

WORK TEAM CLIMATE: A CONFIGURAL PROPERTY

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We propose a new conceptualization of work team climate. According to it, work team climate refers to the pattern of employees' perceptions of their team. From this conceptualization, team climate is a configural property, where dispersion dimensions have an important role to play. We review empirical research on the antecedents and consequences of within-team dispersion in climate perceptions. Finally, we draw a number of practical implications stemming from the proposed conceptualization and the reviewed research outcomes.

Key words: Organizational climate, Work teams, Climate strength, Non-uniform patterns.

En este trabajo se propone una nueva conceptualización del clima de los equipos de trabajo, según la cual el clima es el patrón que componen las percepciones del equipo que tienen sus miembros. Esta conceptualización considera el clima como una propiedad configuracional de los equipos, donde las dimensiones de la dispersión tienen un papel importante. Se revisan los trabajos empíricos realizados acerca de los antecedentes y consecuencias de la dispersión intra-unidad en las percepciones de clima. Finalmente, se analizan las implicaciones prácticas de la conceptualización propuesta, y de los resultados de la investigación.

Palabras clave: Clima organizacional, Equipos de trabajo, Fuerza del clima, Patrones no uniformes.

Organizational climate is a classic theme within the discipline of Organizational Psychology. From its origins in Lewin's studies (Lewin, Lippitt and White, 1939) to the present, organizational researchers have not ceased to be interested in it and this interest seems to have grown during the last few years. This is shown by the publication of two manuals (Ashkanasy, Wilderom and Peterson, 2000; Cooper Cartwright and Earley, 2001) and the conduction of two meta-analyses about the relationship between organizational climate (measured at the individual level) and certain experiences and work results (Parker et al., 2003; Carr et al., 2003). Recent research studies on work team climate have led to new developments that have yielded a better understanding of how work team climate has an influence on team processes and outcomes. Based on these studies, the main objective of the present work is to formulate a new, more

comprehensive, integrative conceptualization of climate as a property of work teams that considers the role of within-unit differences in the perception of the environment. Likewise, from this new conceptualization, a series of questions that may be approached in future investigations will be posed, as well as their practical implications.

PRECEDING QUESTIONS

Climate makes reference to the perceptions individuals have regarding the environment or social context they are a part of (Rousseau, 1988). In organizations, this context can imply different referents, such as the organization, the department or the work team. That is, individuals can describe how they perceive their organization, understood as a whole, or subunits to which they belong, such as their department or work team. Moreover, these perceptions have a content that makes reference to some of the important or strategic aspects of the organization, such as innovation, support, quality of service and safety. These groups of contents represent the facets of organizational climate. Finally, in organizations the climate can be operationalized at diverse levels of analysis¹. At the individual level, the climate refers to the perceptions individuals have about a certain social context, for example, the organization they belong to. To make reference to these individual descriptions, researchers use the term *psychological climate* (James,

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¹ By level we understand a certain position in a system of hierarchical or inclusion relationships. In the case of organizations, individuals form part of work teams, which at the same time are included in departments that belong to a certain organization. Consequently, in organizations we can distinguish diverse levels of analysis.



1982; Rousseau, 1988). The climate operationalized at higher levels of analysis (for example, the work team) is usually defined as perceptions shared by the members of the higher-level unit². Once it has been verified that the members of that unit share their perceptions about it, the climate of the unit is represented by aggregating the individual perceptions. Thus, when the climate is operationalized at higher levels of analysis, it receives the generic name of *aggregate climate* (Rousseau, 1988).

When the referent and the operationalization level of the climate are considered, conceptually different types of climates can arise. Thus, the psychological climate of the work team is conceptually different to the aggregate climate of the work team. Consequently, when the climate of organizations is investigated, it is very important to specify the referent and the level of operationalization involved.

CLIMATE AS SHARED PERCEPTIONS AND THE ROLE OF THE WITHIN-UNIT DIFFERENCES. A CONCEPTUAL REVIEW

Climate operationalized at higher levels of analysis (team, department, organization) is usually defined as the *shared* perceptions of the members of these units. In order to study climate in these cases, first it has to be proven that the perceptions are shared; that is, that there is a certain degree of similarity or agreement among the individual climate perceptions. Once this has been shown, the climate of a given unit can be represented by the average of the individual scores on the involved climate scale. From this approximation to the study of climate, the similarity in the individual perceptions of climate is a prerequisite in order to affirm that a climate exists as a higher-level property, and, consequently, to obtain indicators of the work units' climate. This approximation has hindered the consideration of within-unit differences in perceptions of climate as a scientific construct worthy of study in itself and not as a mere condition for aggregation. In our opinion, this approximation limits the conceptualization of climate. Fortunately, in the last few years, a series of conceptual and theoretical contributions have helped to enrich the concept and research on the climate of organizations, highlighting the role of the within-unit differences.

Among the conceptual and theoretical contributions that have shown the role played by within-unit differences in the study of organizational climate, it is worth mentioning the typology of Chan's composition models (1998), Payne's tridimensional model (2000, 2001) for the analysis of the organizational culture and climate, and dispersion theory and the typology of forms of emergence of higher-level constructs elaborated by Kozlowski and colleagues (Brown and Kozlowski, 1999; Kozlowski and Klein, 2000).

Composition models

It is fairly frequent for investigators to aggregate individual data to obtain measures of higher-level constructs. In order to do this, a *composition model* is necessary (James, 1982; Rousseau, 1985). A composition model specifies the functional relationships that exist among constructs that are operationalized at different levels of analysis that make reference to the same content, but are qualitatively different (Chan, 1998). Composition models clarify the meaning of the construct at the levels involved. In the case of organizational climate, a composition model specifies the relationship between psychological climate and aggregate climate (shared) at the organizational level. Chan (1998) proposed five types of composition models. The *consensus models* have been the most utilized in research on climate. According to these models, the within-unit similarity among individual climate perceptions (psychological climate) is what allows another form of the construct at higher levels of analysis (*shared* team, department, and organization climate) to be obtained, both forms of construct being functionally isomorphic. As previously mentioned, this composition model has contributed to within-unit differences being considered as a problem for obtaining climate measures aggregated at higher levels of analysis, limiting their consideration as a phenomenon of scientific interest (González-Romá et al., 2002).

In the *dispersion composition models*, within-unit similarity (or its opposite, within-unit variability) is not a condition for aggregation, but rather a phenomenon of interest (Chan, 1998). In these models, the constructs at a higher level make reference to the variability of a construct or property at a lower level of analysis, and are

²We use the term *unit* broadly to refer to any collective that can be identified in work organizations (for example, work teams, department, organization).



usually operationalized through variability statistics. In climate research, the dispersion composition model has been used to define a new construct: climate strength (Chan, 1998). This construct makes reference to within-unit similarity in individual climate perceptions. What we would like to highlight here is that the consideration of this dispersion construct in climate research has allowed for the analysis of climate in organizations from a more comprehensive perspective, as well as for the development of a new line of research on the role played by climate strength in the relationship between work unit climate and outcomes.

Payne's three-dimensional model

Payne (2000, 2001) elaborated a general model for the analysis of organizational culture and climate in which one of the dimensions for analysis is the strength of consensus; that is, the degree to which the perceptions, attitudes, behaviors, values and beliefs are shared by the members of the unit. Payne (2000, 2001) has criticized the assumption in the dominant approach to the study of organizational climate and culture (Martin, 1995) according to which members of the work units share their perceptions, values and beliefs. In a study of 56 organizations, Payne (2000) showed that the degree of within-organization consensus in 17 climate scales varied notably across organizations revealing that this is an important element for describing and understanding organizational climate.

Dispersion theory and forms of emergence

Kozlowski and colleagues (Brown and Kozlowski, 1999; Kozlowski and Klein, 2000) have developed a dispersion theory (TD) and a typology of forms of emergence of higher-level constructs that has contributed to increasing researchers' interest in dispersion constructs and that is useful in posing new research questions on organizational climate.

From dispersion theory, it is proposed that through social interaction, individual level constructs (for example psychological climate) are combined to emerge as phenomena of a higher level (team climate). In this theory, within-unit similarity (or dispersion) is a measure of the *degree of emergence* of the higher-level construct (Brown and Kozlowski, 1999). Thus, climate strength can be used

as an indicator of the degree to which the work unit climate has emerged. From this perspective, climate strength becomes an important construct in studies on climate formation in work units.

Another interesting contribution of TD is its conceptualization of within-unit dispersion. TD conceives within-unit dispersion as a general concept free of a specific content that refers to the structure of interindividual differences, and which presents two fundamental dimensions: strength and uniformity (Brown and Kozlowski, 1999). The strength dimension refers to the within-unit homogeneity of the studied phenomenon. The uniformity dimension makes reference to the grouping or distribution pattern presented by the phenomenon studied at the level of the unit of interest. A uniform pattern is observed when there is one single grouping (that is, only one mode) in the distribution of the studied phenomenon. A non-uniform pattern appears when more than one grouping is observed. From these two dispersion dimensions (strength and uniformity), Brown and Kozlowski (1999) present four ideal types of dispersion⁵ that can be used as a work heuristics (see figure 1): 1. strong similarity (high strength, uniform pattern); 2. weak similarity (low strength, uniform pattern); 3. strong dissimilarity (high strength, non-uniform pattern); and 4. weak dissimilarity (low strength, non-uniform pattern).

In organizational climate research, researchers have neglected both dispersion dimensions as phenomena of scientific interest for a long time. Interest was centered on finding patterns of strong similarity, which would allow individual data to be aggregated to obtain measures of shared climate at the team, department or organization levels. Within-unit homogeneity in climate perceptions has been frequently treated as a dichotomous property: if there is enough within-unit homogeneity, unit climate exists, and therefore, individual scores can be aggregated to obtain an indicator of it; if the level of homogeneity is not sufficient, the unit does not have a (shared) climate and aggregation is not justified. Only recently, has the role of the strength dimension begun to be studied (see Schneider, Salvaggio and Subirats, 2002; González-Romá et al., 2002; González-Romá, Fortes, and Peiró, 2009; Colquitt, Noe and Jackson, 2002; Zohar and Luria, 2004; Moliner, Martínez-Tur, Peiró, Ramos and Cropanzano, 2005), and climate strength has been

⁵These four ideal types are presented with an illustrative purpose; however, we must keep in mind that there could be variations as a function of the degree shown by each one of the dimensions involved.

considered as a continuum, not as a dichotomous property.

The role of uniformity has not been considered in research on organizational climate. Only Chan (1998) makes reference to the absence of multimodality (that is, non-uniformity patterns) as a prerequisite for the composition of higher-level constructs in dispersion models. In our opinion, this oversight has been due, first, to the influence of the dominant perspective in organizational climate research, which conceives organizational climate as shared perceptions; and, second, to the fact that in real work units there are many factors and processes that promote uniformity and convergence in climate perceptions, such as attraction, selection and attrition processes, organizational socialization, social interaction among unit members and leader-member interaction (Schneider and Reichers, 1983, Ashforth, 1985; Rentsch, 1990; Kozlowski and Doherty, 1989; Moran and Volkwein, 1992; Klein et al., 2001; González-Romá et al., 2002). Hence, when real work units are analyzed, it is most frequent to find uniform climates which vary in the degree of strength shown. Nevertheless, non-uniform patterns are also present in reality. By way of illustration, the distribution of the scores on two climate scales in two work units are presented in figure 2. The observed distributions show a good fit to non-uniform patterns.

No studies on the factors that promote these types of climate patterns are available. Some questions that may be formulated in this regard are the following: What relationship does the demographic diversity of work units have with the emergence of these types of climate patterns? Certain demographic characteristics (gender, age, seniority, occupation) are associated with different socialization models and processes that can contribute to generating different perceptions of the work context. Moreover, through the processes of social categorization, certain demographic characteristics can become salient leading to subgroups within the unit with different ways of perceiving it. What is the role of the leader-member relationship? Work unit leaders influence the climate perceptions of their followers (Kozlowski and Doherty, 1989; Colquitt et al., 2002; González-Romá et al., 2002). Distinct relationships with subgroups of followers could generate different views of the work unit.

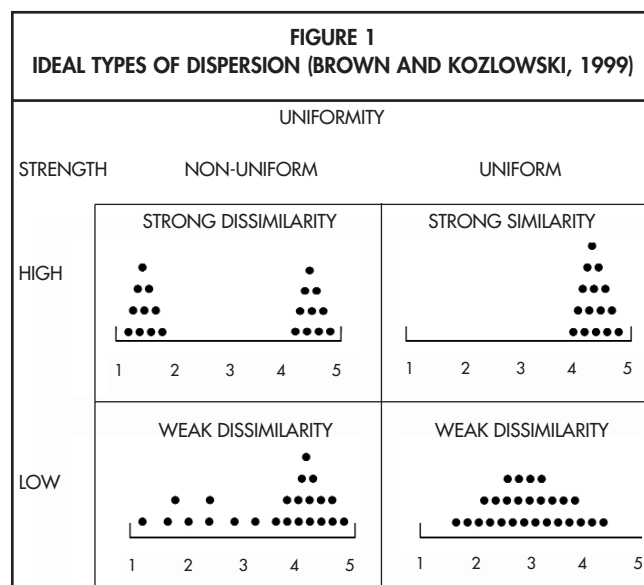
In addition, there has not been sufficient research carried out on the influences of these types of patterns on the processes and outcomes of work units. It can be

expected that units with non-uniform patterns will present higher conflict levels as they may have opposing ways of understanding the unit. At the same time, this will produce greater coordination and communication problems, and consequently, greater work dissatisfaction among its members and worse outcomes. Conflict in the unit may also be a reason for the emergence of non-uniform patterns. The realistic theory on conflict indicates that if within a unit there are individuals with interdependent but opposing goals, a process of within-unit differentiation may be initiated that can result in the formation of confronted subgroups with high internal homogeneity and with contradictory perceptions of the unit (Sherif and Sherif, 1969; Brown and Kozlowski, 1999).

All these questions and proposals should be approached in future investigations if we wish to increase our knowledge of organizational climate.

CLIMATE AS A CONFIGURAL PROPERTY

For a more comprehensive characterization and analysis of work unit climate, it is necessary to consider the within-unit dispersion dimensions (strength and uniformity). This way overcoming the dominant approach that conceives climate as shared perceptions. With this aim, we propose defining work unit climate as the pattern of employees' perceptions of their unit. This conceptualization of climate assumes that it can emerge as a *configural* property with varied forms following a compilation process of emergence, not only as a shared property following a composition model of emergence (Kozlowski and Klein, 2000).



These authors distinguish two types of higher-level properties: shared, describing common characteristics to all unit members; and configural, which show a pattern presenting certain individual properties within the unit. Likewise, they distinguish two types of emergence processes that can be situated at the extremes of a continuum: composition and compilation. In composition processes, it is assumed that all individuals in the unit contribute the same type of element (for example perceptions) and in the same quantity. Under these conditions, it can be asserted that the unit climate is shared. In compilation processes, either the amount or type of individual-level phenomena is different, or both the amount and type are different. For example, in a primary health care team, depending on the professional roles performed, each member provides different behaviors and skills (technical, administrative, social),

and in different quantities to contribute to team performance. Returning to work unit climate, there can be compilation processes when the magnitude of individual perceptions differ. In these cases, climate would emerge as a configural property. The four ideal types of dispersion displayed in Figure 1 are some of the possible forms that climate can present as a configural work unit property.

This conceptualization of climate does not exclude the strong similarity pattern that has dominated research, but rather integrates it into the more complex forms that also occur. As Kozlowski and Klein (2000, p. 59) indicate, "a given phenomenon or construct domain does not necessarily have to exhibit a universal form of emergence; that is, a given emergent phenomenon may be the results of composition processes in one situation and of compilation processes in another". From this new perspective, work unit climate does not necessarily imply the existence of similarity among the members' climate perceptions. Therefore, it is assumed that all units have a climate as a higher-level property; however, in some cases its shape may be complex.

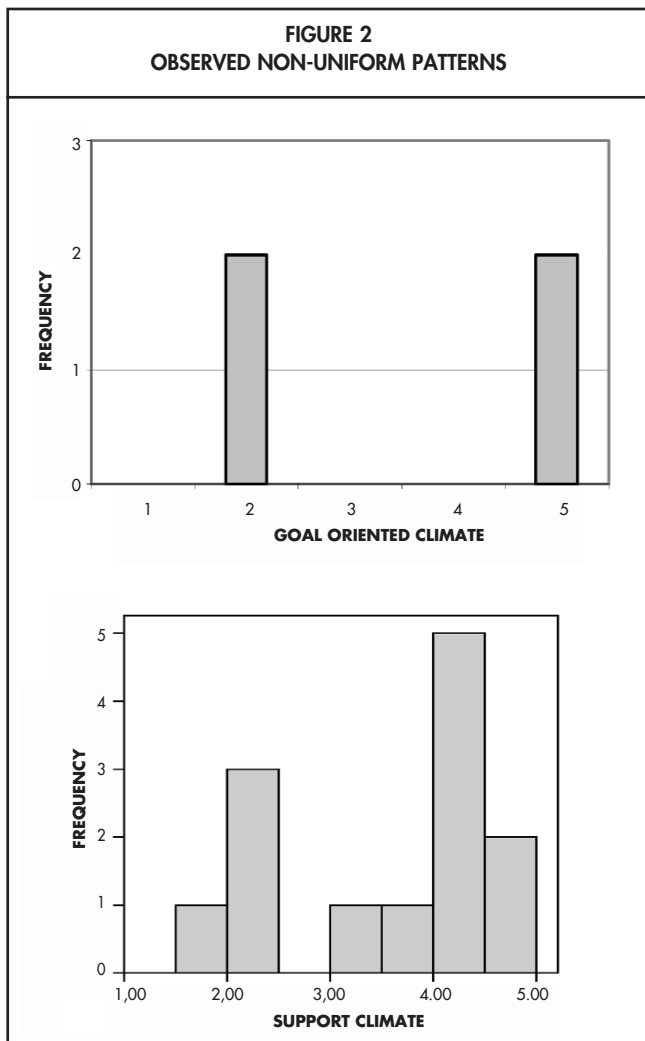
Thus, from this perspective, for a comprehensive description of work unit climate, we first have to consider the uniformity pattern of perceptions. This involves determining the number of existing perception groupings or sub-climates⁶. Second, the internal strength or homogeneity that each grouping shows must be attended to. To represent this aspect, some statistic variability may be used. Third, each grouping must be localized along the continuum on which the measure is made. For this purpose, some central tendency statistic as the mean can be used.

As was previously pointed out, the challenge we are faced with as researchers is to ascertain which factors determine the configuration of work unit climate, and what the effects of the different configurations are on the unit processes and outcomes. We still know little regarding this although the studies carried out on climate strength have begun to provide empirical evidence about it.

STUDIES ON CLIMATE STRENGTH

In the last few years, a series of studies on the antecedents and consequences of climate strength in work units have been conducted. These studies have shown the role of the within-unit differences as a scientific construct of interest that helps us to better understand the relationship between climate and the work unit outcomes.

**FIGURE 2
OBSERVED NON-UNIFORM PATTERNS**





The influences of climate strength

A group of studies regarding the influence of climate strength on distinct team outcomes have shown the moderator role played by this variable on the relationship between unit climate and unit outcomes. In general terms, the moderator hypothesis can be based on the concept of "situational strength" proposed by Mishel (1973). This concept makes reference to the degree of ambiguity present in a given context. Strong situations are those in which there is low ambiguity. These situations make individuals interpret events in a similar way, induce clear and uniform expectations about what the appropriate responses are, and offer adequate incentives for the expression of these responses (Mischel, 1973, p. 276). Consequently, in strong situations behavioral variability will be small (Mischel, 1973; Ostroff and Bowen, 2000). On its part, weak situations are not uniformly interpreted by individuals and do not produce uniform expectations regarding what the appropriate response is. Therefore, in weak situations behavioral variability will be larger (Mischel, 1973; Ostroff and Bowen, 2000). Thus, it can be expected that a unit with strong climate will stimulate uniform and consistent responses among its members, whereas in units with weak climates, the response variability will be greater. This will affect the capacity to predict work unit outcomes so that the relationship between unit climate and outcomes will be greater in units with strong climates than in units with weak climates (Lindell and Brandt, 2000; Ostroff et al., 2003).

Five studies in which members of our research unit participated have obtained results that support this moderator hypothesis. González-Romá et al. (2002), using a sample of units from a regional public health system, found that climate strength moderated the relationship between unit climate and collective satisfaction and commitment. Schneider et al. (2002) observed in a sample of bank branches that climate strength moderated the relationship between unit climate and customers' perceptions of service quality. González-Romá and West (2002) found in a longitudinal study investigating a sample of teams from Great Britain's public unemployment system that climate strength in task orientation moderated the relationship between this facet and team performance. Recently, González-Romá, Fortes, and Peiró (2009) found in a longitudinal study with bank branches that climate strength showed a

moderator effect on the climate- performance relationship when performance was evaluated by the branch members, by the branch manager and by means of financial indicators. Lastly, Moliner et al. (2005), in a study with a sample of service units, found that climate strength moderated the relationship between interactional justice climate and emotional exhaustion. Colquitt et al. (2002) studied the influences of procedural justice climate in a sample of teams from an automobile parts manufacturing company. The results obtained showed that climate strength moderated the relationship between team climate, on the one hand, and team performance (as evaluated by the team supervisor) and absenteeism, on the other. In all the cited studies, the direction of the moderator influence was as expected: climate strength enhanced the relationship between unit climate and the criteria variables considered.

The results of these studies support the moderator role of climate strength. However, in some studies, this moderator effect was not observed (Bliese and Halverson, 1998; Lindell and Brandt, 2000; Zohar and Luria, 2004). The study by Lindell and Brandt (2000) suggests that interdependence among team members may be a necessary condition. However, this is a question that could be approached when more empirical studies have been carried out.

The moderator hypothesis has been supported in a group of studies that considered diverse criteria variables. This hypothesis assumes a linear relationship. One implication is that the greater climate strength is, the stronger the relationship between unit climate and unit outcomes. Nevertheless, some unit outcomes that have not been taken into account by the reviewed studies require certain diversity in the members' ideas and perspectives. This is the case of innovation (West, 2002). It can be questioned if linear modulation is the most appropriate model for the study of the role of climate strength in this case. New studies should determine if in this case non-linear models are a plausible alternative.

5.2. Climate strength antecedents

The results of the reviewed studies show that climate strength is an important factor in the understanding of the relationship between work unit climate and their outcomes. Therefore, it makes sense to wonder which factors have an influence on climate strength. A series of studies have dealt with this question.

⁴In case more than one grouping is found, a relevant question is to establish the reason for this.



One of the factors that may affect climate strength is the diversity in the demographic composition of work units. As a result of diverse factors, such as socialization processes, individuals with different demographic characteristics may have different experiences, beliefs and values which will influence the way they perceive the work context (Williams and O'Reilly, 1998; Klein, Conn, Smith and Sorra, 2001). Thus, it can be expected that greater demographic diversity in unit composition will be associated with lower climate strength. The obtained results regarding this aspect are not congruent. Colquitt et al. (2002) and Naumann and Bennett (2000) found negative relationships between age-related diversity and climate strength in procedural justice. However, Klein and colleagues (2001) did not obtain significant correlations among five measures of demographic diversity and three facets of climate strength. Another factor that may influence climate strength is leader-member relationships. Work unit leaders can model their colleagues' perceptions of climate, reducing the variability of their perceptions (Naumann and Bennet, 2000; Colquitt et al., 2002). Leaders interpret, filter and make sense of the events and organizational practices, and by communicating these interpretations they promote within-unit similarity in climate perceptions (Kozlowski and Doherty, 1989). The results of a series of recent studies support this line of reasoning. González-Romá et al. (2002) found that the communication behavior of the unit leader (the degree to which the leader informed their colleagues about work practices, strategic policies, and other aspects of work) was positively related to unit climate strength. In a longitudinal study, González-Romá y West (2003), found that leader-member interaction positively predicted climate strength referred to task orientation. Recently, Zohar and Luria (2004) observed that transformational leadership was positively related to safety climate strength. An interesting and novel result reported by these authors is that variability and simplicity of supervisors' behavioral patterns were associated with safety climate strength (negatively and positively, respectively). In this regard, Naumann and Bennet (2000) found that the visibility of the unit supervisor was positively related to climate strength.

A third aspect that has been studied as a hypothetical antecedent to climate strength is social interaction among unit members. Based on symbolic interactionism (Blumer, 1969; Schneider and Reichers, 1983), the interactionism approach to climate formation proposes that similarity in

climate perceptions is developed from social interaction among unit members (Moran and Volkwein, 1992). Through social interaction, individuals communicate with each other and discuss the meanings they attribute to organizational successes and practices, and they develop shared interpretations of these (Ashforth, 1985). This way, climate is socially constructed. Findings from recent studies are congruent with this reasoning. Klein and colleagues (2001) as well as González-Romá and cols. (2002), and González-Romá and West (2003) have found positive relationships between the social interaction of unit members and climate strength.

Hence, the results of the studies conducted to date on the antecedents of climate strength show that social interaction among unit members and leader-member interaction are factors that promote climate strength, whereas the role of demographic diversity is not clear. Other factors that could be considered as potential antecedents of climate strength in future research studies are work unit tenure, unit composition stability, and leader's influence. These investigations should try to implement a longitudinal design. This would allow us to obtain more precise knowledge regarding the causal relationships among the studied variables, as well as how they change over time.

STUDIES ON NON-UNIFORM PATTERNS OF CLIMATE

As previously indicated, there is still little data available regarding the influence that non-uniform configurations or patterns of climate have on work team processes and outcomes. However, the few studies carried out indicate that the type of pattern is an important factor. González-Romá and colleagues (González-Romá, Hernández, Peiró, Fortes and Gamero, 2006; Hernández, González-Romá, Peiró, Fortes and Gamero, 2007) analyzed, in a sample of bank branches, the influence that the type of pattern had on a series of criteria. The results obtained showed that compared with branches with uniform climate patterns, bank branches with non-uniform patterns had higher tension scores and lower scores on communication quality, positive affect, work satisfaction and performance.

PRACTICAL IMPLICATIONS

The conceptualization of work unit climate that we propose has important implications for professional practice. One of the services offered by organizational psychologists is organizational climate surveys. In these



studies, a description of the climate of the different work units that make up the organization is usually presented. To obtain this description, the most usual procedure is to calculate the mean from the climate scores given by the members of the work unit in question. This would be an adequate procedure in uniform-pattern of climate with a sufficient level of homogeneity. In these cases, the mean would offer an accurate description of the work unit climate. However, in units with non-uniform climate patterns with high within-unit variability in individual climate scores, the mean would not yield an accurate description. For example, let us imagine that the mean obtained by a work team in a support scale is 3 on a response scale that ranges from 1 (very low) to 5 (very high). If we interpret this score without taking into account any other information, we could conclude that this team's perceived support level is medium as the obtained mean coincides with the middle point of the response scale. Nevertheless, let us imagine that we want to obtain more information before interpreting the work team's mean, and we obtain a graphical distribution of the individual scores. Let us suppose that in this graphic it can be seen that half of the group members obtain very low scores on the support scale, and the other half very high scores. The mean is still 3, but we now know that we cannot infer that the support level perceived in this team is medium. This example shows how before the computation of means to represent work unit climates, it is necessary to examine the distribution of the individual scores within each unit and obtain an indicator of their variability (e.g., the standard deviation). In cases with non-uniform patterns and high standard deviation values, the use of an only mean to describe the climate is inappropriate, and a more detailed description is needed. As previously mentioned, a good practice for a comprehensive description of the unit climate would be to examine, first, the uniformity of the responses, to identify the number of groups (sub-climates) present within the unit; second, determine the internal homogeneity of each group; and third, locate each group along the continuum on which the measurement is performed (for example, climate of support) using the corresponding mean.

Another important practical implication that is derived from the studies conducted on climate strength in work units makes reference to the role played by leaders and managers. Research results show that they can significantly contribute to shape the climate of the units they manage (see section 5.2). In this regard, leaders'

communication behavior, transformational leadership, and the variability, simplicity and visibility of supervisors' behavioral patterns are important factors. Taking into account that work team climate may have an important influence on team outcomes, training on team management should pay special attention to the aforementioned factors.

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