurement occasion.  
• *Plan for missing data*: Consider using a sampling design that incorporates planned missingness into the longitudinal design. | Graham, Hofer, & MacKinnon (1996); Goodman & Blum (1996); Ployhart & Ward (2011) |
time (e.g., Mitchell & James, 2001; Monge, 1990; Pitariu & Ployhart, 2010; Ployhart & Vandenberg, 2010; Roe, 2008) and highlight key issues that should assist mistreatment researchers wishing to design a truly temporal research study. Table 3 summarizes these issues.

New conceptual insights with an objective time lens

When applying an objective time lens to a study on workplace mistreatment, the notion of time reflects a convenient and meaningful metric for representing and investigating how a mistreatment construct changes over time (e.g., Singer & Willett, 2003). Put another way, the mistreatment construct does not change, evolve, or develop because of time but, rather, it does so over the passage of clock-time (Chan, 2014; Ployhart & Vandenberg, 2010). With this temporal perspective in mind, it follows that there are two longitudinal approaches available to researchers.

Descriptive longitudinal research. In descriptive longitudinal research (Chan, 1998; Ployhart & Vandenberg, 2010), the researcher is fundamentally interested in the basic dynamics of the focal mistreatment construct; that is, the form of within-construct change (e.g., linear vs. nonlinear) over time. Thus, a descriptive perspective shifts from viewing mistreatment as static and fixed to a more dynamic view of “mistreating” that could start, stop, change in magnitude, or repeatedly recur as an episodic event (Chan, 1998; George & Jones, 2000; Monge, 1990; Roe, 2008). When developing a rationale to explain the change in mistreatment, key considerations include the onset, duration, and offset of the focal phenomenon, the trajectory of mistreatment (i.e., shape, trend, rate of change such as acceleration or deceleration), and whether cycles or rhythms might be expected over time. Indeed, we acknowledge that conceptualizing the anticipated change trend can be difficult. But we also note that the mistreatment literature has some existing work from which researchers can draw when describing why and under what circumstances their mistreatment construct is expected to change (e.g., Andersson & Pearson, 1999; Aquino & Lamertz, 2004; Chan & McAllister, 2014; Olson-Buchanan & Boswell, 2008; Pearson, Andersson, & Porath, 2000).

To illustrate the potential value in a descriptive approach, we take a closer look at Tepper’s (2000) abusive supervision construct. Recall that abusive supervision refers to the sustained display of hostile verbal and non-verbal behaviors as perceived by subordinates. One should thus expect that the experience of supervisory abuse will continue for an extended period without interruption (i.e., remain relatively stable over time). Nevertheless, this formative assumption is in reality an empirical question that has, to our knowledge, yet to be evaluated or tested. Through a descriptive longitudinal study, an abusive supervision scholar could easily examine the underlying pattern of abusive supervision to determine when it starts and stops; whether it is stable over time (i.e., a relatively flat horizontal line) or exhibiting a trend that is either increasing or decreasing (i.e., linear change); whether the abuse is increasing or decreasing relative to a prior level (i.e., nonlinear change); as well as whether it is a cyclical pattern (e.g., in terms of days, weeks, or months). For example, Tepper, Duffy, Henle, and Lambert (2006) suggest employees’ experience of abusive supervision might be cyclical if their boss is particularly abusive after receiving an unsatisfying annual performance appraisal, a process often perceived as unfair (Greenberg, 1986). Moreover, if the observed change is nonlinear, it would be of theoretical interest to know if there is a plateauing effect or a breaking point at which the within-construct change suddenly changes direction (cf. Lang & Bliese, 2009; Ployhart & Vandenberg, 2010), such as when the abusive supervisor is given coaching with the threat of losing his or her job if behavioral changes are not made.
As this discussion illustrates, understanding the underlying pattern or form of mistreatment change is critical because in longitudinal research, within-construct change is the focal variable of interest. Thus, we maintain that mistreatment researchers need to understand the typical pattern of mistreatment before examining its dynamic relationships with other substantive constructs.

**Explanatory longitudinal research.** Recall that our review yielded nine mistreatment studies in which all variables were measured repeatedly (at a minimum, for three observations) over time. This type of work is referred to as “explanatory” longitudinal research (Chan, 1998; Ployhart & Vandenberg, 2010). Explanatory longitudinal research focuses on studying “dynamic relationships” (Monge, 1990), that is, the effect of a dynamic input on a dynamic outcome. By collecting three or more repeated measurements from the same individuals on all variables (e.g., predictor and criterion), these studies were capable of investigating how a change in mistreatment predicts other substantive variables (e.g., changes in job attitudes or helping behavior). Moreover, because these explanatory studies focused on testing dynamic relationships as prescribed by theory, they offer the mistreatment literature a more rigorous and informative test of theory (Mitchell & James, 2001).

According to temporal scholars, when hypothesizing and testing dynamic relationships, there are a number of issues to consider including: time, duration, and shape (e.g., Chan, 1998; George & Jones, 2000; Monge, 1990; Pitariu & Ployhart, 2010). These temporal characteristics need to be articulated when hypothesizing the nature of a dynamic relationship. This is because the more precise the hypothesis, the more informative the subsequent empirical test, thereby leading to a more advanced refinement of theory (Pitariu & Ployhart, 2010). Other important issues involve the spacing of measurement between the constructs. These time lags are important for causality, but care must be taken to ensure that the lags are neither too short nor too long (Zaheer et al., 1999). For instance, sometimes a target’s reaction to mistreatment may occur almost instantaneously (e.g., when experiencing momentary feelings of anger), whereas other responses may only occur after an extended period of time has passed (e.g., which might occur when minor experiences of incivility accumulate and build up over time). Hence, the effect size of a dynamic relationship will vary as a function of the span of time that passes between the dynamic predictor and dynamic outcome (Gollob & Reichardt, 1987).

We take Taylor et al. (2014) as an example that deals with these issues. In this article, the authors were interested in testing a dynamic model of incivility change, using six repeated measurements for each construct in their mediation model. In doing so, they first needed to develop a theoretical argument to explain why and when incivility perceptions may change over time. Then they theorized why changes in incivility would be related to changes in burnout the following week and, in turn, why changes in burnout would be related to subsequent turnover intention change the following week. The authors then presented competing arguments for the functional form of the dynamic mediated relationships, thus addressing the question of whether the effects should exhibit a linear relationship over time or are subject to change (i.e., nonlinear change) over time. As recommended by Ployhart and Vandenberg (2010), they explicitly addressed the appropriate level of change. Finally, they studied how a number of previously identified methodological challenges unique to longitudinal research may have impacted the ability to detect and model within-person construct change over time, attempting to either tackle these issues when designing their longitudinal field study or providing a logical justification for decisions within the article. Overall, they found that, beyond past and present levels of experienced
incivility, the direction and magnitude of incivility change can generate substantive changes in burnout and, in turn, quit intentions. This result implies that even when an employee’s current level of experienced incivility is relatively low, he or she may still experience an upward change in quit intentions (through an upward change in burnout) if the current level of mistreatment is judged to be more frequent than that experienced in the time period just prior.

In summary, pursuing both descriptive longitudinal research and explanatory longitudinal research reflects what we believe to be an important evolution for research on interpersonal workplace mistreatment. As other streams of organizational psychology are more frequently pursuing both descriptive and explanatory research (Beal, 2012), we presume that the mistreatment literature would do well by following suit. Nevertheless, though both are important to consider, an objective time lens is only one of the ways to extend mistreatment scholarship.

**New conceptual insights with a subjective time lens**

Beyond new insights from considering mistreatment in objective time, mistreatment researchers can also use a subjective temporal lens. As noted earlier, unlike objective time, which is linear and quantifiable, subjective time is more idiosyncratic. As such, subjective time can be characterized as cyclical, heterogeneous, and interpretive (Shipp & Fried, 2014). Subjective time is cyclical because individuals can “time travel” (M. A. Wheeler, Stuss, & Tulving, 1997) to relive a mistreatment incident from the past or to “prelive” mistreatment that is anticipated to occur in the future. It is heterogeneous in that an individual’s current circumstances can cause time to be perceived as passing by quickly or slowly, such as when repeated exposure to a cantankerous coworker seems to cause the workday to drag on and on. Finally, subjective time is interpretive, because two individuals can experience the same levels of mistreatment over the passage of objective time but construe them differently, prompting unique recollections of “past” incidents as well as idiosyncratic forecasts about the possibility of future mistreatment.

As we describe in more detail in what follows, these characteristics of subjective time raise fundamental questions about how individuals shape their views of mistreatment. The fact that subjective time is interpretive is particularly relevant because mistreatment is commonly characterized not as objective acts performed by a supervisor or a coworker, but as the victims’ perceptions of these behaviors (e.g., Martinko et al., 2013; Pearson & Porath, 2005; Tepper, 2000). As such, we believe new theoretical insights will be gained by using a subjective time lens. The various research questions that could be asked fall into three categories: temporal influence and temporal comparison, time perception, and temporal individual differences.

**Temporal influence and temporal comparison.** Temporal influence and temporal comparison are mechanisms that describe the ways in which retrospected and/or anticipated mistreatment will influence a mistreatment study’s focal outcomes. Temporal influence suggests that recollected past mistreatment and anticipated future mistreatment can both have a direct impact on the current outcome (cf. Shipp & Jansen, 2011). This could occur when a recollected mistreatment experience (e.g., past bullying) continues to negatively impact one’s current state of well-being, even though the situation may have changed for the better. As another example, if a noted abusive supervisor is being moved into an employee’s unit, the employee may foresee mistreatment and contemplate quitting, or ask for a transfer before the abusive supervisor even arrives. As these examples demonstrate, given that recollected and anticipatory mistreatment are distinct from mistreatment experienced in the present, all three mistreatment perceptions could differentially impact a target’s job attitudes, quit
intentions, and retaliation behaviors in the present moment.

Whereas temporal influence suggests that retrospected and anticipated mistreatment can directly influence outcomes in the present (i.e., main effects), temporal comparison implies moderating effects in which the relationship between current perceived mistreatment and the focal outcome are contingent on retrospected or anticipated levels of mistreatment. That is, when an individual engages in temporal comparison, he or she will compare current mistreatment perceptions to those in the past or future. This means that the current level of perceived mistreatment is only understood in the context of past mistreatment and/or anticipated future mistreatment. Thus, a mistreatment incident experienced in the present could be interpreted quite differently depending upon what mistreatment the individual has experienced in the past or expects to experience in the future. For example, an individual whose prior workplace was characterized by high levels of incivility may be more tolerant of low to moderate levels of incivility in his current workplace, reacting less strongly than others because the current situation is not as bad by comparison.

**Time perception.** Because a subjective lens assumes that the experience of clock time is bound by an individual’s interpretation of it, individuals may perceive that time is passing slowly or quickly depending upon their current experience. For example, when an individual feels pain or lack of stimulation, time may seem to drag on; yet the experience of pleasure, flow, or lots of activity causes time to pass rather quickly (e.g., Ariely, 1998; Conti, 2001; Csikszentmihalyi, 1990; Janssen, Naka, & Friedman, 2013; McGrath & Rotchford, 1983). In terms of mistreatment, this implies that the “pain” of being mistreated may cause an individual’s workday or work week to pass by more slowly, perhaps increasing the individual’s desire to find a job elsewhere.

**Individual temporal differences.** Although there are a number of individual differences related to time (see Shipp & Cole, 2015, for a review), we believe two constructs specifically relate to subjective time as discussed herein. **Temporal focus** describes individuals’ characteristic tendency to think about the past, present, and/or future periods of their lives (Shipp, Edwards, & Lambert, 2009). For example, individuals who are past focused are more likely to relive memories as compared to individuals low in past focus, who may think little about previous experiences. This implies that past or future focused individuals may be presently impacted to a greater extent by retrospected or anticipated mistreatment, with these additional time periods impacting current outcomes (cf. Shipp et al., 2009). The second individual difference is **temporal depth**, defined as the typical distance to the past or future that an individual considers relevant (Bluedorn, 2002). Given that a greater temporal distance makes events more abstract as opposed to concrete, individuals tend to find more distant events less relevant for the current moment (Trope & Liberman, 2003). On the other hand, individuals with long temporal depths may be more likely to consider mistreatment incidents in the distant future and, thus, make decisions in the present that individuals with shorter temporal depths have yet to even consider.

To illustrate how temporal individual differences could be incorporated into a mistreatment study, we use an example from social undermining (e.g., Duffy et al., 2002). According to Duffy et al. (2002), undermining behaviors occur in a recurrent fashion over time. This means that the effect of undermining behaviors will possibly accumulate (i.e., linger) and remain relevant to an individual’s current reactions. On this basis, it seems reasonable to predict that individuals with a strong past temporal focus will not only dwell on previous incidents, but also become increasingly reactive to each subsequent undermining episode. Alternatively, individuals with a strong future
temporal focus are prone to anticipating undermining experiences that have yet to occur and this tendency may prompt them to be more sensitive to such behaviors in the present. Moreover, to the extent an individual is predisposed to anticipating future undermining occurrences (e.g., workplace paranoid cognitions; Chan & McAllister, 2014), he or she might actually behave in ways that incite mistreatment in the present (i.e., a self-fulfilling prophecy). Though each proposition seems equally plausible, we are not aware of any undermining research that has considered the role of temporal individual differences (viz., temporal focus or temporal depth) when exploring undermining effects.4

To conclude, we believe that a subjective time lens offers the mistreatment literature an untapped perspective from which to develop new and unique research questions. In fact, we contend that mistreatment perceptions assessed in the present may not be fully understood without accounting for the relative importance of an individual’s retrospections and projections of future mistreatment. At present, the absence of such temporal predictors suggests the possibility that meaningful effects are unaccounted for. That is, at best, certain effects are relegated to the error term when predicting an individual’s current reactions to mistreatment, but at worst, the assumed effect of current undermining may actually be attributable to one or more incidents occurring in other periods of time. To paraphrase an anonymous reviewer of this paper, it would seem that the mistreatment literature has missed an opportunity to explore how subjective conceptions of time might influence the way individuals react to mistreatment both psychologically and behaviorally.

**New conceptual insights with a completely temporal perspective**

Ultimately, it is our hope that interpersonal mistreatment research will move beyond a focus on just objective time or just subjective time to enthusiastically take on the challenge of a “completely temporal” perspective (Shipp & Cole, 2015). A completely temporal study would, for example, examine change in mistreatment over the course of both objective time and subjective time—that is, change that is happening in clock time and in the minds of individuals. Doing so has a number of theoretical and methodological challenges (see, e.g., Shipp & Cole, 2015), including the task of integrating two already complex frameworks. Nonetheless, the adoption of a completely temporal lens will unquestionably inform understanding of how and why workplace mistreatment has such devastating consequences for those experiencing it (as well as for their employing organizations). To further emphasize the complexity of adopting a completely temporal approach, we present the following incivility example.

Consider two individuals who belong to the same work group (see Figure 1). As depicted, the sloping lines in Figure 1 represent contrasting hypothetical patterns of real-time measurements of experienced incivility over five time periods (i.e., \( T_{-2}, T_{-1}, T_0, T_{+1}, T_{+2} \)) along the horizontal axis for Individual 1 \((I_1)\) and Individual 2 \((I_2)\), respectively. The point at which the two lines intersect represents experienced incivility at the present moment in time \((T_0)\). In addition, the shading around the two sloping lines depicts retrospected and anticipated incivility as presently perceived by these two individuals. The shading further indicates that retrospections and anticipations of incivility may be somewhat imperfectly linked to the actual past or the (soon-to-be) actual future and are likely to become fuzzier as temporal distance increases (cf. Shipp & Jansen, 2011). A key assumption of the subjective approach towards time is that some mistreatment incidents are going to be more memorable than others and may even be exaggerated in the memories of those affected, thereby allowing for the possibility of a single incident to have real implications.
that ripple into the future. Hence, a subjective lens acknowledges that, irrespective of the accuracy or validity of individuals’ perceptions on which interpersonal mistreatment is based, recollections of past mistreatment and expectations regarding future mistreatment can both be very real in their consequences.

At the present moment in time ($T_0$), $I_1$ and $I_2$ report identical levels of incivility (i.e., a rating of 3 on a 5-point scale running along the vertical axis). Note that a researcher focusing only on the present (a static perspective) would view these individuals’ experiences as equivalent and may expect each individual to be equally inclined to consider quitting. Yet moving backwards in time from the present, Figure 1 indicates that $I_1$ and $I_2$ reported experiencing different levels of mistreatment and thus are likely to recall substantively different experiences as well. At $T_{-2}$, for instance, $I_1$ experienced fewer incidents of incivility as compared to $I_2$. Now taking the passage of time into account (i.e., moving from $T_{-2}$ to $T_{-1}$), Figure 1 suggests that $I_1$ has experienced an upward change in incivility; that is, relative to incivility levels reported at $T_{-2}$, the frequency of incivility experienced at $T_{-1}$ has increased. In contrast, $I_2$ has experienced a downward change in incivility (i.e., moving from $T_{-2}$ to $T_{-1}$). By the third time

![Figure 1. Completely temporal incivility example for two hypothetical individuals.](image-url)

Note. Following Shipp and Jansen (2011), shading indicates that retrospections and anticipations of incivility may be somewhat imperfectly linked to the actual past or the (soon-to-be) actual future and are likely to become fuzzier as temporal distance increases.
period (i.e., \( T_{-2} \) to \( T_0 \)), \( I_1 \)'s experienced incivility has increased from 1 to 3, whereas \( I_2 \)'s level of experienced incivility has decreased from 5 to 3.

Beyond the consideration of how these two trajectories map onto objective time, a subjective approach towards time suggests these two individuals may also interpret their trajectories differently, perhaps even recrafting their memories. For example, \( I_1 \) may look back at past incidents she previously ignored (\( T_{-2} \)) but now understands that they were early signals of an increasing level of incivility. As such, the historically low levels of incivility may become exaggerated in her mind as she presently makes sense of the upward changes in incivility she is experiencing. In fact, moving forward into the future, \( I_1 \) and \( I_2 \) may likewise anticipate substantively different workplace experiences. As \( I_1 \) considers the anticipated future, she is likely to forecast a progressively worsening situation, with additional episodes of incivility looming ahead. In contrast, \( I_2 \)'s downward incivility trajectory signals that his anticipated future will become increasingly better. Consequently, at the present moment, \( I_1 \) is not only more likely than \( I_2 \) to be experiencing psychological discomfort, but also a greater desire to seek alternative employment opportunities.

Though hypothetical, this final example illustrates how two individuals’ turnover intentions may vary even when their present levels of reported mistreatment are identical. This can be explained by the fact that individuals’ mistreatment experiences (a) will objectively vary as they go about their daily lives at work but (b) are also based on idiosyncratic experiences such that two individuals could differ in their perceptions of the same experienced mistreatment. For this within-person variation to be accurately captured, real-time measurements collected repeatedly over (objective) time are assumed necessary (e.g., Hershcovis & Reich, 2013). And yet, this illustration also demonstrates how a subjective temporal lens is capable of providing a complementary perspective from which to examine interpersonal mistreatment. It seems reasonable to assume that individuals’ reactions to present-day mistreatment are likely to be informed by their past histories of mistreatment as well as their expectations regarding the likelihood of being mistreated in the future. To be sure, a completely temporal view best represents the reality of individuals’ mistreatment experiences as they unfold over time.

### Additional relevant research issues

Whereas our purpose was to highlight various types of temporal research questions that mistreatment scholars could ask, we suspect that interested researchers will confront additional issues when attempting to account for the role of time in their work. We identify what we believe are a few of the more salient issues or challenges, though we acknowledge that we have not exhausted the full range of possibilities.

**Time lags.** Echoing Mitchell and James (2001), we believe that when designing a longitudinal study, researchers will need to pay particular attention to the question of “when things happen” (p. 530). In part, this is because a dynamic construct may refer to qualitatively different phenomena when using a “short” versus a “long” time lag between repeated measurements (Zaheer et al., 1999). It follows that different time lags can yield substantively different effect sizes even though the same dynamic relationships are under study (Gollob & Reichardt, 1987). Such issues pose real challenges not only for the design of longitudinal research but also for theory development. To the extent possible, the time lag needs to fit the theory believed to underlie the focal phenomena. In this sense, mistreatment scholars may want to collectively identify some reasonable time lags so that they can have confidence that different studies are “comparing apples to apples.” Readers interested to learn more about the implications of time lags may wish to consult Ancona et al. (2001),

**Statistical approaches.** Longitudinal (repeated measures) data provide rich information for exploring the effects of interpersonal workplace mistreatment. Fortunately, researchers have a number of statistical modeling approaches at their disposal. These statistical tools are capable of testing rather complex models involving change within persons, including lagged effects (e.g., last week’s abuse predicting this week’s stress), spillover effects from one context to another (e.g., undermining at work predicting conflict at home), and accumulated effects (exposure to recurring incivility events on job burnout). These bivariate models can be easily extended to multivariate longitudinal models examining dynamic mediated (and frequently multilevel) relationships over time (Pitariu & Ployhart, 2010; Selig & Preacher, 2009). Because the statistical approaches used to test these sophisticated models have been extensively reviewed elsewhere, we simply note that some options are better suited for certain research questions than others (see Ployhart & Vandenberg, 2010, for a review). For a more advanced discussion of longitudinal data analysis, including the logic and practice of modeling within-construct variation and change, we refer interested readers to Ferrer and McArdle (2010); Grimm, An, McArdle, Zonderman, and Resnick (2012); Little (2013); McArdle (2009); and Singer and Willett (2003).

**Interval-contingent versus event-contingent sampling.** In coding studies for our review, we observed that the nine longitudinal studies with an objective approach to time all employed an interval-contingent sampling approach. This approach schedules the repeated measures by the clock at fixed time intervals. Of these, five were focused on the dynamic effects of incivility, three were focused on the dynamic effects of abusive supervision, and one examined the dynamic relationships between bullying and well-being outcomes. Although a small percentage of the entire body of work, these publications are all very recent, with seven being published within the last 4 years and two others “in press.” We view this as a positive step toward more fully incorporating temporal factors into mistreatment research.

Nevertheless, interval-contingent sampling produces repeated measures composed of mistreatment experiences aggregated over a defined period of time (e.g., a day, week, or month), yielding limited insight into how individuals react to an incident “in the moment.” As additional objective time studies emerge, we believe an event-contingent approach (i.e., participants initiate a survey each time a mistreatment event occurs) may provide additional insights into mistreatment phenomena insofar as it can examine the consequences of specific events as they naturally unfold over time (e.g., Hershcovis & Reich, 2013). For a detailed discussion on data collection schedules, including interval-contingent versus event-contingent sampling, readers can consult Beal and Weiss (2003); Bolger, Davis, and Rafaeli (2003); and L. Wheeler and Reis (1991).

**Conclusion**

Prompted by the inherently dynamic nature of interpersonal workplace mistreatment, we set out to determine the extent to which existing research on abusive supervision, bullying, incivility, and social undermining has accounted for time. Taking each construct’s operational definition as our starting point, we reviewed the body of empirical work associated with each construct, examining whether the relationships between these four types of mistreatment and their consequences have been tested in ways that could shed light on the temporal characteristics of mistreatment experiences. We found that all four mistreatment constructs (and their proposed consequences) have largely been cast as between-person phenomena (i.e., inherently stable) rather than the
more accurate portrayal as within-person phenomena (i.e., inherently dynamic). Integrating the mistreatment literature with prior work on temporal dynamics (e.g., Mitchell & James, 2001; Shipp & Jansen, 2011), we conclude that the adoption of a purely static or “snapshot” approach toward interpersonal mistreatment masks considerable and meaningful fluctuations in the experience of, responses to, and consequences of such behavior. All in all, our analysis intimates that contemporary mistreatment research may be too simplistic and, thereby, inadequate for understanding the dynamic relationships between these negative acts and important workplace outcomes. We hope our work encourages future mistreatment research to adopt a temporal lens and, thus, further advances our understanding of these unique, dynamic, and important workplace experiences.

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Notes
1. Although these example constructs have received a great deal of scholarly attention, we note that there are other forms of mistreatment that fall under the broad umbrella of interpersonal workplace mistreatment, including workplace aggression and victimization (e.g., Aquino & Thau, 2009), workplace harassment (e.g., Bowling & Beehr, 2006), interpersonal deviance (Berry, Ones, & Sackett, 2007), and workplace ostracism (Ferris, Brown, Berry, & Lian, 2008).
2. We used PsycInfo for our search. We also manually reviewed abstracts of recent Academy of Management and Society for Industrial and Organizational Psychology conferences (2013–2014) and examined the reference sections of existing meta-analyses and narrative reviews on any of the four mistreatment constructs. Following previous reviews and meta-analyses (e.g., Hershcovis, 2011; Hershcovis & Barling, 2010), we used several variations of the following keywords: abusive supervision, bullying, incivility, mistreatment, and undermining.

3. Because we focused on the downstream consequences of interpersonal mistreatment at work, we excluded research in which the mistreatment construct was positioned as the study’s dependent variable. We also excluded studies that were not work-related (e.g., school bullying) or were unavailable in English. Meta-analyses, experimental designs, qualitative studies, and narrative reviews were likewise excluded.

4. Although we selected undermining as our example here given its explicit description of accumulated and recurring behavior, we believe our logic equally applies to the other forms of mistreatment covered in this review.

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*A full list of all papers included in our review, as well as those which were ultimately excluded from analysis, is available from the authors upon request.


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Author biographies

Michael S. Cole is an Associate Professor of Management at Texas Christian University. His research interests focus on multilevel theories, research, and methodologies as they relate to behavior in organizations.

Abbie J. Shipp is an Associate Professor of Management at Texas Christian University. Her research focuses on the psychological experience of time at work including: the trajectory of work experiences over time, how individuals react to change, how time is spent on work tasks, and how individuals think about the past/present/future.

Shannon G. Taylor is an Assistant Professor of Management at University of Central Florida. His research focuses on abusive, uncivil, and unethical behavior in the workplace and changes in work behavior over time.