

# Methodological implications of a systems approach to organizational climate

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In this article the serious theoretical and methodological issues facing climate research are discussed. It is indicated that the most important theoretical and methodological issue facing climate researchers is a lack of conceptual integration of the climate construct. It is shown that this has resulted in an inability of climate researchers to satisfactorily resolve a number of methodological issues. It is further shown that the inability of climate researchers to resolve these methodological issues, has led to a decline of research interest in the climate construct, whereby the viability of organizational climate as a research field and management tool is threatened.

In this article the author proffers a social systems approach to the conceptualization of organizational climate. The methodological implications of such an approach are discussed and it is shown that this reconceptualization of the climate construct can alleviate many of the methodological issues still facing climate research.

## 1 INTRODUCTION

The concept "organizational climate" is nothing new in the management sciences. The impact that a person's environment has on his behaviour forms the cornerstone of this field of study that dates back to the first climate studies undertaken by Lewin in the 1930's. These studies led Lewin (1951:241) to conclude that "psychological atmospheres are empirical realities and are



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scientifically describable facts". For the past twenty five years much research has focussed on this construct owing to the proposed relationship between organizational climate and other organizational variables.

Despite the prominence of climate research in the management sciences, the conceptualisation of the "organizational climate" construct is still characterized by a diversity of approaches and a lack of consensus about how this construct should be operationally defined. Guion's (1973:21) much reported observation that "... the concept of organizational climate is undoubtedly important, but it also seems to be one of the fuzziest concepts to come along in some time" still seems to hold true, despite what

Glick (1985:601) calls organizational climates' "prominent, if not glorious history in organizational science."

Despite the importance of this construct to the management sciences, considering the impact that climate has on organizational behavior, climate research has been reduced to a mere trickle in recent years due to the inability of climate researchers to satisfactorily resolve theoretical and methodological issues surrounding the climate construct. Lack of conceptual clarity often leads to inadequate or inappropriate measurement techniques. The methodological stance of the climate construct must therefore be viewed in relation to its conceptual development.

According to Schneider and Reichers (1983:20) the development of climate research can be assessed from two different points of view. The first views the climate construct as a half empty cup, while the second views it as a half full cup. Schneider and Reichers (1983:20) propose that the second viewpoint is the more acceptable. The conceptual development of the climate construct clearly indicates that the climate construct offers a useful alternative to motivation as an explanation of worker behaviour, whilst also emphasizing the importance of group influences in organizational research which in itself led to further refinement of the climate construct. The methodological progress that has been made up till now has also enabled researchers to differentiate the climate construct from other constructs such as job satisfaction, whereby useful multi-dimensional measurements could be developed.

Glick (1985:601) on the other hand, is of the opinion that many of the pitfalls that characterize multi-level research still exist in climate research as a result of the inconsistency between theoretical unit, observation and analysis. This dilemma is, according to Woodman and King (1978:816), typical of any effort to describe and explain human behaviour. The researcher is always faced with the dilemma of how to operationally define a construct so that it can be measured in a reliable and valid manner. This appears

to be particularly pertinent to climate research.

Despite definite progress in the conceptualization and measurement of the climate construct, researchers are still faced with a number of conceptual issues that remain unresolved.

Glick (1985:602) identifies five such important issues that still remain unresolved as far as the conceptualization of the climate construct is concerned:

- the appropriate theoretical unit for the measurement of climate;
- the determinants of the climate construct;
- the proposed relationship between psychological climate and organizational climate;
- the interpretation of perceptual agreement; and
- the domain of climate.

To these five issues can be added the proposed relationship between organizational climate and organizational culture which has emerged as a conceptual issue during the latter half of the 1980's.

The decline in research interest in the climate construct is the direct result of climate researchers inability to sufficiently resolve these conceptual issues according to Glick (1985:612). Glick (1985:613) states further that unless these conceptual issues can be resolved, the "organizational climate" construct will no longer be viewed as a useful research field, or management tool.

It would therefore appear that the climate construct is subject to serious theoretical and methodological problems. The most important of these is a lack of theoretical integration as far as the operational definition of this construct is concerned. The often inconsistent operational definition of the climate construct leads to what Falcione and Kaplan (1984:300) call "theoretical and empirical muddy waters."

The need for theoretical integration of the climate construct within the framework of an organizational model was first identified by James and Jones (1974) when they proposed that realistic models should be used for organizational analysis so that the position of

organization climate within such a model could be determined (p. 1110).

James and Jones (1974:1109), however, also emphasized that the organizational climate construct is often applied in the literature in such a manner that it does not justify a separate component in an organizational model, nor does it even qualify as a construct because the basic requirement of a nomological net is not met.

Despite the fact that James and Jones advocated the use of a theoretical framework for the study of organizational climate in 1974, a recent overview of the available literature shows that no single study that views the climate construct within a theoretical framework of organizational functioning has ever been undertaken. The most important progress thus far regarding the analysis of the etiology of organizational climate is concerned, is the symbolic interactional approach of Schneider and Reichers (1983) and the structural approach of Poole and McPhee (1983).

Although both these approaches hold important implications for the conceptualization and measurement of organizational climate, neither has been developed in a systematic and comprehensive manner. Poole (1985:107) himself emphasizes the need that still exists for the thorough structural analysis of organizational processes which would enable researchers to develop systematic integrated approaches for explaining the simultaneous influence of structural aspects, climate and organizational practices on member behaviour and organizational outcomes.

This need, identified by Poole (1985:107), points to the need for a theoretical framework in which organizational climate can be studied within the context of organizational functioning. An inability of climate researchers to formulate such a theoretical framework endangers the viability of the climate construct as a useful variable in the multi-dimensional study of relationship between the individual and the organization. Glick (1985:606) expresses concern that if

research interest in the climate construct declines to such an extent that it is abandoned by organizational researchers, it might lead to one dimensional approaches to organizational behaviour that bring researchers no closer to the resolution of the issues that already characterize the interaction between the organization and the individual.

## 2. A SYSTEMS APPROACH TO ORGANISATIONAL CLIMATE

Climate researchers such as Glick (1985:601) are of the opinion that a reconceptualization of the climate construct will be necessary in order to increase the validity and reliability of climate research.

When the current stance of the climate construct is viewed, it is clear that much conceptual progress has taken place, and to a large extent a reconceptualization of the construct has already occurred in that the climate constructs' conceptualization has changed from:<sup>12</sup>

- a static to a dynamic phenomenon;
- an individual level phenomenon to a multi-level phenomenon;
- a micro-level phenomenon to a macro-level phenomenon;
- an objective/subjective phenomenon to an intersubjective phenomenon;
- a psychological to a sociological phenomenon;
- a dimensional to a molar construct;
- a causal determinant to a predictive variable;
- a dimensional to typological (molar) construct;
- a direct determinant of behaviour in a main-effect sense to an indirect determinant of behaviour in an interactive sense;
- a general measurement to a specific/unique measurement; and
- from a dependent/independent variable to an interdependent variable.

The inconsistent and even divergent conceptualization of organizational climate must however be viewed in the light of the very real dilemma facing climate researchers, and should not be viewed as an indication that

<sup>12</sup> See the literature overviews of James and Jones (1974), Hellriegel and Slocum (1974), Schneider and Reichers (1983), Falcione and Kaplan (1984), Poole (1985).

the climate construct does not exist due to a lack of a consistent conceptualization thereof. Various operational definitions that elucidate some aspect of a construct can exist for the same construct.

An operational definition never incorporates all realistic characteristics of a construct, nor can it expose all of the meaning contained in a concept. This is especially true of a complex construct such as "climate". The dilemma facing the researcher consists of a choice between a broad, global but useful operational definition of organizational climate, and a theoretically specific but confusing approach in which theoretical strength and parsimony is lost.

Studying climate from a systems framework can alleviate this dilemma for the climate researcher. Not only does the systems approach provide a much needed theoretical framework for the integration of available knowledge about the climate construct, but it also offers a useful framework in which complex variables such as climate can be studied. Furthermore it is also a parsimonious approach that consists of fewer concepts and assumptions than alternative approaches. Above all, it has the advantage that it provides for an increase in complexity as far as the level of analysis is concerned — something that is of particular importance where a multi-level construct such as climate is concerned.

Within a social systems model of organizational functioning, climate can be operationally defined as:

- an attitudinal (emotive) output;
- that manifests individually or collectively on various hierarchical levels of the organization;
- that refers to the individual, group (subsystem) or organizations basic structure of beliefs, expectations and attitudes that are held about the organization;
- that is shaped by the individual, subsystem or organizations' perception of the effectiveness with which organizational processes enable structural organizational components to interact for the execution of organizational functions; and
- that has a differential effect on the

behaviour of the individual and/or subsystem and thereby on the organizational system as a whole.

Through the application of the system principles of level, function, structure and process, climate's relationship with organizational functioning can be determined. Viewing climate in terms of systems principles is concurrent with the demand for a dynamic approach to organizational climate that has been established by the most recent climate approaches, while at the same time supplementing the flaws of these approaches by providing a systematic and integrated explanation of the simultaneous influence of individual and organizational variables on behavioural and attitudinal outputs of the organizational system as a whole.

Because the focus of this article is not on a systems approach to organizational climate as such, but rather on the methodological implications of such an approach, a brief overview of what such an approach entails will be given.

## **2.1 The levels, structures and functions of climate**

Climate within the systems approach is viewed as a multi-level phenomenon that manifests at four different organizational levels, but that only manifests as a collective construct on subsystem, organizational and organization-environment level through social interaction. Although climate has an important influence on behaviour at individual level, on this level it is merely indicative of an internal state of the individual that is only of importance to the organization to the extent that it is externalized in the form of behaviour. At each of these hierarchical levels climate must be viewed in terms of the levels that envelop it, and those levels that are enveloped by it.

The structure and functions of climate can be described according to the level that is being analyzed.

- (1) Organizational culture manifests on the organization-environment level as the perceptions that are held over time about the effectiveness with which the organization maintains the input-trans-

formation-output cycle in its interaction with the environment. Organizational culture creates the contextual environment within which climate manifests at the other levels, and thereby enables the organization to adapt effectively to changes in the environment.

(2) Organizational climate manifests at organizational level as the basic structure of beliefs, attitudes, values and expectations that are held by most people in the organization at a certain point in time about the effectiveness with which core organizational processes enable various organizational subsystems to interact effectively for the execution of organization functions (providing a product or service). Organizational climate can exhibit a high or low degree of congruence with organizational culture, depending upon how well organizational culture is articulated, the amount of coherence it exhibits and how well it has been shared through interaction. A high degree of congruence between organizational culture and climate depends on the effectiveness of the interaction processes through which perceptions are shared. The function of organizational climate is to help maintain a cycle of transformation within the organization by specifying appropriate behavioural guidelines and goals for the various subsystems.

(3) Subsystem climate manifests as the perceptions that most members of a subsystem hold about the effectiveness with which subsystem processes enable subsystem elements to interact for the execution of subsystem functions. Subsystem climate is a representation of how organizational climate manifests within the subsystem. It represents changes to and qualifications of the organizational climate that exists within the organization. The degree of congruence between subsystem climate and organizational climate depends upon how well organizational climate is shared and articulated. Where a strong organizational climate

exists a deviation within the subsystem climate is not likely to occur. Subsystem climate is of particular importance because it is on this level that climate changes from being a psychological phenomenon that represents the internal state of the individual, to being a collective phenomenon that is shared through social interaction. Subsystem climate can therefore be viewed as a frame of reference which serves to help the individual interpret organizational experiences so that he can react towards it in an appropriate manner. In time subsystems can also develop their own cultures.

(4) Psychological climate refers to the individuals psychologically meaningful cognitive representation of subsystem climate. It evolves from perceptual interaction between the individual and the situation and serves as an information source to the individual in the formulation of expectations, affective responses and instrumental behaviour toward the organizational situation that is perceived. Because psychological climate represents an internal state of the individual, it is only of importance to the organization once it becomes externalized in the form of behaviour.

The processes that shape the formation of climate at each organizational level are the processes that make interaction possible. In the case of psychological climate, climate is formed through perceptual interaction. However, once climate becomes a collective construct these processes take on a social nature in that climate formation becomes possible only through social interaction. Zeitz (1983:1089) posits the following:

(Climate) "... also operates on the individual level but becomes collective when possessed by multiple interacting members for example, when individual behaviours and attitudes are reinforced and amplified through imitation, social rewards or sanctions communicated by widespread interaction they become pervasive organization-wide characteristics."

## 2.2 Conceptual Implications of a systems approach

Climate within the systems approach is therefore viewed as the result of the interaction processes that link organizational structures to their functions. Because the organization is viewed as a social system interaction processes link individuals and groups to their functional roles whereby ordered patterns of organizational behaviours are established and maintained.

According to the systems approach the construct that is known in the literature as organizational climate is a perception that is held of the effectiveness of the interaction processes through which organizational structures interact. As communication is the process through which these interactions occur organizational climate in fact represents a perception of the climate for organizational functioning that is created by communication. Support for this theoretical position was first expressed by Dennis (1975:5) who stated "... like the concept 'organizational' climate, communication climate refers primarily to members' perception of communication or communication related events in the organizational environment. These perceptions may be the product of singular or multiple organizational experiences ..."

It is also notable that many of the earlier climate studies that were undertaken conceptualized organizational climate in terms of communication variables and that many of the climate dimensions that were distinguished referred to communication characteristics or practices of the organization (see also Litwin and Stringer, 1968; Payne and Mansfield, 1973; Bass, Valenzi, Farrow and Solomon, 1975; Payne and Pugh, 1976; Gavin and Howe, 1975; La Follette and Simms, 1975; Taylor and Bowers, 1970; Lawler, Hall and Oldham, 1974; Jones and James, 1979; Joyce and Slocum, 1984, amongst others). Support for the theoretical position that organizational climate manifests as a climate for organizational functioning that is created and recreated through communication thus seems evident from the results of previous climate research. Organizational climate is

therefore considered to be determined by the perceptions that exist of the various processes of communication that link organization structures to functions at each organizational level.

This climate for organizational functioning, that is created and recreated by communication, should not be confused with what is known in the literature as communication climate. Although all organizational processes comprise a form of communication two types of communication processes are required at each organizational level, i.e. information and resource transposition processes. The processes whereby information is processed shape the perception of what is generally known in the literature as communication climate. The second type of communication process that is required, make the transposition of material and energy into products and services possible. This climate is never specifically identified in the literature and is never viewed in isolation from the more enveloping global construct known as organizational climate. Within a social systems approach however, this climate, created by the perceptions that are held of the processes that make possible the transformation of material and energy, is referred to as the transposition climate.

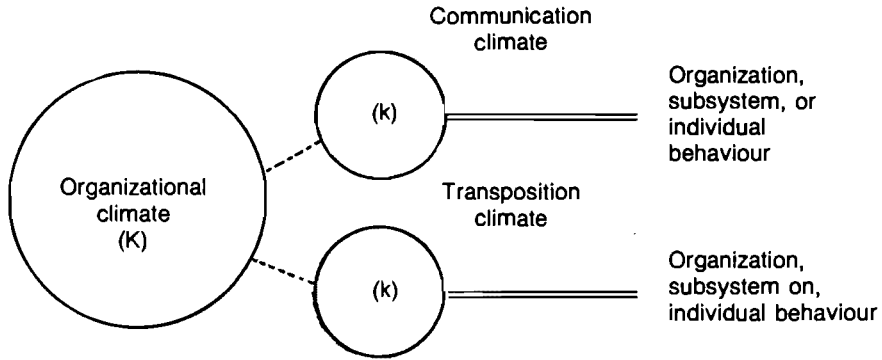
Climate should not however be regarded as the summation of the perceptions that are held about information processing and material and energy processing. According to systems principles climate must be regarded as more than the sum of its parts. In Buckley's (1967) terms climate should be regarded as the result of unorganized multiplication and not as mere summation of its composing parts. In such a comparison climate can be represented as follows:

Climate = information processing X material and energy processing

Climate is therefore determined by two subconstructs i.e. the communication climate and the transposition climate:

- communication climate represents the meaning that is ascribed to the processes whereby information is processed; and
- transposition climate represents the meaning that is ascribed to the processes whereby material and energy are processed.

This construct can be depicted as follows:



**The construct organizational climate**

K = construct organizational climate  
 k = indicators/subconstructs of the construct  
 ===== = operational definitions

--- = proposed relationship with the construct organizational climate

**Figure 1: The climate construct**

**2.3 Implications of a systems approach for existing methodological issues in climate research**

In the introduction to this article it was clearly stated that the methodological stance of the climate construct must be viewed in relation to its conceptual development. A number of unresolved theoretical issues were identified. In this section each of these issues will be dealt with more closely. Specific emphasis will be placed on how a systems approach can alleviate these methodological problems for climate research.

**2.3.1 The appropriate theoretical unit for the measurement of climate**

The appropriate theoretical unit for climate research has been debated for more than a decade by researchers such as Guion, 1973; Hellriegel and Slocum, 1974; James and Jones, 1974; Powell and Butterfield, 1978; James, 1980 and Mossholder and Bedeian, 1983. Initial studies viewed the organization as the appropriate unit of analysis. James and Jones (1974) were the first climate researchers to draw a distinction between the organizational climate construct and the

psychological climate construct. This first focused the attention of researchers on the existence of different theoretical levels for the different constructs.

Falcione and Kaplan (1984:289) are of the opinion that the large number of organizational level studies that were actually undertaken on individual level indicate a meaningful dilemma in climate research.

Although the recognition of multiple theoretical levels is clearly appropriate, Glick (1985) is of the opinion that the appropriate measurement level is not always clear. The theoretical unit for collective climate cannot always be determined independently and its substantive interpretation is also suspect.

This is further complicated by the fact that climate researchers use aggregate scores to measure climate. The use of aggregate scores only makes sense if conclusions are to be drawn about collective theoretical units such as a subunit of the organization.

According to Poole (1985:86) research results support the following assumptions:

- climate is an organizational rather than individual characteristic;
- climate must be differentiated from evaluative responses such as satisfaction, and

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— climate constitutes a generalized description of organizational practices and must therefore be distinguished from individual members descriptions thereof.

Within a systems approach climate is also viewed as a multi-level phenomenon. Because system levels are hierarchically ordered, each level must be analysed in conjunction with the levels that envelop it and are enveloped by it. The distinction drawn by James and Jones (1974) between organizational climate and psychological climate would therefore appear to be valid. Organizational climate is a collective construct that must be distinguished from psychological climate which is an individual construct. Within a systems framework climate manifests as a collective construct at three organizational levels i.e.

- organization-environment (as culture)
- organizational level (as climate)
- group level (as subsystem climate)

These three levels represent the appropriate levels at which climate research should be undertaken. The level at which climate research is undertaken will determine which structural and functional elements and processes must be analyzed. Because organizational climate represents a collective construct, collective perceptions can be determined by aggregate climate scores. Conclusions drawn on the basis of these aggregated climate scores will have a bearing on the aggregated theoretical unit and not on the individual members that constitute that unit. This implies that climate is regarded within the systems approach as a collective construct that must be distinguished from individual members' perceptions of the situation.

### **2.3.2 The determinants of the climate construct**

According to Roberts *et. al.*, an understanding of the determinants of climate construct is critical for the elucidation of this construct because determinants form an integral part of the nomological net. As James and Jones (1974) indicated the basic requirement of a nomological net must first be met before climate can qualify as a construct.

Most researchers attempt to describe climate in general terms, although the dimensions that are used vary greatly. On an empirical level support for the relationship between structural elements and climate varied greatly from positive, to negative to no support for the influence of structural variables on climate. Schneider (1975a) states that although structural variables do determine certain organizational behaviours (e.g. centralization and formalization) other research results such as those of Lawler *et. al.*, (1974) and Payne and Mansfield (1973) do not succeed in establishing relationship between structural variables and climate.

In general it would appear as though inconsistent relationships exist between climate and structure. The inconsequential influence of macro-level structural and contextual variables on climate research indicate that mediating organizational practices play an important role in the definition and maintenance of climate (see Child and Ellis, 1973; Lawler *et. al.*, 1974; Muchinsky, 1977b). Previous efforts to explain climate in terms of mediating variables emphasized psychological processes because individual levels of analysis were typically employed in these studies. This increased confusion about which organizational levels are the appropriate theoretical units for measuring climate (see Payne and Pugh, 1976; and James, 1982). According to Glick and Roberts (1984) individual levels of analysis are only appropriate for the measurement of psychological climate and not for accurate measurement of organizational level processes.

Glick (1985:604) believes that the evolution of climate must be viewed from a psychological perspective, but that it also incorporates sociological/organizational level processes. Sociological and organizational level analysis are therefore also necessary to determine the impact that these processes have on the evolution of climate.

Various researchers have made important contributions to an understanding of the determinants of psychological and organizational climate (Abbey and Dickson, 1983; Johnston, 1976; Joyce and Slocum, 1979,



1984; Poole and McPhee, 1983; Schneider and Reichers, 1983).

The need for further dynamic perspectives and longitudinal research are advocated by various researchers such as Abbey and Dickson (1983); Johnston (1976); Joyce and Slocum (1979, 1982, 1984); Schneider and Reichers (1983) and Poole (1985).

Glick (1985:604) is of the opinion that three types of research designs can further isolate the determinants of climate i.e.:

- longitudinal studies;
- studies about newcomer socialization that can determine the processes whereby climate is developed and shared; and
- network analysis that can determine the interaction patterns through which climate perceptions are shaped.

The systems framework not only satisfies the need for a dynamic approach to climate research, but it also specifies what the determinants of climate are. Because climate is generated through interaction, the determinants of organizational climate according to a systems approach are those sociological and organizational processes that make interaction between structural organizational components at each level possible. By viewing processes as the determinants of climate, the role of structure is also clarified. Processes bind structure to functions. Climate perceptions are therefore not based on a perception of the structures themselves, but rather on the effectiveness of the processes that link these structures to their functions. By specifying interaction processes as the determinants of organizational climate an explicit dynamic approach to climate research is taken which also makes it possible to specify a nomological net for climate so that climate can indeed qualify as a construct.

### **2.3.3 The proposed relationship between organizational climate and psychological climate**

The proposed relationship between organizational climate and psychological climate has been the subject of debate amongst climate researchers for more than a decade. Initially the organization was viewed as the appropriate theoretical unit for

climate research. However, when James and Jones (1974) drew a distinction between organizational climate and psychological climate the debate about the proposed relationship between organizational climate and psychological climate reached new heights. Climate researchers often confused individual and organizational levels of analysis and thereby perpetuated the confusion surrounding the distinction between organizational and psychological climate. One of the methodological problems resulting from such a distinction was put forth by Falcione and Werner (1978:12): "Using different measures which purport to measure a construct at one level of analysis and another instrument that measures another related construct but at a different level of analysis, can be hazardous business. What we find may be more artificial than real."

By defining the climate construct within a systems framework of organizational functioning the proposed relationship between individual (psychological climate) and collective climate (organization or subunit climate) can be sufficiently clarified.

Collective climate is not viewed within the systems approach as the simple aggregate of psychological climate. Separate composition rules are formulated for each of these constructs. Psychological climate is formed at individual level through perceptual interaction. Organizational climate manifests at organizational level as a collective construct that is collectively formed through social interaction. As each of these constructs manifest at a different organizational level, each has its own composition and dimensionality. The processes that form each of these constructs can be clearly differentiated in the systems approach and therefore each indicates a separate construct that must be measured differently.

### **2.3.4 The interpretation of perceptual agreement**

As can be gleaned from the above discussion the use of composition rules serves to increase the lack of conceptual clarity about the climate construct. Organization climate is defined by various climate researchers as

the aggregate psychological climate that exists in an organization where individual levels of perceptual agreement exist (Howe, 1975; James, 1982; Joyce and Slocum, 1979). According to this definition climate can be high or low for some organizations, but it does not exist at all in those organizations where perceptual agreement does not exist.

This is a disputable theoretical assumption because according to Glick (1985:604) a construct either exists for a whole organization or it does not exist at all. Although Glick (1985:604) acknowledges that the reliability of aggregate perceptual measurement may vary due to varying levels of perceptual agreement, all organizations must exhibit a climate that can be described as high or low on certain dimensions. Homology between constructs such as organizational/psychological climate must be established empirically and not through the use of composition rules. Organizational climate is the result of sociological and organizational processes and must therefore be viewed as a separate organizational characteristic — not just the aggregate of psychological climate. Ascribing climate only to those organizations that exhibit a high degree of perceptual agreement about psychological climate negates the traditional criteria of construct validity and measurement reliability at organizational levels of analysis. It supposes that psychological climate and organizational climate have the same dimensionality and would therefore exhibit the same pattern of relationships with the variables that are being regarded.

Poole (1985:91) states that most climate studies focus on perceptual agreement because it is directly related to communality of meaning amongst organizational members. Poole (1985:91) also indicates that research results about perceptual agreement have been inconclusive as research results have come out in favour of both perceptual agreement and disagreement.

The systems approach to climate research implies that organizational climate is not dependent on perceptual agreement. The construct exists at each hierarchical level independently of the degree perceptual agree-

ment that exists about it. Where a low level of perceptual agreement exists it must not be interpreted that the construct does not exist at that level. Low perceptual agreement is rather indicative of fact that the processes whereby climate is formed at each level do not function effectively and that as a result the meaning that is ascribed to that situation is not shared properly amongst all organizational members. This would also explain the contradicting research results that were obtained. Climate perceptions may be characterised at each organizational level by high or low perceptual agreement. However, the degree of perceptual agreement only serves as an indication of effectiveness of climate formation at each organizational level.

### 2.3.5 The domain of climate research

According to Glick one of the biggest problems facing the climate researcher is identifying the appropriate dimensions of the climate construct. Climate is a generic term that refers to a class of dimensions that are considered by some researchers to be so vague and diverse that it can be regarded as meaningless (see Guion, 1973; Johansson, 1973 and James and Jones, 1974). According to Guion (1973) the term organizational climate incorporates various organizational and psychological dimensions but this only serves to increase the vagueness of the concept.

When the climate dimensions that are identified by various climate researchers are regarded, two facts are conspicuous: —there is a huge diversity of climate dimensions that are identified by climate researchers; —climate overlaps with most other organizational variables.

In an overview of climate literature two approaches to the description of climate is discernable (see Poole, 1985). Dimensional approaches presume that climate can best be described as consisting of a number of variables, each of which represents an important meaningful variable to the organizational member. Situational variation in climate

perceptions are then reflected by varying values according to the various dimensions.

There are three kinds of dimensional approaches:

- the first approach tries to specify general dimensions that provide a global, general description of climate;
- the second approach tries to identify climates for specific organizational practices e.g. leadership climate;
- the third approach tries to identify climate dimensions that are unique to each organization.

Typological approaches focus on climate as a whole i.e. an integrated configuration of characteristics. Typological climates are described by terms such as democratic, autocratic, etc. The different types of climates can be evaluated by their dimensions, but cannot be reduced to their dimensions because they form an integrated whole. Typological approaches assume that individuals react to the organization situation as a whole. Consequently typological approaches represent a smaller range of climates than dimensional approaches where there are potentially as many types of climates as there are combinations of values on the different dimensions.

By regarding the climate construct within a systems framework the domain of climate research is clearly specified. Thus a nomological net is established through which the validity of the climate construct can be proven. By using the appropriate climate dimensions for each construct at each organizational level, valid climate instruments can be developed. Both dimensional and typological approaches can be accommodated within the systems approach to organizational climate.

- the approach can be used to specify general climate dimensions at each organizational level. These dimensions can then be used to develop general climate instruments for use in all organizations;
- the approach can be used to determine the dimensions for specific climates e.g. production climate;
- the approach can be used to translate

general climate dimensions into specific dimensions for each organization so that unique but valid climate measurement instruments can be developed for each organization. This approach is regarded as the most appropriate since climate is determined by the processes that allow organizations to function. Although certain universal organizational processes exist the specific manner in which these processes manifest in each organization, is unique to that organization. This means that the development of an omnibus climate measurement should not be regarded as a valid research goal. Researchers should rather focus on identifying processes that are innate to each particular organization.

This approach also provides for a typological approach to climate research. Dimensional data can be used to identify coherent patterns or types of climates. Because the dimensions of climate as identified within the systems framework are specifically not identified through isolation from the whole, but rather through regarding the organization as a whole, a dimensional approach to the development of a type does not rob such a type of its coherence. By using typological classifications of climate types, it might become possible to make predictions about the process of climate acquisition and to formulate guidelines for the management of climate acquisition. More longitudinal research will however be needed before this can become possible.

### **2.3.6 The proposed relationship between organizational climate and culture**

Interest in the organizational culture construct started picking up at just about the same time that research interest in the climate construct began to decline. Climate researchers such as Glick (1985), Ashforth (1985) and Falcione and Kaplan (1984) started focussing on the proposed relationship between climate and culture because it was perceived that there is a close link between the two constructs. The apparent similarity of these two constructs can be ascribed to the fact that both represent a

broad class of psychological and organizational variables that reflect the individuals' interaction with the organization. As Falcione and Kaplan (1984:301) point out, organizational culture as defined within an ideational approach exhibits a significant similarity to organizational climate as defined within the multiple measurement organizational characteristic approach distinguished by James and Jones (1974) in their literature overview of the climate construct. Such a similarity might explain why the climate and culture constructs are often used interchangeably in the literature.

Given the conceptual congruence between the culture and climate constructs it is not surprising that empirical congruence has also been found to exist. Many of the methodological issues that are regarded by climate researchers also form the focus of culture research. The theoretical unit problem underlies Riley's (1983) argument for the recognition of the existence of multiple cultures and subcultures within the organization. Barley (1983) points to the debate surrounding the theoretical unit problem that exists in the anthropology about Goodenough's (1981) interpretation of culture as a psychological phenomenon and Geertz's (1973) interpretation of culture as a socially constructed phenomenon.

Moreover according to Glick (1985:12) most new culture research focus on the dynamic processes whereby culture is formed and changed. A strong similarity exists between recent climate approaches (Poole and McPhee, 1983; Schneider and Reichers, 1983) and culture (Hirsch and Andrews, 1983; Pettigrew, 1979; Pandy, 1983; Riley, 1983; Smith and Simmons, 1983).

Both climate and culture researchers also focus on the level of perceptual agreement, although culture researchers do not quantify the level of perceptual agreement. However researchers such as Deale and Kennedy (1982) are of the opinion that low perceptual agreement would indicate a weak organizational culture.

It would therefore appear as though Glick (1985:612) is correct in stating that the smaller substantive differences between

climate and culture appear to be more prominent than real. Falcione and Kaplan (1984:301) however indicate that empirical support for the isomorphism of climate and culture do not exist because;

- such an approach would presume that climate could exist apart from individual perceptions. Almost all climate studies however measure climate through techniques that are based on individual perception;
- homogenous perceptions of an organizations culture/climate could then be expected to exist. However research results indicate that different climates can exist for different functional groups in an organization (see Hall and Lawler, 1969; Johnston, 1976; Schneider, 1975(a); 1975(b); Stimson and La Belle, 1971).

Despite the apparent empirical congruence between climate and culture, the differences between the two constructs also appear to be methodological as a result of differing disciplinary foundations. Climate initially developed from Lewin's social-psychological framework while culture has its origin in anthropology and symbolic interactionism. According to Glick (1985:612) climate research tends to be nomothetic and quantitative in its description of phenomena that exist at a certain point in time. According to Martin, Feldman, Hatch and Sitkin (1983) culture research is mainly idiographic and uses qualitative methods to describe dynamic processes (Jelinek, Smircich and Hirsch, 1983; Pettigrew, 1979) from both external and participant perspectives.

Despite efforts to clarify the proposed relationship between climate and culture (see Falcione and Kaplan, 1984) it would appear as though the relationship between climate and culture remains an empirical issue. Falcione and Kaplan (1984:302) are of the opinion that culture research might be useful to climate research in two respects

- theoretically it might be possible to gain a better understanding of climate because culture adds a contextual dimension to field research; and
- empirically it can focus research efforts on alternative methods of data-gathering

and thereby reduce the dependence of climate on self-reports.

Ashforth (1985:842) believes that culture perceptions compliment climate perceptions in that it helps the individual to define what is psychologically important and thereby enables the individual to understand organizational experiences.

A systems approach to climate clarifies the proposed relationship with culture that is evident from the literature overview. The systems approach specifies the nature of the interdependence that exists between these two constructs and thereby explains the conceptual and methodological differences and similarities between these constructs. By ordering these constructs according to the system principle of level each is conceptualized as a separate construct. This approach explains the processes through which each construct is shaped on each level, and what the nature of the interdependence between these constructs is.

It would therefore appear as though a social systems approach to organizational climate within the framework of a model of organizational functioning to a greater extent alleviates the dilemma facing the climate researcher. Within this approach climate can be operationally defined in such a manner that it can be measured validly and reliably. This approach therefore succeeds in proffering a useful, theoretically specific explanation for the relationship that is thought to exist between climate and organizational behaviour.

This approach also greatly succeeds in alleviating most of the methodological issues in climate research that have up till now remained unresolved.

It would therefore appear as though the climate construct can finally move out of the troubled methodological waters that it has been bogged down in for such a long time.

Although the social systems approach may not provide a full understanding of the relationship between organizational functioning and organizational climate, it does succeed in proffering a systematically integrated explanation of the climate construct without resorting to confusing detail.

### **3 METHODOLOGICAL GUIDELINES FOR CLIMATE RESEARCH WITHIN A SOCIAL SYSTEMS APPROACH**

By operationally defining the climate construct within the framework of a social systems model of organizational functioning many of the conceptual issues that have plagued the climate construct have been resolved. The implication of this is that the methodological issues that have always remained unresolved can now be alleviated since a lack of conceptual clarity regarding the construct no longer exists. The importance of empirical research into the climate construct represents much more than a mere effort to validate or test a specific theoretical position. Through empirical research knowledge and understanding about the construct can be expanded which can lead researchers to new insights about the phenomenon.

As the conceptualization of the climate construct within the social systems approach holds important methodological implications for climate research these implications will henceforth be discussed.

#### **3.1 Interaction processes as determinants of the climate construct**

Within the social systems approach climate is viewed as an outcome of the interactional processes that exists within the organization.

According to Bradley and Baird (1983:43) each organization anticipates certain interaction patterns that reflect the organizations structure and indicate the relationships that ought to exist between workers. These interaction patterns form the organizations formal structure. All communication that takes place within the organization is however not reflected by the organizations formal structure. Informal networks develop to supplement shortcomings in the organizations formal network. Formal and informal networks therefore function in a complementary and substitutionary manner. Where existing interaction patterns function ineffectively, new patterns of interaction will be brought into existence. In this manner subsystems create interaction patterns that will to a greater or

lesser extent be congruent with the interaction patterns that are formally prescribed by the organization.

In an organization with an effective formal structure little differentiation between the formal and informal structure will occur because the interaction patterns dictated by the organization function effectively. In contrast in an organization with an ineffective organizational structure informal interaction patterns will differ greatly from those formally dictated by the organization.

Where the formal organization structure functions ineffectively informal interaction patterns evolve to counteract the shortcomings of the formal organization structure. The interaction patterns that evolve informally are often functional and can in time develop into new formal interaction patterns.

The methodological implication of this is that network analysis may provide a useful method in "... assessing the impact of social interaction and patterns of information and work flows on within group consistency in measures of climate" as stated by Glick (1985:605). Other climate researchers such as Jablin (1980) Joyce and Slocum (1984) and Schneider and Reichers (1983) also emphasize the usefulness of network analysis for charting communication patterns that are associated with various types of climate. Jablin (1980:342) identifies the following methodological advantages of assessing climate by means of network analysis:

- it can increase the validity of climate research because it provides for a multi-method multi-trait research paradigm that can be subjected to tests for convergent and discrimination validity;
- it can help alleviate some methodological problems, such as the basis on which aggregate climate scores can be calculated.

Jablin (1980:342) also proposes that simulated network studies of real or computer simulated networks can be undertaken in a laboratory environment so that the impact of these on climate formation can be observed in controlled circumstances. Jablin's (1980) viewpoint is based on the assumption that although field studies provide valuable insights, the concepts that are

involved in climate research are so complex that is difficult to study in real situations.

Jablin (1980) is of the opinion that laboratory studies might provide the insights that are necessary to gain an understanding of bigger organizational networks.

### **3.2 The critical theoretical unit for studying climate**

A further important theoretical implication of the conceptualization of organizational climate within the system approach is that the natural workgroup (subsystem) becomes the smallest and most important theoretical unit for climate research. As indicated by Weick (1969) behaviour of lower system levels constrain the behaviour of higher system levels. Therefore the climate that exists within the subsystem will constrain the climate that will exist for the organization as a whole. The subsystem is of particular importance for the climate researcher as it provides the context within which the individuals behaviour is integrated with that of others so that ordered, standardised behavioural patterns that are required of individuals who are involved in a functional relationship, can be brought into existence and maintained.

The subsystem represents the functional unit within which individuals and groups exhibit appropriate behaviour within their functional roles. Empirical results consistently point to the importance of this level for an understanding of how climate is experienced by the individual. Corporate philosophers such as Peters and Waterman (1984) and organizational theorists such as French and Bell (1984) regard the natural workgroup as a basic building block of the organization and therefore as a crucial element in determining organizational behaviour.

The research of the climate construct at subsystem level should therefore be regarded as a priority by climate researchers because it is at this level that individual and group perceptions of the organization are established and experienced. Because all other levels on which climate manifests envelopes the subsystem level a full understanding of how climate forms on these levels cannot be gained unless climate

formation at subsystem level is fully understood. In this also lies an important motivation as to why climate research should not be abandoned in favour of culture research. A full understanding of the organizational culture construct cannot be gained unless an understanding of how it evolves in the first place is gained. Disappointingly enough this is exactly what is happening with climate research. Research interest in the organizational climate construct is waning in favour of culture research. An overview of the literature clearly shows that as research interest in the climate construct began waning in the mid 1980's (almost no climate studies were reported after 1986) research interest in culture increased. There has since been a steady increase in literature dealing with this subject.

What is proposed here is not that subsystem climate should be researched in isolation of other organizational levels. The importance of studying the process of climate formation at all three collective organization levels must be re-emphasized as these form an interdependent whole as far as the processes whereby climate is formed is concerned.

The importance of the natural workgroup, however, lies in the fact that it provides the contextual environment in which the individual experiences and attains climate perceptions. As it is of extreme importance for management to manage the acquisition of climate, future climate research will have to focus on this level if climate acquisition is to be considered an important management tool in future.

### **3.3 The unique nature of climate**

Climate, as it is operationally defined within the systems approach, presumes that organizational climate is a construct that cannot be measured in terms of general dimensions. Climate is regarded as an unique construct that manifests uniquely within each organization because each organizations interaction processes manifest in a different fashion. Within the social systems approach the domain of climate research is clearly specified. Interaction processes are the

determinants of climate. Since each organizations interaction processes manifest uniquely within that organization, climate must be viewed as an unique construct. By specifying interaction processes as the determinants of climate the domain of climate research is clearly delimited. This means that a nomological net is established for the climate construct and that the validity of the construct can be proven.

Construct validity can be determined in two ways, i.e.:

- by correlating measurement instruments with existing measurement instruments of which the validity have been proven; and
- by factor analysis through which the underlying patterns of relationships in a set of variables can be determined.

Because the validity of existing climate instruments can be seriously questioned due to the fact that they have not been developed within the framework of systematic integrated models of organizational functioning, the first method is not possible on a practical level. Therefore factor analysis must be regarded as the primary method for proving the validity of the climate construct.

Another method would be to prove the convergent validity of the climate construct. This can be done by comparing perceptual measurements scores obtained by a measurement instrument based on a theoretical construct with some kind of "hard criteria". If climate, as it is perceptually measured, shows a high degree of congruence with measurements obtained by the use of "hard" criteria, (eg. actual behaviour), the convergent validity of the climate construct can be proven. The deduction can then be made that theoretical construct under measures what it is supposed to measure.

The aim with the dimensions identified within the systems approach is to establish a dimensional approach to organizational climate. In contrast to earlier dimensional approaches the aim is not to develop an omnibus climate measure. These dimensions are meant to serve as guidelines of the relationship that exists between the variables that constitute the climate construct. These dimensions should be used to determine the

specific nature of climate as it manifests within each organization. This further implies that items should be developed for each dimension based on the unique manner in which each dimension manifests within each organization. This implies that items should be developed according to the specific process that constitutes that dimension at that specific level of the organization. Climate researchers are therefore required to represent general dimensions in a specific manner. Although such an approach may be time consuming, it is also much more sensitive to the nuances of a specific organization. Accordingly results obtained in this way will be much more accurate than when general climate measures are employed. Although a dimensional approach to organizational climate is proposed, it represents an unique approach in terms of how each dimension is operationalized within a specific organization. It would however also be possible to validate the construct validity of the general dimensions through such an unique approach.

### **3.4 Appropriate research design for studying climate**

Climate as it is conceptualized within the system approach constitutes a multi-dimensional multi-level construct. Various climate researchers, amongst others Glick, 1985; Dandridge, Mitroff and Joyce, 1980; James and Jones, 1974; Payne and Pugh, 1975; Jablin, 1980; advocate the use of multi-trait multi-method research designs.

Hill and Northouse (1978:43) emphasize the importance of multi-step research designs in the light of the large number of research findings that indicate a discrepancy between attitudes (perceptions) and actual behaviour that is exhibited in an organization. Hill and Northouse (1978) propose that a multi-step research design offers a method of evaluating any discrepancies between perception and behaviour, because such discrepancies can be controlled for by such a research design. Because climate perceptions may or may not manifest as behaviour, it is important to determine the convergent validity of climate perceptions by

comparing subjective and objective climate measurements.

The importance of a multi-step research design is strongly emphasized by Jablin (1980). Jablin (1980) also points to the importance of determining the discrimination validity of these two types of measurements. According to Jablin (1980) very few climate studies have been undertaken that compares the convergent and discrimination validity of subjective and objective measurements.

A definite recommendation is therefore that climate should be studied within multi-trait multi-method research designs. This will enable future researchers to determine not only convergent and discrimination validity but also the manner in which these two types of measures co-vary.

The research design that is proposed for future climate research should include at least two steps and two methods. Climate should at least be measured by a measurement instrument that is applied individually within work group context, as well as by focus group interviews that are conducted within this context. Thus it will be possible to obtain two sets of data for analysis from which the convergent and discrimination validity of the climate construct can be determined. Thus can be ensured that perceptual climate measurements represent an index of the organizations behaviour and do not merely constitute idiosyncratic responses of organizational members. By comparing soft and hard criteria the validity of the climate construct can be determined.

### **3.5 A process approach to organizational climate**

Monge (1982:245) states that system researchers can only illustrate a system characteristic if the analytical tool that is used, provides an inherent representation of that characteristic itself. The use of traditional research methodologies is according to Monge (1982:258) inappropriate for systems research as it is inherently incapable of exposing specific system hypothesis.

Monge (1982:258) proposes that system hypothesis can only be tested by system



research methods with which it exhibits an inherent congruence.

The implication of this for the climate researcher lies in the fact that climate as it is conceptualized within the systems approach represents a dynamic entity. This implies that climate should be studied as a process. However, according to Monge, Farace, Eisenberg and White (1984) organizational researchers tend to undertake static rather than processual research. Monge *et al.*, (1984) identify three reasons why this is so i.e. methodological determinism, inaccessibility of process methods and the perceived effort required of the researcher.

A variable such as climate undergoes rapid changes as the organization reacts to meaningful organizational events. For this reason climate researchers such as Schneider and Reichers (1983) advocate longitudinal climate research. Climate, as conceptualized within a systems framework necessitates the collection and analysis of longitudinal data and therefore the research methods that are used must allow for this. In so doing the focus can be shifted from static relationships to dynamic relationships. Monge *et al.*, (1984) therefore propose that climate should be studied within appropriate time sequences in order to determine both tendencies and periodicity of the climate phenomenon. Tendencies will show gradual changes in climate perceptions that take place in time while periodicity will show cyclical fluctuations in general climate perceptions.

Climate should therefore preferably be studied longitudinally in terms of appropriate time sequences.

### **3.6 Increasing Validity**

By applying the following methodological guidelines validity can be increased further.

#### **3.6.1 Representative Sample of the Organisation**

According to the systems approach the appropriate theoretical units for analysing climate in the organisation are the collective levels on which it manifests. The unit of

analysis should therefore also be collective. This implies that valid measurements of the climate construct can only be obtained if representative samples of the whole organisation is drawn. The validity of studies that do not apply this simple principle is threatened. This is especially true of studies that draw samples of one or two individuals from one or two divisions of the organization.

To draw a sample of individuals leads to inaccuracy as the wrong level of analysis is used. Consequently the use of small homogeneous samples of individuals from the organization make it impossible to determine the validity and reliability of climate measurements.

For many climate researchers the methodological limitations of small sample populations do not weigh as heavily as the cost and practical problems associated with big representative samples. Representative samples should however be included in any future empirical research of organizational climate.

#### **3.6.2 Descriptive measurements**

For the accuracy and construct validity of the climate construct as it is operationally defined within the social systems approach it is required that climate measurements that are obtained through perceptual measures should be measured by descriptive rather than evaluative items. Climate, viewed from a systems approach, represents a description of the meaning that is ascribed to a particular situation and does not merely constitute a personal or affective evaluation of the situation.

This represents a dilemma to the climate researcher as attitudinal scales are the only empirical means available to quantify any attitude (feeling) a individual has toward an object.

Climate evolves as a result of perception and as such it represents the meaning, effect or response that a stimuli has on the human psyche. This meaning, as it applies to climate, should be measured in a descriptive rather than evaluative terms. Attitude scales which are typically used to measure climate include the Thurstone scale, Likert-

type scales and the Semantic Differential scale of Osgood, Succi and Tannenbaum.

In particular the Semantic Differential scale can be singled out for the potential that it holds to measure climate accurately and validly. Climate has been defined as the process whereby meaning is ascribed to organizational situations so that the individual can respond to the situation in an appropriate manner. The Semantic Differential offers a method whereby meaning can be measured through semantic differentiation. This scale represents a dimension and its determinants on a bipolar seven point scale. The scale measures three dimensions of meaning i.e. evaluative, potency and activity dimensions. De Vito (1986:228) proposes that the Semantic Differential can be used to index meaning for

- different concepts by the same subject;
- same concepts by different subjects; and
- various concepts by the same subject at different time intervals.

The third possibility for indexing meaning is especially appropriate for climate research. The meaning that various subjects ascribe to the concepts that indicate climate can be measured in appropriate time intervals through the Semantic Differential Scale. This will determine both tendencies and periodicity of climate perceptions.

Climate researchers should also take care in the formulation of climate items. Items should be formulated in a descriptive and not evaluative manner. The distinction between evaluation and description is not always easy to make. As Rockeach (1968) states ... "While it is possible (but unlikely) for perception to exist without affect" it is difficult for a respondent to prevent his feelings from influencing his perception.

Two possible solutions can be offered on a methodological level to prevent affective responses from contaminating climate perceptions. The first possible solution is identified by Payne, Fineman and Wall (1976). Payne *et. al.*, (1976) propose that climate items should contain two separate sections. The first section is descriptive and measures how a situation is perceived. The second part of the question is affective and

measures how the individual feels about the situation that he perceives. In the analysis of responses affective measurements can then be eliminated and truly descriptive measurements of the situation can thus be obtained.

This proposal of Payne *et. al.*, is not without merit as perception without a degree of affect is not a reality. This method at least provides a useful method for managing the overlap that is bound to occur between perception and affect so that reality based descriptions of the situation can be obtained.

A further possibility is to expand on Payne *et. al.*, (1976) proposal and to measure each climate item in three parts

- how is it now (descriptive)
- how do you feel about the situation (affective)
- how would you like it to be in future.

The motivation for including the third part of the item is that future interventions can be based on this data. The value of this lies in the fact that climate acquisition can then be planned and managed according to the information that is obtained by this part of the question.

It should also be noted that the International Communication Associations Communication Audit (Goldhaber and Rogers, 1979) already contains a number of these type of items on the basis of which corrective actions can be planned.

The second possible solution for controlling the influence of affect on climate measurements is to describe item distractors at each item in terms of true perceptions rather than in vague global terms such as agree or disagree. By describing the item distractors for the respondent, more concrete and accurate responses for the description of the situation can be solicited from respondents.

The Semantic Differential lends itself particularly well to such an approach as it is a bipolar scale in which each pole can be contrasted with each other in a descriptive manner. Another possibility is to use a Thurstone scale in which descriptive statements about the organization is made.

Up till now climate researchers have often

mixed evaluative and descriptive items in their climate questionnaires. Much greater care will have to be taken in future to control for the influence that affect might have on climate perceptions.

### 3.7 Norm tables for the comparison of climate scores

A further implication of the way that organizational climate is conceptualized within the systems approach is that standard norms for the comparison of climate scores can not be drawn up. Because climate measurements represent an unique measurement for each organization a general measurement instrument through which standardised climate scores can be developed, does not exist.

It is also not meaningful to compare organizational climates as no "best" organizational climate exists. Climate is, according to the systems perspective, effective for a particular organization if it (1) enables a specific organization to adapt to its particular environmental demands and (2) if it effectively maintains that organizations input — transformation and output cycles.

## 4 CONCLUSION

In this article the serious theoretical and methodological issues facing climate research has been discussed. It was cited that the most important issue facing climate researchers is the lack of theoretical integration in the conceptualization of the organizational climate construct. The inconsistent and even divergent conceptualization of the climate construct has led climate researchers to conclude that a reconceptualization of the climate construct would be necessary to re-

tain organization climate as useful research field and management tool.

A social systems approach to organizational climate proffers such a reconceptualization. It was indicated that by operationally defining the climate construct within the framework of a social systems model of organizational functioning many of the existing conceptual and methodological issues facing climate researchers can be resolved. Without a guiding framework such as the systems model of organizational functioning a phenomenon that is as complex as climate is, cannot be fully explained or understood. On an empirical level valuable insights can be gained, but only if research is conducted in systematic and ordered fashion. As Meehan (1969:81) states: "Faulty methodology can destroy an explanation but no amount of methodological skill can establish an explanation".

This truth is apparent when the conceptual and methodological stance of the climate construct is regarded. Despite the multitude of empirical research that has been conducted into the climate construct, researchers still fail to offer a truly integrated theoretical explanation of the construct and the processes by which it is formed.

The purpose of this article has therefore not just been to provide a guiding framework for conducting research into the climate construct, but also to discuss the methodological implications of such a framework for climate research so that the observation of Woodman and King (1978:824) that "... perhaps climate is destined to remain theoretically promising but methodologically unsound" will not come true.

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## 5. REFERENCES

Abbey, A., & Dickson, J.W. (1983). R & D Work Climate and Innovation In Semiconductors. **Academy of Management Journal**, 26 :362-368.

Ashforth, B.E. (1985). Climate Formation : Issues and Extensions. **Academy of Management Review**, Vol 10:4 : 837-847.

Barley, S.R. (1983). Semiotics and the Study of Organizational Cultures. **Administrative Science Quarterly**, 28 : 393-413.

Bass, V.M., Valenzi, E.R., Farrow, L., & Solomon, R.J.(1975). Management Styles Associated With Organizational Task, Personal and Interpersonal

Contingencies. **Journal of Applied Psychology**, **60** :720-729.

Bradley, P.H., & Baird, J.E. (Jnr). (1983). **Communication for Business and the Professions**. Dubuque, Iowa : Wm. C. Brown.

Buckley, W. (1967). **Sociology and Modern Systems Theory**. Englewood Cliffs : Prentice-Hall.

Child, J., & Ellis, T. (1973). Predictors of Variation in Managerial Roles. **Human Relations**, **26** : 227-250.

Dandridge, T., Mitroff, I., & Joyce, W. (1980). Organizational Symbolism : A Topic to Expand Organizational Analysis. **Academy of Management Review**, **5** : 248-256.

De Vito, J.A. (1988). **Human Communication. The Basic Course**. (Fourth Edition). New York : Harper and Row.

Deale, T., & Kennedy, A.E. (1982). **Corporate Cultures**. Reading, MA : Addison-Wesley.

Dennis, H.S. (1974). **A Theoretical and Empirical Study of Managerial Communication Climate in Complex Organizations**. Unpublished Doctoral Dissertation, Purdue University.

Dennis, H.S. (1975). **The Construction of a Managerial Communication Climate Inventory for use in Complex Organizations**. Referaat gelewer by die Annual Convention of the International Communication Association. Chicago, Illinois.

Falcione, R.L., & Kaplan, E.A., (1984). Organizational Climate, Communication and Culture. In Bostrom, R.N. (Ed.). **Communication Yearbook 8**. Beverley Hills, California : Sage.

Falcione, R.L., & Werner, E., (1978). **Organizational Climate and Communication Climate : A State of the Art**. Referaat gelewer by die International Communication Association: Chicago.

French, W.L., & Bell, C.H., (Jnr.).(1984). **Organizational Development. Behavioral Science Interventions for Organization Improvement**. (Third Edition). Englewood Cliffs, New Jersey : Prentice-Hall.

Gavin, J.F., & Howe, J.G., (1975). Psychological Climate : Some Theoretical and Empirical Considerations. **Behavioral Science**, **20** : 228-240.

Geertz, D. (1973). **The Interpretation of Cultures**. New York : Basic Books.

Glick, W.H. (1985). Conceptualizing and Measuring Organizational and Psychological Climate : Pitfalls in Multilevel Research. **Academy of Management Review**, **10**, **1** : 601-616.

Glick, W.H., & Roberts, K.H. (1984). Hypothesized Interdependence, Assumed Independence. **Academy of Management Review**, **9** : 772-735.

Goldhaber, G.M., & Rogers, D.P. (1979). **Auditing Organizational Communication Systems : The ICA Communication Audit**. Dubuque, Iowa : Kendall Hunt.

Goodenough, W.H. (1981). **Culture, Language, And Society**. Menlo Park, California : Benjamin Cummings.

Guion, R.M. (1973). A Note on Organizational Climate. **Organizational Behavior and Human Performance**, **9** : 120-125.

Hall, D., & Lawler, E.E. III (1969). Unused Potential in Research Development Organizations. **Research Management**, **12** : 339-354.

Hellriegel, D., & Slocum, J.W., Jr. (1974). Organizational Climate : Measures, Research and Contingencies. **Academy of Management Journal**, **19** : 255-280.

Hill, S.K., & Northouse, P.G. (1978). Design for Studying Communication Climate Within an Organization. **Journal of Business Communication**, **15**, **2** : 37-44.

Howe, J.G. (1977). Group Climate : An Exploratory Analysis of Construct Validity. **Organizational Behavior and Human Performance**, **19** : 106-125.

Jablin, F.M. (1980). Organizational Communication Theory and Research : An Overview of Communication Climate and Network Research. **Communication Yearbook**, **4** : 327-347.

James, L.R. (1982). **Organizational Climate : Another Look at a Potentially Important Construct**. **Office of Naval Research Technical Report**. Institute of Behavioral Research : Texas Christian University.

James, L.R., & Jones, A.P. (1974). Organizational Climate : A Review of Theory and Research. **Psychological Bulletin**, **81**(12) : 1096-1112.

Jelinek, M., Smircich, L., & Hirsch, P. (1983). Introduction : A Code of Many Colors. **Administrative Science Quarterly**, **28** : 331-338.

Johannesson, R.E. (1973). Some Problems in the Measurement of Organizational Climate. **Organizational Behavior and Human Performance**, **10** : 118-144.

Johnston, H.R. (1976). A New Conceptualization of Source of Organizational Climate. **Administrative Science Quarterly**, **21**, 95-103.

Jones, A.P., & James, L.R. (1979). Psychological climate : Dimensions and Relationships of Individual and Aggregated Work Environment Perceptions. **Organizational Behavior and Human Performance**, **23** : 201-250.

Joyce, W.F., & Slocum, J.W., Jr. (1979). Climates in Organizations. In Kerr, S. (Ed.). **Organizational Behavior**. Columbus, Ohio : Grid.

Joyce, W.F., & Slocum, J.W., Jr. (1982). Correlates of Climate Discrepancy. **Human Relations**, **35** : 951-972.

Joyce, W.F., & Slocum, J.W., Jr. (1984). Collective Climate : Agreement as a Basis for Defining Aggregate Climates in Organizations. **Academy of Management Journal**, **27** : 721-741.

La Folette, W.R., & Simms, H.P., Jr. (1975). Is Satisfaction Redundant with Organizational Climate? **Organizational Behavior and Human Performance**, **13** : 257-278.

Lawler, E.E. III., Hall, D.T., & Oldham, G.R. (1974). Organizational Climate : Relationship to Organizational Structure Process and Performance. **Organizational Behavior and Human Performance**, **11** : 139-155.

Lewin, K. (1951). **Field Theory in Social Science**. New York : Harper and Bros.

Litwin, G., & Stringer, R. (1968). **Motivation and Organizational Climate**. Boston : Harvard University Press.

Martin, J., Feldman, M.S., Hatch, J., & Sitken, S.B. (1983). The Uniqueness Paradox in Organizational Stories. **Administrative Science Quarterly**, **28** : 438-453.

Meehan, E.J. (1960). **Value Judgement and Social Science : Structures and Processes**.

Homewood, Illinois : Dorsey Press.

Monge, P.R. (1982). Systems Theory and Research in the Study of Organizational Communication : The Correspondence Problem. **Human Communication Research**, **8** : 245-261.

Monge, P.R., Farace, R.V., Eisenberg, K.I.M., & White, L.L. (1984). The Process of Studying Process. **Journal of Communication**. Winter : 22-42.

Mossholder, K.W., & Bedeian, A.G. (1983). Cross-level Inference and Organisational Research : Perspectives on Interpretation and Application. **Academy of Management Review**, **8** : 547-558.

Muchinsky, P.M. (1977b). Organizational Communication : Relationship to Organizational Climate and Job Satisfaction. **Academy of Management Journal**, **20** : 592-607.

Payne, R.L., Fineman, S., & Wall, T.O. (1976). Organizational Climate and Job Satisfaction: a Conceptual Synthesis. **Organizational Behavior and Human Performance**, **16** : 45-62.

Payne, R.L., & Mansfield, K. (1973). Relationships of Perceptions of Organizational Climate to Organizational Structure, Context and Hierarchical Position. **Administrative Science Quarterly**, **18** : 515-526.

Peters, T.J., & Waterman, R.H. (1984). **In Search of Excellence**. New York : Warner Books.

Pettigrew, A.M. (1979). On Studying Organizational Cultures. **Administrative Science Quarterly**, **24** : 570-581.

Pondy, L.R. (1983). The Role of Metaphors and Myths in Organization and in the Facilitation of Change. In Pondy, L.R., Frost, P.J., Morgan, G. en Dandridge, T.C.(Eds.). **Organizational Symbolism**. Greenwich, Connecticut : JAI.

Poole, M.S. (1985). Communication, Organizational Climates, Review, Critique, and a New Perspective. In Mc Phee, D. en Tompkins, P.K. Organizational Communication : Traditional Themes and New Directions. **Sage Annual Reviews of Communication Research**, Vol 13 : 79-108.

Poole, M.S., & McPhee, R.D. (1983). A Structural Theory of Organizational Climate. In Putnam,

L. en Pacanowsky, M. (Eds.). **Organizational Communication : An Interpretive Approach.** Beverly Hills, C.A. : Sage.

Powell, G.W., & Butterfield, D.A. (1978). The Case for Subsystem Climate in Organizations. **Academy of Management Review**, **3** : 151-157.

Riley, P. (1983). A Structurationist Account of Political Cultures. **Administrative Science Quarterly**, **28** ; 414-438.

Rokeach , M. (1968). **Bellefs, Attitudes and Values.** San Francisco : Josey-Bass.

Schneider, B. (1975a). Organizational Climates : An Essay. **Personnel Psychology**, **28** : 447-479.

Schneider, B. (1975b). Organizational Climate : Individual Preferences and Organizational Realities Revisited. **Journal of Applied Psychology**, **60** : 459-465.

Schneider, B., & Reichers, A.E. (1983). On the Etiology of Climates. **Personnel Psychology**, **36** : 19-39.

Smircich, L. (1983). Concepts of Culture and Organizational Analysis. **Administrative Science Quarterly**, **28** : 339-358.

Smith, K.K., & Simmons, V.M. (1983). A Rumpelstilken Organization : Metaphors on Methaphors in Field Research. **Administrative Science Quarterly**, **28** : 377-392.

Stimson, J., & La Belle, T. (1971). The Organizational Climate of Paraguayan Schools. Rural-Urban Differentiation. **Education and Urban Society**, **3** : 333-349.

Taylor, J., & Bowers, D. (1970). **The Survey of Organizations.** Ann Arbor, Michigan : Institute for Social Research.

Woodman, R.W., & King, D.C. (1978). Organizational Climate : Science or Folklore? **Academy of Management Review**, **3** : 816-826.

Zeitz, G. (1983). Structural and Individual Determinants of Organizational Morale and Satisfaction. **Social Forces**, **61**, : 1088-1108.