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All of the Above?: an Examination of Overlapping Organizational Climates

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Keywords
organizational climate, specific organizational climates, measurement issues

Disciplines
Business | Management Sciences and Quantitative Methods | Organizational Behavior and Theory

All of the Above?: An Examination of Overlapping Organizational Climates

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Abstract

We examined the largely unexplored issue of strong associations between multiple specific climates (e.g., for safety and for service). Given that workplaces are likely to have more than one specific climate present, it is important to understand how and why these perceptions overlap. Individual ratings (i.e., at the psychological climate level) for seven specific climates and a general positive climate were obtained from 353 MTurk Workers employed in various industries. We first observed strong correlations among a larger set of specific climates than typically studied: climates for collaboration, communication, fair treatment, fear, safety, service, and work-life balance were all strongly correlated. Second, we found that two methodological mechanisms – common method variance (CMV) due to (a) measurement occasion and (b) self-report – and a theoretical mechanism, general climate, each account for covariance among the specific climate measures. General positive climate had a primary (i.e., larger) impact on the relationships between specific climates, but CMV – especially due to measurement occasion – also accounted for significant and non-negligible covariance between climates. We discuss directions for continued research on and practice implementing specific climates in order to accurately model and modify perceptions of multiple climates.

Keywords: Organizational climate; specific climates; general climate; psychological climate; common method variance; measurement issues.

All of the Above?: An Examination of Overlapping Organizational Climates

Psychological organizational climate – that is, individual employees' perceptions about the behaviors that are expected and rewarded in the workplace (e.g., Schneider, Ehrhart, & Macey, 2013) – can have one of many specific targets, such as employee safety or customer service. Examining these so-called specific climates has benefitted the prediction of corresponding specific outcomes; for example, safety climate significantly predicts accidents (Clarke, 2006). However, we have not yet established whether responses to different specific climate measures are truly independent, or the extent to which such responses are driven by theoretical and methodological mechanisms. So far, different specific climates have been theoretically considered to diverge and potentially compete in a given workplace (Kuenzi & Schminke, 2009; Ostroff, Kinicki, & Tamkins, 2003; Paul, 2012; Schneider et al., 2013; Schulte, Ostroff, Shmulyian, & Kinicki, 2009), rather than complement each other or reflect a unified, general climate factor. For example, an employee who is focused on achieving work-life balance (i.e., responding to a positive work-life balance climate) may sacrifice customer satisfaction by completing work quickly (i.e., promote a negative customer service climate).

But much of the evidence is at odds with this image of competing specific climates: empirical work typically finds moderate to strong positive, rather than negative, correlations between multiple specific climates, thus supporting a complementary – rather than competing – approach (e.g., McKay, Avery, Liao, & Morris, 2011; Myer, Thoroughgood, & Mohammed, 2016). In some cases, specific climates can even substitute for one another in their effects on outcomes (e.g., Rubino et al., 2018). In other cases, more complex associations between climates, such as interactions, have been modeled (e.g., Myer et al., 2016). Empirical studies of the associations and effects of specific climates on each other are still emerging, and we do not yet have a broad understanding of the reasons for strong associations between larger and more varied sets of specific climates (e.g., Schneider et al., 2013). Understanding how and why individual perceptions of specific climates overlap will advance both theory and practice regarding specific climates and their associated outcomes.

The purpose of this study is to examine the relationships between individual perceptions of varied specific organizational climates – a larger set of climates than typically studied simultaneously – and to evaluate multiple possible mechanisms underlying that overlap. The mechanisms that we examine in this study cover both a theoretical perspective – that of broader, general climates (e.g., employee support, well-being, Schneider et al., 2013) as the driver of more specific climate perceptions – and a methodological one – common method variance (CMV). We examine the significance, magnitude, and nature of the impact that each of these mechanisms has on specific climates. Our findings will establish an understanding of the extent to which each of these factors, along with the specific climate constructs themselves, drive individual employees' perceptions of multiple climates. In addition to informing interventions related to work climates, this examination also addresses prior calls to develop "[m]ulticlimate models" (Kuenzi & Schminke, 2009, p. 710), and furthermore to study specific climates along with general climate (Kuenzi & Schminke, 2009; Schneider et al., 2013). Following, we review research on the relationships between multiple specific organizational climates, then we introduce our selected empirical and theoretical mechanisms that may explain associations among specific climates.

Specific Organizational Climates

More formally defined, organizational climate refers to employees’ shared perceptions of the policies, practices, and procedures that the organization is likely to reward, support, and expect (e.g., Schneider et al., 2013). Beginning with Zohar's (1980) study of safety climate, the field of "specific" climate research was developed. The specific organizational climate literature is diverse: research on specific climates includes, but is certainly not limited to, climates for safety, service, collaboration, communication, fair treatment, and work-life balance. Organizational climate is an important predictor of employees' behaviors on the job, and specific climates have been consistently supported as predictors of related, specific outcomes; as examples, safety climate has been identified as an important component of safe work environments (Kath, Marks, & Ranney, 2010), and customer service climate has been linked to both customer and employee retention (Schneider, 1980).

While specific climates have been linked to respective outcomes, most workplaces likely emphasize more than one goal or outcome, and therefore, more than one corresponding specific climate (e.g., Kuenzi & Schminke, 2009; Ostroff et al., 2003; Paul, 2012; Schneider et al., 2013; Schulte et al., 2009). For example, food service and medicine both likely value employee safety as well as customer service. In food service, the employee must serve food that was prepared according to safety standards and in a friendly, customer-focused manner. Similarly, a nurse may need to provide a patient with an injection in accordance with safety regulations while also ensuring that the patient is satisfied with the procedure.

Despite their likely simultaneous presence in workplaces, the possible relationships between multiple climates are not yet fully understood (Schneider et al., 2013; Zohar, 2010; Zohar, Davidson, & Hofmann, 2012), and these relationships may be complex. For example, it is possible that rules may be bent to better serve customers, fulfilling service goals, but damaging ethical goals (cf. Myer et al., 2016). Past theoretical work has likewise argued that the relationship between multiple climates may be best represented as a competition or tradeoff

(Paul, 2012). According to this approach, multiple climates demand incompatible employee behaviors, such as adhering to the rules for safety versus bending those same rules for customer service. Because multiple climates could require contradictory behaviors from employees, they have been theorized to be negatively related. But this also raises another issue in the study of specific climates: while various climates may indeed require contradictory behaviors, this would be best examined using moment-by-moment choices that employees make about specific climates and related goals. But rather than studying climates dynamically, studies often take a static "snapshot" of climate levels, either within a single measurement session or on multiple, but still static, occasions.

Using such methods, findings generally show a relatively strong positive, rather than negative, association between pairs of specific climates. For example, safety climate and service climate show a strong positive correlation, both within a single organization (r = .46, Veld, Paauwe, & Boselie, 2010) and among individual employees from various organizations (r = .65, Brawley & Pury, 2014). While some studies do find more modest correlations between specific climates (e.g., unit supervisory support and unit control climates r = .12, Bacharach & Bamberger, 2007), numerous studies find strong positive associations between other combinations of climates, including service climate with ethical climate (r = .78, Myer et al., 2016) and diversity climate (r = .45, McKay et al., 2011); support climate with innovation, goal orientation (r = .47-.67, González-Romá, Peiró, & Tordera, 2002), and team climate (r = .71, Gelade & Young, 2005); and among a variety of justice climate types (r = .34 - .88, Liao & Rupp, 2005; r = .69 - .84, Mayer, Nishii, Schneider, & Goldstein, 2007; r = .62 - .68, Spell & Arnold, 2007). Generally, empirical evidence shows strong positive associations between multiple climates, which may be surprising given that they are intended to be specifically focused (and may compete).

We propose first examining the pattern of and reasons for individuals' responses to multiple climate measures. Specifically, what leads respondents to answer the items related to many different climates similarly? Items measuring different specific climates could share a focus on rewarding relevant behaviors, which matches many common organizational climate definitions (Schneider et al., 2013), but that also match each other. Such similarities in item wording – among a number of other research design elements, like measuring climates statically – could inflate the observed correlations between specific climate measures. However, strong correlations may not just be measurement artifacts: theoretically, it could be that a unified, general climate perception drives individuals' more specific climate perceptions. In this case, it would be the underlying general climate perception – and specifically, how positive it is – that accounts for the associations between more specific climate perceptions, which also tend to be positively valenced (e.g., promoting safety, service). In the following section, we outline our examination of both the phenomenon of strong specific climate associations and two potential mechanisms for such strong associations.

The Current Study

Our first objective is to study this phenomenon itself: we examine a larger set of specific climates, rather than examining only one or a few specific climates at a time (e.g., Ostroff et al., 2003; Myer et al., 2016). We conduct this first study of its kind in the context of multiple organizations; that is, to maximize the variance on climate measures, we examine individual (psychological) climate ratings from participants working at a variety of organizations.

Generally, research on specific climates measures only the specific climates relevant to the focus of each study. For our purposes, though, this good research practice limits the body of empirical evidence to the correlations among only a few specific climates at a time. Furthermore, these observations are potentially inflated if the climates that are relevant to a given study are also associated with each other. Therefore, we will test whether strong positive associations are observed with a larger and more varied set of seven specific climates. In this way, the first purpose of our work is descriptive and will provide a basic understanding the associations among individual perceptions of a larger set of climates.

Our paper's contribution – to understand the correlations between a varied set of specific climates – was best served by choosing a set of specific climates that embody the "variety" in the specific climate literature. We made this determination based on both research attention the likely observations – ideally, null observations – among the set of climate measures we chose. In other words, we sought out variety in our chosen climates so that strong correlations might not typically be expected between them, thus setting up a rigorous test of our hypothesis of strongly correlated specific climates. Last, given that we study this issue from the individual level (i.e., psychological climate), we excluded climates that are more exclusively tied to supervisory behaviors, such as justice and leadership climates.

With these bases in mind, we first chose service and safety climates as two of the most commonly studied specific climates (e.g., Schneider et al., 2013; and Kuenzi & Schminke, 2009 found that safety and service climates had been the subject of 19 and 17 published papers, respectively). To represent a range of other climates in terms of their representation in the literature, we selected: fair treatment climate as less frequently studied (e.g., diversity climate had one published work at the time of Kuenzi & Schminke's 2009 paper); collaboration climate as one studied almost as frequently as safety and service climates (15 studies were published on support climate per Kuenzi & Schminke's review); communication climate which falls in between those two extremes (with seven published studies on involvement climates per Kuenzi & Schminke's review); and work-life balance climate, which was not represented in Kuenzi & Schminke's review and thus expands the variety of our set of climates.

Finally, to fully extend the range of likely observations in our data, we included one negatively valenced climate – climate of fear – in this study. Climate of fear had a negative correlation with communication *culture* in the study of its initial development (r = -.33; Ashkanasy & Nicholson, 2003). Therefore, both theoretically and empirically, climate of fear would likely not fit the broader pattern of positive correlations between all specific climates.

Based on prior empirical evidence, we hypothesize that the relationships between these specific climates will be strongly positive, except for climate of fear. Due to the negative focus of that specific climate, we propose that it will show strong but negative relationships with the other climate measures.

> *Hypothesis 1*: Except for climate of fear, all of the specific climates will be strongly positively associated with each other. Climate of fear will be strongly *negatively* associated with all of the other specific climates.

If we support *Hypothesis 1*, it will be important to explore why multiple specific climates are strongly associated. Understanding the mechanisms behind these observations will provide a broad basic understanding of multiple specific climates within an organization, which could be useful in improving both theory and interventions targeting the multiple climates in a given workplace.

Methodological mechanism. One possible reason for the strong relationships between different organizational climates is relatively simple: methodological effects. Proponents of common method variance (CMV; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012) argue that methodological choices like measuring constructs at a single time point, using a single rater, and using a single method (e.g., survey), can artificially affect the relationships observed between measures. CMV is indeed a primary concern in organizational research (Spector, 1987). Given that climates may often be assessed within a single measurement occasion and with similar methods (e.g., survey), it is important to determine whether strong associations between multiple climates are observed simply due to CMV. To test this hypothesis, the current study split all construct measures across two time points in order to evaluate the significance and magnitude of variance associated with the climate constructs compared to that of the common methods (cf. Podsakoff et al., 2003, 2012). This design allowed us to examine in depth two possible sources of CMV: (1) self-report and (2) the two measurement occasions. For this study, we are interested in particular in how CMV affects the relationships between pairs of specific climates.

Hypothesis 2a: The strength of observed relationships among the specific climates will be reduced when accounting for CMV.

Theoretical mechanism. A second possible explanation for the relationships between specific climates is, by contrast, theoretical: some organizations may generally be more responsive to employees' needs for successful job performance and more aware of employees' current job performance levels. Stated differently, there may be organizations that are simply "good" and have generally positive climates, regardless of the specific climate in question. This approach is derived from the concept of general climates, where it is theorized that specific climates cannot emerge without the presence of broader, more fundamental climates in the organization (Schneider et al., 2013; Schneider, White, & Paul, 1998; Schulte et al., 2009; Wallace & Chen, 2006). One example of this is a general climate for well-being, which

Schneider, Ehrhart, and Macey (2011, 2013) argue could be a necessary prerequisite for developing more specific climates in a given work setting. Other general climates could include a broad focus on achievement or market orientation (Kuenzi, 2008).

Similarly, it is possible that one specific climate could promote another specific climate's emergence. As an example, if a manager provides the required safety equipment (e.g., safety goggles), monitors whether each employee actually uses the equipment while performing the job, provides feedback to those who do and do not comply, and responds promptly to safety concerns voiced by employees, then employees may be more likely to engage in more safety behaviors, compared to an employee with a manager who does not provide safety equipment and does not monitor or provide feedback about the use of safety equipment. However, in doing so, the manager may also encourage employee behaviors towards other organizational goals and corresponding specific climates. For example, monitoring safety compliance and providing performance feedback requires communication, thus promoting a climate for communication.

Likewise, providing training for employees to ensure that the job is performed safely may in many cases be redundant with good customer service – such as when an employee learns proper food preparation procedures, resulting in a meal for a customer that is both satisfying and safe for consumption. Further, the careful monitoring of and value placed upon safe working behaviors may promote – rather than discourage – the reporting of on-the-job accidents (Clarke, 2006); this could manifest as both a positive association of safety climate with service climate and communication climate, as well as a negative association with climate of fear. In sum, a positive general climate may be associated with generally "good" specific climates and thus partially account for a strong association between specific climates.

Hypothesis 2b: Relationships among specific climates will be partially explained by general positive climate.

The contributions of the present study are in providing a strong test of (*Hypothesis 1*) whether individual perceptions of multiple climates are strongly associated and, if so, determining whether the observed relationships between specific climates can be explained by (*Hypothesis 2a*) CMV and/or (*Hypothesis 2b*) a general positive climate. This work will overcome the tendency for organizational climate research to focus on one organizational climate at a time (e.g., Ostroff et al., 2003; Myer et al., 2016) and advance our understanding of the mechanisms driving individual perceptions of multiple specific climates in a given workplace.

Method

Participants and Procedure

Participants were recruited via Amazon's Mechanical Turk (MTurk) to complete two HITs approximately four weeks apart. MTurk is an online resource for recruiting and compensating individuals to complete various tasks, including research tasks such as the surveys for this study. Past research generally supports the quality of data obtained from MTurk respondents compared to traditional research samples (e.g., Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013), but it is important to consider the generalizability of such a sample (Cheung, Burns, Sinclair, & Sliter, 2017). We recruited participants using MTurk in order to increase the likelihood that participants were employed in a wide variety of jobs and industries, and thus enhance both the variance of climate scale scores (as opposed to the homogeneity that might be expected on climate within a given organization, e.g., Ashkanasy & Nicholson, 2003; Schneider, 1987) and the generalizability of our findings across many levels of each specific climate. Additionally, there is no reason to expect that individual ratings of organizational climates (i.e., psychological climate) should differ systematically between employed MTurk Workers and traditional employees. For our study, MTurk Workers were required to reside in the United States (U.S.) and have an MTurk HIT approval rating of 95% or greater in order to participate. We requested in the HIT listing that participants were currently employed in a regular job (i.e., outside of MTurk).

Participants were compensated for their completion of each of the two HITs. This two-part survey design enabled two different tests of CMV (*Hypothesis 2a*), with one based on self-report (common to all measures in the study) and one based on measurement occasion. Pay for the first HIT was determined using US federal minimum wage. For the estimated 8-10 minutes required, pay for the completed first HIT was $1.20 ($7.25/hour × ⅙th of an hour = $1.21). The second HIT was available for a period of 29 to 44 days after the first HIT, and MTurk Workers were notified that the HIT was available in messages sent via MTurk. To encourage participants to complete the study, pay for the second HIT was doubled to $2.40 for the same time requirement.

In the first HIT, 452 participants completed demographic items and half of the items from each questionnaire, which were randomly selected by the research team and randomized within each questionnaire by the survey software to minimize ordering effects. In the second HIT, 353 returning participants (78%) completed the remaining halves of each questionnaire, and these respondents comprised the final sample for study analyses.

Responses to the second HIT were matched to responses from the first HIT using MTurk Worker IDs. There was no difference in average age, hours worked per week, or tenure for participants who completed only the first part (mean age = 30.80, *SD* = 9.06; mean hours per week = 39.23, *SD* = 9.74; mean tenure = 4.61 years, *SD* = 4.14) and those who completed both parts (mean age = 32.89, *SD* = 9.17; mean hours per week = 39.06, *SD* = 9.25; mean tenure =

5.13 years, $SD = 4.36$), $F \leq 3.29$, $p \geq .07$. There was also no significant difference based on gender between participants who completed only the first part ($n = 47$ male, or 56.63%) and those who completed both parts of the study ($n = 197$ male, or 56.12%), $\chi^2(1) = .01$, $p = .946$. Because the participants in this study were recruited from a variety of industries, organizations, and work groups, climate scores were not aggregated beyond the individual level.

Measures

Demographics. Participants completed personal and work-based demographic items, such as the number of hours worked per week.

Specific climates. Participants completed questionnaires regarding climates for collaboration, communication, fair treatment, fear, safety, service, and work-life balance. Participants also completed a revised climate of fear questionnaire developed by the authors, detailed below. Response options were selected by the research team to best suit each measure. Except where noted, response options for all scales ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

Collaboration climate. Collaboration climate ($\alpha = .87$) was measured using five items from the Workplace Social Capital Measure (Kouvonen et al., 2006). A sample item is *People in the work unit cooperate in order to help develop and apply new ideas.*

Communication climate. Communication climate ($\alpha = .90$) was measured using nine items selected from Downs & Hazen's (1977) Communication Satisfaction Questionnaire. A sample item was *Extent to which my supervisor listens and pays attention to me.* Response options ranged from 1 (*not at all*) to 5 (*completely*).

Fair treatment climate. Fair treatment climate ($\alpha = .76$) was measured using four items modified based on Matteson's (2008) Perceived Diversity Inclusive Climate scale. A sample item was *Qualified personnel – regardless of gender, race/ethnicity, religion, age, and physical disability – can expect similar training opportunities.*

Fear climate. Climate of fear (α = .93) was measured using the 13-item scale developed by Ashkanasy and Nicholson (2003). A sample item is *I feel people aren't totally truthful with me because they worry about what they have to tell me.*

Fear climate – revised scale. Items from the original climate of fear scale (CFS; Ashkanasy & Nicholson, 2003) seemed to resemble the individual difference Fear of Negative Evaluation (FNE; Watson & Friend, 1969). For example, the CFS item *I feel fearful or anxious when I am at work* seemed to reflect the FNE item *I often worry that I will say or do the wrong things.* Consequently, we revised CFS items to more closely reflect climate perceptions rather than individual differences in emotional response, as was part of Ashkanasy and Nicholson's intent in creating a "specifically emotional construct" (p. 27). For example, the CFS item *I dread repercussions at work because they are unpredictable* was revised to *Repercussions at work are unpredictable.* Two items from the original CFS measure were not easily translatable to the revision's focus on the workplace in general. Therefore, a Revised Climate of Fear Scale (CFS-R; α = .90) included 11 items. The complete CFS-R is provided in Appendix A.

Safety climate. Safety climate (α = .87) was measured using five items from Zohar and Luria's (2005) Organization-Level Safety Climate scale. A sample item is *Top management in this plant/company is strict about working safely when work falls behind schedule.*

Service climate. Customer service climate (α = .83) was measured using four items from the Global Service Climate Scale developed by Schneider, White, and Paul (1998). A sample item is *How would you rate efforts to measure and track the quality of the work and service in your business?* Response options ranged from 1 (*poor*) to 5 (*excellent*).

Work-life balance climate. Work-life balance climate (α = .84) was measured using seven items from the Managerial Support and Career Concerns measures from the National Study of the Changing Workforce as used by Behson (2005). A sample item is *My supervisor really cares about the effects that work demands have on my personal and family life.*

General positive climate. An 11-item questionnaire designed for this study measured a variety of behaviors related to enhancing general employee performance, such as providing resources for doing one's job, investing in employee development, tracking job performance, and being responsive to employee feedback about issues. This measure is used to test *Hypothesis 2b*, that general positive climate accounts for associations between specific climates.

To develop this measure, we used Schneider and Reichers's (1983) definition of climate as a shared set of perceptions regarding policies, practices, and procedures about what an organization rewards, supports, and expects. We focused especially on the elements of rewards, support, and expectations, and aimed to avoid mentioning strategic goals that would align with certain specific climates; for example, we include no mentions of support specifically for safety or service. In doing so, we mirrored procedures used by Ostroff, Kinicki, & Clark (2002) to develop a molar climate measure, and we followed the distinctions delineated by Schneider et al. (2013):

> To clarify the distinction between molar climate and focused climate, here is what might have been a typical generic climate item followed by the strategically focused version of the item: "*My supervisor says a good word whenever he sees a job well done*" versus "*My supervisor says a good word whenever he sees a job done according to the safety rules*" (Zohar, 2000, as cited in Schneider et al., 2013).

A sample item created for our general climate measure is *My manager and coworkers* *react quickly when I report problems.* The complete measure is provided in Appendix B.

This new measure showed acceptable internal consistency reliability, α = .88, but the initial measurement model (with all items) showed inadequate fit, with Satorra-Bentler (S-B) scaled robust $\chi^2(44) = 227.51$, $p < .001$, CFI = .847, NNFI = .808, SRMR = .069, RMSEA = .109 with 90% CI = [.095, .123]. After removing one unreliable item (*Insist on regularly checking my work*, which had a standardized factor loading of .09) and one redundant item (*Provide all the equipment and information I need to do my job* was dropped for redundancy with the item *Provide me with the tools, technology, or other resources I need to do my job well*), the baseline model fit improved and neared commonly accepted fit guidelines for a number of the model fit statistics, CFI = .888, NNFI = .875, SRMR = .066, though not for all fit statistics, S-B $\chi^2(27) = 129.87$, $p < .001$, RMSEA = .131 with 90% CI = [.113, .148]. Given that this was a newly developed measure and considering the historical difficulty of conceptually and empirically defining general climate (see e.g., Kuenzi & Schminke, 2009; Schneider et al., 2011, 2013), we accepted these fit values for the present analyses. But we do recommend future development of this measure as well as the exploration of the present study's hypotheses using other general climate measures.

Fear of negative evaluation. In order to evaluate the CFS and CFS-R as measures of climate or as measures of individual differences, social-evaluative anxiety was measured using the Fear of Negative Evaluation Scale (FNE; α =.90; Watson & Friend, 1969). Due to researcher error, one item on the FNE scale – *I am frequently afraid of other people noticing my shortcomings* – was duplicated in the surveys, while another item – *The disapproval of others would have little effect on me* – was omitted for the first 301 participants. The missing item was replaced in the survey for remaining participants.

Results

Missing data on study variables (.78% total of all item responses, with .32% missing due to researcher error as reported for the FNE scale) were imputed using the expectation maximization (EM) algorithm (Newman, 2003).

Descriptive statistics are reported in Table 1. While both the original and the revised climate of fear scales (CFS and CFS-R, respectively) were reliable, the original scale had a slightly higher internal consistency (α for CFS = .93 versus α for CFS-R = .90). However, CFS was significantly more strongly related to FNE ($r = .45$) than CFS-R ($r = .32$), $z = 12.03$, $p < .001$. Despite its slightly lower internal consistency reliability, we use CFS-R in subsequent analyses given CFS's stronger association with the individual difference variable.

Relationship Among Climates (*Hypothesis 1*)

Shown in Table 1, except for climate of fear, the climates were all strongly positively related to each other, $r = .49$ to .77 (cf. Cohen, 1992). By contrast, climate of fear showed strong negative relationships with all of the other climates, $r = -.62$ to -.78. These results support *Hypothesis 1*, and extend known information about strong relationships among multiple climates. The remaining hypothesis tests explore two of the possible mechanisms driving this pattern of results.

Underlying Mechanisms for Relationships Among Climates

Establishing a baseline model for comparisons. We first established a baseline model of the seven specific climate measures (as described in the next paragraph) before exploring effects of CMV, described in the subsequent paragraphs. Robust fit statistics were used for all analyses because multivariate kurtosis was high, with an initial normalized estimate of 54.50 (cf. Kline, 2011). Our reported model fit statistics include both relative fit – i.e., Satorra-Bentler scaled χ^2 (S-B χ^2), the comparative fit index (CFI), and the non-normed fit index (NNFI), which is also known as the Tucker-Lewis index (TLI) – and absolute fit indices – i.e., standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA). While a nonsignificant χ^2 indicates good model fit, this index is sensitive to sample size and model complexity. Therefore, while it is commonly reported, it should be considered along with a number of other indices to determine model fit (Byrne, Shavelson, & Muthen, 1989; Hooper, Coughlan, & Mullen, 2008). Therefore, CFI and NNFI values of approximately .90 or higher – accompanied by null model RMSEA values exceeding .158 (Kenny, 2015) – and SRMR and RMSEA values of approximately .08 or lower were considered indicative of a well-fitting model throughout this study. For comparisons of nested models, we report change in S-B χ^2 (ΔS-B χ^2). However, like χ^2, ΔS-B χ^2 is also sensitive to sample size, so we relied on the 90% confidence intervals (CIs) for RMSEA for determining meaningful improvement in model fit.

The initial measurement model for the seven climate constructs fit the data inadequately, S-B $\chi^2(924) = 2136.60$, $p < .001$, CFI = .838, NNFI = .827, SRMR = .063, RMSEA = .061. To improve model fit, one climate of fear item – *When speaking up in this organization, you have to able to prove all your remarks* – was removed from the measurement model for very low reliability, with a standardized loading of .31. Three correlated pairs of item error terms contributing to model misfit were also identified using the Lagrange Multiplier (LM) test for adding parameters. Each of these pairs of items came from the same specific climate measure and were similarly worded, indicating redundancy; for example, the collaboration climate item *Members of the work unit build on each other's ideas in order to achieve the best possible outcome* was very similar to *People in the work unit cooperate in order to achieve the best possible outcome*. See Table 2 notes for complete item pair text. Rather than adding inter-item error covariances to our model, however (cf. Kline, 2011), we removed the one item with the lowest standardized factor loading out of each pair from the measurement model for all subsequent analyses (see Tables 2-3). These changes – removing one unreliable item and three redundant ones – resulted in a modified baseline model with acceptable fit; see Model 1 in Table 4.

Common method effects (*Hypothesis 2a*). Following the establishment of the baseline comparison model (Model 1 in Table 4), effects of CMV were evaluated in two ways. With each method, estimating CMV effects improved model fit significantly. First, we examined a model with two method factors, corresponding to each of the two data collection sessions (Model 2 in Table 4; also see Figure 1). In this model, each item from the first survey was predicted by both its respective specific climate factor and one method factor; and each item from the second survey was predicted by both its respective specific climate factor and a second method factor. Estimating two method factors in the model fit the data well and significantly better than the model with specific climate factors alone (Model 1), indicating effects of CMV based on measurement occasion (shown in Model 1 and 2's non-overlapping RMSEA CIs in Table 4).

Our second test of CMV used a single method factor, representing method effects based on self-report measures, as were used for all climate items (Model 3). In this model, each item was predicted by its respective specific climate factor and the one method factor. Like the model with two method factors (Model 2), this model fit the data well and significantly better than the model with specific climate factors alone (Model 1), indicating effects of CMV based on self-report. All item loadings for Models 1-3 are reported in Table 2.

Comparing Models 2 and 3, however, there were not meaningful differences in fit between the two ways of estimating CMV (see Model 2 and 3's overlapping RMSEA CIs in

Table 4), suggesting the effects of measurement occasion and self-report measures had equivalent effects on the climate measures. By contrast, examining average variance extracted (AVE; Fornell & Larcker, 1981) showed that the two CMV factors (Model 2) account for 7% of variance across the specific climate items, compared to 19% accounted for by a single CMV factor (Model 1). However, correlations among specific climates – the associations of main interest in this study – changed relatively little with either two method factors (average $\Delta r \leq |.03|$) or one method factor (average $\Delta r \leq |.08|$; see Table 5).

We repeated these two tests of CMV with models that also included general climate as a second-order factor predicting each of the seven first-order specific climate factors (Model 4). As before, introducing either two method factors (Model 5) or one method factor (Model 6) made the model fit both well and significantly better, but the two ways of estimating CMV appeared to be equivalent in their effects on model fit (compare Model 5 and 6's RMSEA CIs in Table 4). All item and factor loadings, including second-order factor loadings, for Models 4-6 are reported in Table 3. AVE estimates showed a similar pattern as before, with two CMV factors (Model 5) accounting for 8% of variance in the specific climate items and a single CMV factor accounting for 14% (Model 6). And as before, the correlations among specific climates changed relatively little with one method factor (average $\Delta r \leq |.05|$). But in contrast to the results without a general climate factor, there were larger average changes in the correlations among specific climates with two method factors (average $\Delta r \leq |.11|$, cf. Cohen, 1992; see Table 6).

Although the single CMV factor accounted for a larger portion of variance across the specific climate items, the portion of the model of most interest to the present study – that is, the correlations among specific climate factors – is affected the most when accounting for two measurement occasions as well as general positive climate. Based on model comparisons, AVE, and effects on the correlation matrices, we conclude that there is some support for *Hypothesis 2a* of CMV effects, particularly when estimating measurement occasion effects – represented by the two CMV factors – along with general climate's effects.

General positive climate (*Hypothesis 2b*). Much larger effects were observed when adding general climate to the model (Models 4-6). First, though, we note that the model including a second-order general climate factor is both simpler than the model with separate specific climate factors and fits the model just as well (compare Model 4 to Model 1's RMSEA CIs in Table 4). Therefore, we can conclude that general climate offers a more parsimonious representation of a variety of specific climates.

Additionally, compared to models without general climate, correlations among specific climates were largely attenuated when including general climate (e.g., average $\Delta r \leq |.60|$); compare Table 6 to Table 5). Overall, this pattern of findings shows strong support for *Hypothesis 2b*, that general climate can account for observed associations between specific climates. But we note that these effects are not uniform: for example, work-life balance and fear climates showed smaller changes in their relationships with other climates when general climate was included.

To further test whether the relationships observed between climates depends on a positive general work climate (*Hypothesis 2b*), we also conducted a series of regression-based moderation. Here, we tested whether general climate moderated relationships between pairs of climates: each specific climate was, in turn, used as the outcome variable (y) in six multiple regressions with the other six climate measures entered as the predictor variable (x), and general climate entered as the moderating variable (z). To maintain an acceptable family-wise Type I error rate in testing all possible pairs of climates, we used a Bonferroni correction to our selected

Type I error rate of .05 / 42 pairs = .001. None of the *F* change tests of moderation effects met this corrected cutoff, with a minimum observed $p = .013$. Therefore, there was no support for *Hypothesis 2b* based on these analyses.

However, the evidence described above – in testing *Hypothesis 2b* using structural equation modeling – does indicate that general climate has a considerable effect on the relationships observed between specific climates. There was a considerable difference in average correlations between specific climates when general climate was estimated (e.g., without CMV factors, average $r \leq |.74|$) or not estimated (average $r \leq |.18|$; see Tables 5-6). Additionally, the standardized loadings of the first-order specific climate factors onto the second-order general climate factor are all very strong, ranging from |.64| to |.93| across the various models (see Table 3). Therefore, we conclude that there is support for *Hypothesis 2b* based on our structural equation modeling findings, and that general climate accounts for a significant and sizeable portion of the covariance between specific climates. The difference in findings based on regression and these based on structural equation modeling further highlight the need to estimate the effects of multiple climates simultaneously, as in structural equation modeling, rather than in isolation, as in separate regression models.

Discussion

This study begins to address whether, how, and why multiple organizational climates overlap. Results of this study provide empirical, descriptive information about the associations between a number of multiple specific climates, thereby addressing a key gap in current organizational climate literature (Ostroff et al., 2003; Schneider et al., 2013; Zohar et al., 2012). We extended previous empirical results, which typically examine only a few climates at once, and found strong relationships among a variety of specific organizational climates. Additionally, we provide evidence that (at least) two mechanisms drive this association. Results suggested that the relationships between these employee perceptions derive primarily from a generally positive organizational climate. However, there were also non-negligible effects of CMV based primarily on measurement occasions, providing some initial evidence of effects of current measurement practices on observed specific climate correlations. Instead of multiple measurement occasions alleviating CMV effects (cf. Podsakoff et al., 2003, 2012), it appears that there may be an increase in artificial covariance when using this approach with multiple climate measures. Further study of methodological effects is needed given that the present results suggest that existing recommendations may actually enhance such effects. By contrast, it is perhaps a relief to observe that CMV effects based on self-report (i.e., estimated using one CMV factor) had a small impact on correlations among specific climates. Although self-report is a natural fit for measuring climate perceptions and similar item structures are likely among climate measures, climate researchers still have many other useful methods for reducing CMV available, such as varying response scales between climate measures (cf. Podsakoff et al., 2003, 2012). Future research might also examine other possible artifacts common to climate research, such as the varying referents (e.g., manager, organization, or coworkers) across and even within climate scales. Though CMV applies to this topic as it does in other organizational research, our findings do indicate that the "overlap" we observe between multiple climates is more than a mere measurement problem; instead, these positive associations are also comprised of meaningful, theory-based associations.

Theoretically speaking, these results support approaching the associations between multiple climates primarily as a phenomenon deriving from a positive general climate (Schneider et al., 2013, 1998; Schulte et al., 2009; Wallace & Chen, 2006). The strong attenuation (average

$\Delta r \leq |.60|$) we observed in the correlations among specific climates when accounting for general positive climate, along with the comparable fit of the simpler model that includes general climate (compared to the model that excludes it), is compelling evidence for general climate as the mechanism underlying for specific climates. However, we are not prepared to call for a moratorium on specific climate research; instead, we suggest several additional steps that should be taken before advancing such a claim. First, this is only the first study of its kind. Although we intentionally examined a variety of specific climates, the seven climates examined are certainly not an exhaustive representation of the literature. Additionally, we examine only one type of general climate measure. So our first suggestion is additional research on this phenomenon to confirm and further understand its occurrence with additional specific and general climate measures.

A practical, intermediate step would be to include a general climate measure in addition to specific climate measures in future studies, as also proposed by Kuenzi and Schminke (2009) and Schneider et al. (2013). This would allow researchers to evaluate the relative effects of specific and general climates on targeted outcomes. Although these recommendations bring with it the same issues from early climate research on properly defining and measuring general climate, we think it is a worthy inclusion in future data collection and analysis efforts in order to understand and potentially integrate the climate literature. We also provide a newly validated general climate measure that may be further developed for use in such studies. Second, given climate's definition as a shared, group-level perception, as well as the great potential for variation in phenomena across levels (Kozlowski & Klein, 2000), it will be crucial to also examine this phenomenon at the group level.

Last, we also argue that our findings support the continued study of more complex associations between multiple climates. Some studies have found that climates are indeed compensatory: for example, justice climate and sexual harassment climates may be substitutable in terms of their impact on sexual harassment (Rubino et al., 2018). However, more complex associations could be indicated through strong correlations between climates (e.g., service and ethical climates interact to enhance business profitability [Myer et al., 2016], and diversity and service climates interact to enhance customer satisfaction [McKay et al., 2011]), and we encourage researchers to continue exploring these complex effects. Our study may help identify intriguing pairs of specific climate for further study. For example, work-life balance and fear climates' correlations with other climates changed relatively little when including general climate. It is possible that climates vary in their independence from a generally positive climate, and these two might be ideal variables for studying that phenomenon. In general, though, the varied associations between multiple climates needs continued study, with a specific focus on describing and explaining these relationships.

Our findings may also provide actionable links for organizational development. These findings suggest broader – i.e., more general – changes required than simply focusing on promoting one specific climate. Alternatively, these findings could suggest that interventions to improve one specific climate – through its association with a general climate perception – could enhance other specific climates, too. This area of research would benefit from understanding the patterns of goal-driven behaviors associated with each climate, whether those differ significantly from each other, and in which order each climate develops and the behaviors occur. While climate theory posits that climates drive behaviors (see Bowen & Ostroff, 2004; e.g., Neal, Griffin, & Hart, 2000), some behaviors associated with one specific climate could, through a general climate, drive the development of a different specific climate. The sequence of these effects could be studied in a work setting where new climates may be likely to form, such as a newly-established team.

More broadly, this work contributes to our understanding of the changing nature of work, which requires increased role variety and balancing of various expectations (e.g., Schabracq & Cooper, 2000). Understanding how employees respond to expectations for completing multiple goals associated with various specific climates will be essential to understanding modern jobs, which more often encompass multiple roles or functions.

One limitation of the present study is the examination of only individual perceptions of climates, though we do examine this phenomenon across multiple organizations and industries. Future research should investigate these relationships at multiple levels (e.g., group, organization) and within single organizations to examine the generalizability of our findings to consensual climate research. Likewise, the set of climates studied here is certainly not exhaustive, and we encourage additional study of this phenomenon with other large sets of specific climates. As noted earlier, future study of this phenomenon might focus especially on climates that showed smaller changes in correlations when modeling general climate (i.e., fear climate, work-life balance climate).

Future research should also explore other possibilities for the measurement of multiple climates. Typical measurement practices – i.e., obtaining agreement ratings for a number of specific climates – make it possible to simultaneously rate multiple climates as highly important. Other measurement practices – such as forced distributions of limited resources – may better reflect the reality of a limited store of employee energy or other organizational resources to fulfill the demands of multiple climates (Brawley & Pury, 2017). While such measurement techniques impose some limitations (e.g., Meade, 2004), they may more accurately index the relative importance of multiple climates within a workplace.

Conclusion

Our results support strong associations among a variety of specific psychological climates. The present study informs us about both the magnitude of relationships between climates in a cross-sectional, multi-organizational sample, as well as primary theoretical and secondary methodological reasons for these associations. Results of this study will be valuable both for future research on multiple climates within each workplace as well as practical applications for improving employee and organizational performance.

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Table 1

Descriptive Statistics

Variable	*M* (*SD*)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Collaboration Climate	3.84 (.75)	.87									
2. Communication Climate	3.42 (.82)	.75	.90								
3. Fair Treatment Climate	4.13 (.76)	.62	.60	.76							
4. Fear Climate	2.24 (.78)	-.74	-.75	-.67	.93						
5. Fear Climate (Revised Scale)	2.50 (.78)	-.74	-.77	-.64	.87	.90					
6. Safety Climate	3.64 (.84)	.64	.67	.53	-.63	-.62	.87				
7. Service Climate	3.40 (.92)	.72	.77	.56	-.71	-.72	.70	.83			
8. Work-Life Balance Climate	3.46 (.81)	.58	.61	.52	-.73	-.78	.49	.56	.84		
9. General Positive Climate	3.68 (.69)	.77	.79	.66	-.79	-.77	.71	.79	.58	.88	
10. Fear of Negative Evaluation	2.73 (.81)	-.25	-.27	-.15	.45	.32	-.22	-.26	-.24	-.28	.90

Note. $N = 353$. Reliability reported on diagonal. $r \geq |.11|$ significant at $p < .05$ level.

Table 2

Structural Equation Model Results

Climate Measures	Baseline	Loadings with two method factors (Model 2)			Loadings with one method factor (Model 3)	
Collaboration Climate	(Model 1)	Climate	"Time 1"	"Time 2"	Climate	"Self-report"
Item 1	.83	.78	.29		.62	.57
Item 2	.75	.67	.34		.49	.56
Item 3	.84	.77	.35		.54	.64
Item 4[a]	n/a	n/a	n/a	n/a	n/a	n/a
Item 5[a]	.66	.67		.10	.59	.35
Communication Climate						
Item 1	.58	.59	.23		.37	.48
Item 2	.67	.67	.28		.41	.57
Item 3	.82	.80		.21	.74	.37
Item 4	.57	.55	.26		.37	.47
Item 5	.81	.76		.32	.75	.35
Item 6	.82	.78		.27	.73	.39
Item 7	.58	.59	.26		.34	.52
Item 8	.76	.70		.36	.72	.29
Item 9	.73	.69		.32	.73	.24
Fair Treatment Climate						
Item 1	.69	.74		.14	.72	.29
Item 2	.75	.68	.32		.46	.49
Item 3	.66	.58	.31		.38	.43
Item 4	.59	.65	-.06		.63	.22

[a]Item 4 (*Members of the work unit build on each other's ideas in order to achieve the best possible outcome*) was dropped for redundancy with Item 5 (*People in the work unit cooperate in order to help develop and apply new ideas*). [b]Item 5 (Considers safety when setting production speed and schedules) was dropped for redundancy with Item 4 (Requires each manager to help improve safety in his/her department). [c]Item 4 (*How would you rate the tools, technology, and other resources provided to employees to support the delivery of superior quality work and service?*) was dropped for redundancy with Item 3 (*How would you rate the leadership shown by management in your business in supporting the service quality effort?*).

Table 2 (continued)

Climate Measures	Baseline	Loadings with two method factors (Model 2)			Loadings with one method factor (Model 3)	
Fear Climate	(Model 1)	Climate	"Time 1"	"Time 2"	Climate	"Time 1"
Item 1	.74	.69	-.30		.51	-.54
Item 2	.82	.73	-.44		.46	-.71
Item 3	.69	.73		-.09	.68	-.30
Item 4	.79	.72	-.36		.49	-.63
Item 5	.72	.63	-.41		.40	-.61
Item 6	.73	.77		.11	.66	-.36
Item 7	.81	.72	-.46		.45	-.71
Item 8	n/a	n/a	n/a	n/a	n/a	n/a
Item 9	.67	.71		.00	.63	-.31
Item 10	.53	.58		-.10	.59	-.14
Item 11	.54	.59		.18	.55	-.22
Safety Climate						
Item 1	.66	.65	.35		.46	.56
Item 2	.80	.82		.03	.78	.24
Item 3	.83	.81		.14	.77	.31
Item 4[b]	.85	.84		.11	.79	.31
Item 5[b]	n/a	n/a	n/a	n/a	n/a	n/a
Service Climate						
Item 1	.75	.73		.32	.79	.23
Item 2	.76	.75		.25	.76	.28
Item 3[c]	.77	.75	.35		.49	.63
Item 4[c]	n/a	n/a	n/a	n/a	n/a	n/a
Work-Life Balance Climate						
Item 1	.75	.75		-.25	.68	.34
Item 2	.73	.74		-.08	.65	.34
Item 3	.57	.55	.29		.37	.45
Item 4	.62	.63		-.22	.69	.12
Item 5	.68	.68		-.19	.70	.20
Item 6	.61	.58	.28		.42	.45
Item 7	.63	.58	.32		.43	.47

Table 3

Structural Equation Model Results with General Positive Climate Included

Climate Measures	Baseline	Loadings with two method factors (Model 5)			Loadings with one method factor (Model 6)	
Collaboration Climate	(Model 4)	Climate	"Time 1"	"Time 2"	Climate	"Time 1"
Item 1	.83	.77	.30		.66	.50
Item 2	.75	.66	.36		.52	.54
Item 3	.84	.76	.37		.61	.58
Item 4[a]	n/a	n/a	n/a	n/a	n/a	n/a
Item 5[a]	.66	.68		.01	.61	.31
Communication Climate						
Item 1	.58	.55	.23		.45	.39
Item 2	.67	.63	.33		.49	.52
Item 3	.82	.82		.07	.78	.28
Item 4	.57	.53	.29		.43	.42
Item 5	.81	.82		.11	.79	.25
Item 6	.82	.82		.05	.77	.30
Item 7	.58	.54	.28		.42	.44
Item 8	.76	.77		.02	.73	.23
Item 9	.73	.74		.07	.73	.18
Fair Treatment Climate						
Item 1	.69	.77		.03	.76	.21
Item 2	.75	.64	.34		.49	.49
Item 3	.66	.55	.32		.41	.43
Item 4	.59	.65	-.03		.65	.15
Fear Climate						
Item 1	.74	.68	-.30		.57	-.46
Item 2	.82	.73	-.42		.58	-.60
Item 3	.69	.74		-.12	.73	-.17
Item 4	.79	.71	-.36		.57	-.56
Item 5	.72	.62	-.42		.49	-.55
Item 6	.73	.76		.07	.69	-.28
Item 7	.81	.72	-.44		.58	-.59
Item 8	n/a	n/a	n/a	n/a	n/a	n/a
Item 9	.67	.72		.02	.68	-.21
Item 10	.53	.57		-.09	.59	-.08
Item 11	.54	.58		.08	.56	-.14

[a, b, c]See Table 2 notes on items removed from specific climate measures. [d]Item removed for unreliability. [e]Item removed for redundancy.

Table 3 (continued)

Climate Measures		Loadings with two method factors (Model 5)			Loadings with one method factor (Model 6)	
Safety Climate	Baseline (Model 4)	Climate	"Time 1"	"Time 2"	Climate	"Time 1"
Item 1	.66	.65	.37		.52	.52
Item 2	.80	.80		.14	.81	.13
Item 3	.83	.80		.23	.81	.19
Item 4[b]	.85	.84		.14	.82	.21
Item 5[b]	n/a	n/a	n/a	n/a	n/a	n/a
Service Climate						
Item 1	.75	.72		.32	.80	.14
Item 2	.76	.71		.52	.81	.15
Item 3[c]	.77	.75	.37		.56	.59
Item 4[c]	n/a	n/a	n/a	n/a	n/a	n/a
Work-Life Balance Climate						
Item 1	.75	.77		-.14	.71	.26
Item 2	.73	.74		.05	.69	.26
Item 3	.57	.53	.27		.44	.38
Item 4	.62	.65		-.10	.67	.10
Item 5	.68	.70		-.04	.71	.13
Item 6	.61	.57	.27		.48	.39
Item 7	.63	.58	.29		.49	.41
General Positive Climate						
Item 1	.77	.78		.18	.79	.17
Item 2[d]	n/a	n/a	n/a	n/a	n/a	n/a
Item 3[e]	n/a	n/a	n/a	n/a	n/a	n/a
Item 4	.58	.60		.11	.60	.11
Item 5	.67	.59	.37		.49	.49
Item 6	.76	.75		.28	.79	.15
Item 7	.54	.48	.34		.38	.44
Item 8	.75	.71		.46	.79	.13
Item 9	.76	.72	.40		.54	.60
Item 10	.63	.60	.31		.45	.50
Item 11	.72	.74		.07	.70	.24
Loadings on General Climate						
Collaboration Climate	.85	.88			.83	
Communication Climate	.90	.90			.87	
Fair Treatment Climate	.81	.83			.79	
Fear Climate	-.91	-.92			-.90	
Safety Climate	.76	.74			.73	
Service Climate	.93	.88			.89	
Work-Life Balance Climate	.71	.73			.64	

Table 4

Model Fit Statistics

Model	χ^2	S-B χ^2	*df*	CFI	NNFI	SRMR	RMSEA [90% CI]	Δ S-B χ^2
1. Baseline model	2051.16	1578.51	758	.877	.867	.065	.055 [.052, .059]	Comparison to Model 1
2. Model 1, plus two CMV factors	1499.57	1177.28	717	.931	.921	.050	.043 [.038, .047]	$\chi^2(41) = 315.47$***
3. Model 1, plus one CMV factor	1551.94	1233.95	717	.922	.911	.048	.045 [.041, .049]	$\chi^2(41) = 246.02$***
4. Added general climate factor	3087.81	2337.21	1147	.856	.846	.064	.054 [.051, .057]	Comparison to Model 4
5. Model 4, plus two CMV factors	2290.93	1777.69	1097	.917	.908	.049	.042 [.038, .045]	$\chi^2(50) = 381.23$***
6. Model 4, plus one CMV factor	2353.41	1850.23	1097	.909	.898	.047	.044 [.041, .048]	$\chi^2(50) = 298.94$***

Note. S-B χ^2 = Satorra-Bentler scaled (robust) χ^2. CFI = comparative fit index. NNFI = non-normed fit index (also known as the Tucker-Lewis index, or TLI). SRMR = standardized root mean square residual. RMSEA = root mean square error of approximation. CMV = common method variance. Null model RMSEA for Models 1-3 = .176, and null model RMSEA for Models 4-6 = .163. These null model RMSEA values being near .158 indicate a "good fitting" null model, which as a rule reduces the relative fit indices (CFI, NNFI; Kenny, 2015).

*** $p < .001$.

Table 5

Latent Factor Correlations in Baseline and CMV Estimation Models 1-3

Climate	1.	2.	3.	4.	5.	6.	7.
1. Collaboration Climate	--						
2. Communication Climate	.81 / .84 / .74	--					
3. Fair Treatment Climate	.78 / .77 / .70	.70 / .75 / .67	---				
4. Fear Climate	-.85 / -.83 / -.72	-.85 / -.89 / -.81	-.75 / -.75 / -.72	---			
5. Safety Climate	.65 / .69 / .58	.71 / .70 / .63	.59 / .63 / .58	-.66 / -.69 / -.58	---		
6. Service Climate	.81 / .82 / .71	.90 / .87 / .82	.66 / .69 / .58	-.85 / -.86 / -.77	.78 / .77 / .70	---	
7. Work-Life Balance Climate	.69 / .72 / .53	.69 / .76 / .55	.63 / .65 / .56	-.86 / -.88 / -.81	.54 / .58 / .42	.68 / .75 / .53	--

Note. Correlations without method factors reported first (Model 1), correlations with two method factors reported second (Model 2), correlations with one method factor reported last (Model 3).

Table 6

Latent Factor Correlations in Baseline and CMV Estimation Models 4-6, with General Positive Climate Included

Climate	1.	2.	3.	4.	5.	6.	7.
1. Collaboration Climate	--						
2. Communication Climate	.17 / .23 / .22	--					
3. Fair Treatment Climate	.32 / .18 / .20	.00 / -.04 / .05	---				
4. Fear Climate	-.36 / -.11 / -.11	-.20 / -.21 / -.22	-.14 / .02 / -.09	---			
5. Safety Climate	.01 / .13 / .09	.08 / .13 / .10	.01 / .09 / .08	.11 / .03 / .08	---		
6. Service Climate	.01 / .24 / .10	.36 / .50 / .32	-.33 / -.06 / -.28	.02 / -.22 / -.01	.30 / .32 / .26	---	
7. Work-Life Balance Climate	.21 / .13 / .14	.14 / .09 / .12	.18 / .08 / .18	-.73 / -.71 / -.73	.00 / .03 / .01	.05 / .20 / .04	--

Note. Correlations without method factors reported first (Model 4), correlations with two method factors reported second (Model 5), correlations with one method factor reported last (Model 6). Note that since Models 4-6 include a second-order general climate factor, these correlations were modeled between the latent factor disturbances.

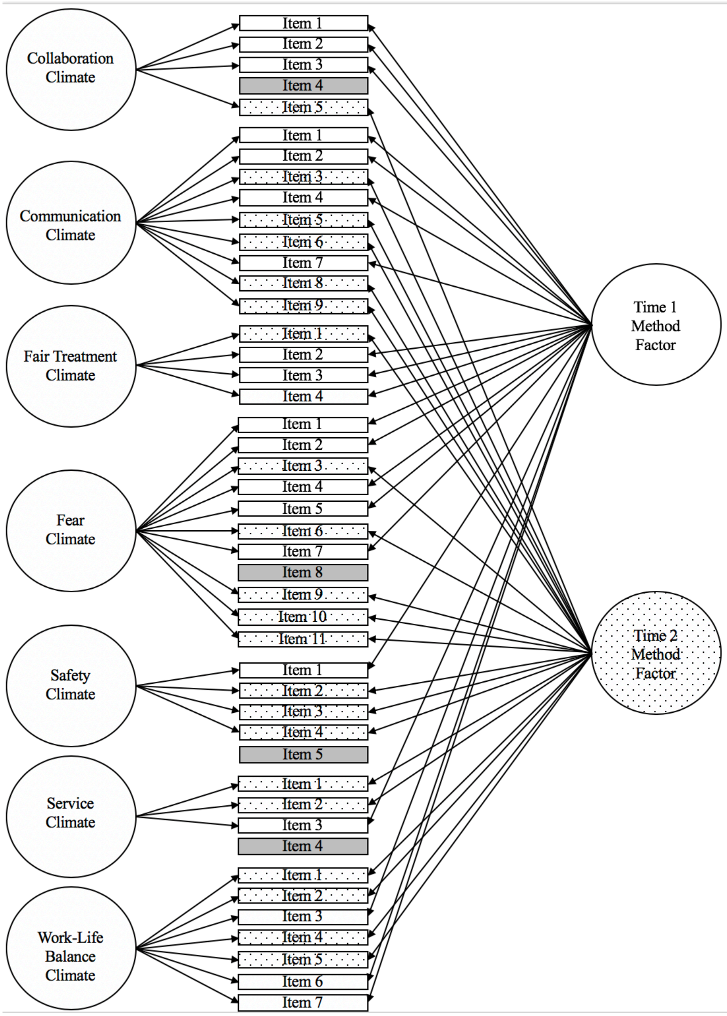

Figure 1. Model with specific climates and two CMV factors (one representing each measurement occasion, i.e., Model 2). Unreliable and redundant items that were removed from the models are shaded in grey, and items measured at Time 2 have a patterned background. For other models, a second-order general climate factor (i.e., predicting all specific climates) was included (Models 4-6), and/or a single CMV factor (representing self-report measures) was included as a predictor of all items (Models 3 and 6). For clarity, correlations that were estimated between each pair of specific climate factors are not depicted; when including a second-order general climate factor (Models 4-6), these correlations were modeled between the latent factor disturbances.

Appendix A

Revised Climate of Fear Scale (CFS-R)

1. Other employees aren't totally truthful at work because they worry about what they have to say.
2. Employees can be totally honest with management on all work related issues. (R)
3. Management considers suggestions without criticism. (R)
4. We do not receive all the information we need to do our jobs properly.
5. Admitting mistakes is frowned upon at work.
6. Repercussions at work are unpredictable.
7. Management is easy to discuss sensitive topics with. (R)
8. When speaking up in this organization, you have to be able to prove all your remarks.
9. Punishment is only applied to those who have done something wrong. (R)
10. Co-workers are easy to discuss sensitive issues with. (R)
11. Management comes down hard on mistakes as an example to others.

Appendix B

General Positive Climate Scale

My manager and coworkers…

1. React quickly when I report problems.
2. Insist on regularly checking my work. *
3. Provide all the equipment and information I need to do my job. *
4. Would consider my behavior when reviewing my performance or promoting me.
5. Invest a lot of time and money in training for me and other employees.
6. Provide me with a lot of information about issues on my job.
7. Make an effort to measure or track the quality of my work.
8. Recognize and/or rewards me for doing a good job.
9. Support me in doing my job to the best of my ability.
10. Communicate with me when I am not doing my job correctly or to the best of my ability.
11. Provide me with the tools, technology, or other resources I need to do my job well.

* denotes items that were dropped from the measure (see Method).