CULTURE, ORGANISATIONAL CULTURE AND ORGANISATIONAL CLIMATE: AN INTEGRATIVE APPROACH

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ABSTRACT

Calls for an integrative approach towards organisational culture research and organisational climate research are not lacking. However, given organisational culture research's roots in culture research, it should be possible to conduct research that has a simultaneous focus on culture, organisational culture, and organisational climate. We propose that such a more integrative approach towards these concepts will open up more synergistic research opportunities for future researchers. It will also tell us more about the interactions that these variables can have with each other, hence giving us more insights than what we can achieve by researching on these concepts separately.

Keywords: Culture; Organizational Culture; Organizational Climate.

Introduction:

Organisational culture research has been one of the core topics of organisational behaviour research. Its importance can be deduced from the fact that it is one of the topics that are covered in almost any introductory management textbooks or organisational behaviour textbooks (for e.g., see George & Jones, 2008; Kinicki & Williams, 2008). In our daily lives, it is also not uncommon to see the term culture or organisational culture being used whenever the press is reporting on employee behaviours or organisational practices. Indeed, ever since Hofstede's (1980) cultural study had become famous, it seems that the term "culture" or "organisational culture" will usually be part of a discussion if employees or organisations from different places are part of the topic of discussion.

However, in organisational research, there is one other field of research that is focused on issues that are similar to those issues that organisational culture researchers have been focusing on: organisational climate research. This field of research is not only less mentioned by the media and is hence less known to the general public, its similarity of research focus with organisational culture research had also caused some confusion among the academic community. Part of the reasons for this confusion might be because while some culture researchers had said that climate

research was a sub-set of culture research (Hofstede, 1998; Poole, 1985), and was hence a type of culture research, many climate researchers tried to argue that climate research was different from culture research (for e.g., see Ostroff, Kinicki & Tamkins, 2003; Schneider, Ehrhart & Macey, 2011).

Today, it is widely accepted that organisational climate research and organisational culture research are two inter-related fields of research. Due to the similarities and overlaps in terms of research scope that organisational culture research and organisational climate research have with each other, some researchers had proposed an integrative approach towards organisational culture research and organisational climate research.

Nevertheless, given that organisational culture research has its roots in culture research, we propose that it is possible to conduct research that focuses on the concepts of culture, organisational culture and organisational climate simultaneously. In this paper, we will first proceed to conduct a literature review on culture research, organisational culture research and organisational climate research to illustrate the similarities that these fields of research have. Then, we will propose a way to conduct research that has a simultaneous focus on these concepts. Such an integrative approach, we propose, will open up more synergistic research opportunities for future researchers. It will also tell us more about the

interactions that these variables can have with each other, hence giving us more insights than what we can achieve by researching on these concepts separately.

Culture:

"Culture" had been defined to be a set of beliefs, values, and norms learnt and shared by a group of people via their common experiences (Barney, 1986; Hofstede, 1998; Mennell, Murcott & Otterloo, 1992; O'Reilly, 1989; O'Reilly & Chatman, 1996; Schein, 1992). In some situations, the beliefs and values of a particular culture can manifest themselves in forms such as artefacts unique to the culture in perspective. When this is the case, artefacts may also be considered as one of the factors that define a culture. Nevertheless, although the set of factors that define culture consists of concepts of all forms, which can be either explicit or implied, these factors together affect the way people perceive their environment and make decisions, sometimes even without their personal awareness (Briscoe, 2009; Daft, 2007; Grossman, 2009).

In the early days, cultural research was originally a line of research pursued by anthropologists to explain human behaviours. It was later picked up by sociologists in their explanation of societal phenomena, and now it is a line of research pursued by many other disciplines of research.

Culture is an artificially created phenomenon (Tong & Pakir, 1996). According to the literature, when a group of people with a common aim gathers and works together, they will form a unique culture. Depending on the level of analysis, people use different terminologies to describe the resulting phenomena of such human interactions. When it occurs at a national level, we call it "national culture"; when it occurs at an ethnic level, we call it "ethnic culture"; and when the unit of study is the organisation, we call it "organisational culture". Ultimately, it is a tool created by a group of people to help them to live and make sense of their lives (Ostroff et al., 2003).

In addition, culture can also act as a form of heuristic mechanism that enables individuals belonging to a group to know how they should act and react in specific situations. For example, it was mentioned by Cunha, Cabral-Cardoso and Clegg (2008) that:

"… someone doing business in Mexico should know that business meals can last from two to three hours (Alisau, 1997) in the middle of the day, after which you return to work, and that meetings rarely start on time, such that a little delay (of 20 minutes or more), is perfectly natural according to national habits. For Americans, this may appear intolerable (Welch, 2000)".

- Cunha et al. (2008, p. 949)

Hence, although an American may be annoyed when a meeting is delayed for more than 20 minutes, a local

Mexican would have avoided this negative emotional experience by intuitively going to the meeting 20 minutes later.

In Nashik of India, if a person is waiting for something, and if s/he asks the locals about how long one has to wait, the locals will tend to reply "please wait for two minutes". Although the reply was "two minutes", they usually do not really mean that the thing one is waiting for will be done in around two minutes. It is just the locals' way of saying "please wait for a while". If one is to ask the locals about how long one has to wait after two minutes, the reply will usually be another "please wait for two minutes". Hence, for those who know the implied meaning of "two minutes", they will not take the reply literally and will expect a longer waiting time.

Culture is a socially constructed phenomenon. It refers to the values, beliefs, and norms created and shared by a group of people after spending some time together (Barney, 1986; Hofstede, 1998; Mennell et al., 1992; O'Reilly, 1989; O'Reilly & Chatman, 1996; Schein, 1992). It has a strong influence over people who are part of the group (Briscoe, 2009; Daft, 2007; Grossman, 2009). Hence, although different organisations have different organisational cultures, it is still possible for certain cultural elements to be observable across organisations in the same country (Schein, 1999). For example, in China, it is possible to observe certain cultural elements such as collectivism in different companies (Robbins, Bergman, Stagg & Coulter, 2008), although the actual way such collectivism manifests itself may be different in different organisations.

For instance, while the employees in one organisation may exhibit very strong collectivism, the employees of another organisation may only be slightly collectivistic. This is because although individuals in an organisation tend to form an organisational culture that belongs to them uniquely, the people who make up the organisation belong to a bigger group – the country. Hence different organisations in a country will have certain similar cultural features, although each organisation's culture is likely to be unique when it is taken as a whole.

One associated phenomenon is the effect of the founder on an organisation's culture. When a founder starts an organisation, it is likely that his/her values and other personal characteristics will influence the operations of the company (Frederick & Kuratko, 2010; Giberson, Resick, Dickson, Mitchelson, Randall & Clark, 2009; Hofstede, 1998; Schein, 1999). In most instances, not only will the personal characteristics of the founder influence the strategy and direction of the organisation that they founded (Frederick & Kuratko, 2010; Hofstede, 1998; Schein, 1999), it will also influence the human resource composition of the organisation. For example, according to the attraction–selection–attrition theory

(Schneider & Reichers, 1983), the founder is likely to attract, employ, and retain individuals who have characteristics that are similar with that of the founder. Indeed, in a study by Giberson et al. (2009), it was found that the personalities of chief executive officers (CEOs) were related to the culture of their organisation. Using a sample of 32 CEOs from Midwestern US organisations (of whom over half were the founders of their organisations) and 467 of their employees, the authors found that the CEOs' traits, such as agreeableness, emotional stability (or neuroticism), extraversion, and openness to experience were associated with organisational culture factors such as the organisation's hierarchical culture values, clan culture values, adhocracy culture values, and market culture values.

In addition, it had been proposed by Frederick and Kuratko (2010) that the personality fit between an entrepreneur – somebody who starts and owns their own business (Davidsson, 2004; Gartner, 1990) – and a potential successor will influence whether or not the successor will be able to successfully take over the business in the future. This is likely to cause the characteristics of a founder to perpetrate their presence beyond the presence of the founder.

Hence, organisations established by founders from the same country are likely to have similar cultural elements, due to the common backgrounds of their founders, although the exact ways that they are manifested are likely to differ. Likewise, it is also possible for two branches of a firm to have dissimilar cultural elements when the two branches are operated by employees of different nationalities (Schein, 1999).

Organisational Culture:

In modern society, for the sake of operational efficiency and effectiveness, people pool their resources together and form artificial entities called organisations (Tabalujan & Low, 2006). As individuals working in an organisation interact, they will soon form a culture that belongs uniquely to them: an organisational culture.

Interest in studying organisational culture can be traced back to the United States in the 1920s (Handel, 2003). However, systematic studies on organisational culture were only conducted in the 1930s when the Hawthorne studies were almost complete (Ostroff et al., 2003).

Research in organisational culture was rooted in anthropology and had relied heavily on qualitative approaches, such as interviews and participant observation, in the past (Hofstede, 1998; Ostroff et al., 2003).

In the early days, the focus of such studies on organisations was on the struggle that companies had with their employees. For example, to protect their rights from processes such as the unionisation of employees, some organisations tried to enhance their

employees' identification with them by using a range of different policies. Examples of such policies included "employment security… health care, company-sponsored unions, grievance mechanisms, suggestion systems, picnics... company-sponsored athletics... [and] company songs…" (Handel, 2003, p. 347). Collectively, these policies were known as welfare capitalism. However, when such policies became too costly, especially during the Great Depression, most of them were discontinued.

The interest in studying organisational culture was revitalised and reached a new high in the 1970s and 1980s, when the success of the Japanese business was observed around the world (Handel, 2003). Researchers attributed the credit for desirable employee qualities, such as commitment and conscientiousness, to the "paternalistic" culture of Japanese companies and hoped to find the answers to questions such as the best means to improve morale, commitment, and productivity of employees through their research on organisational culture.

During the 1990s, more and more culture researchers turned to quantitative methodologies (Ostroff et al., 2003). Thereafter, culture research was conducted using either quantitative or qualitative methodologies depending on the focus and interest of individual researchers.

Today, the scope of the answers sought by organisational culture researchers had moved beyond questions related to concepts such as morale, commitment, and productivity of employees to topics such as the organisation's influence on individual decision-making, how organisational changes can be implemented successfully, the outcomes of mergers and acquisitions, and the policies and practices of organisations (Schein, 1999; Giberson et al., 2009).

Nevertheless, although much work had been done in organisational culture research, there is not yet a single definition of the concept that is accepted by all organisational culture researchers. For example, by reviewing the literature that was published between 1960 and 1993, Verbeke, Volgering, and Hessels (1998) reported that over 50 different definitions of the concept were found. This disagreement might be due to the fact that past organisational culture researchers were scientists from different backgrounds (Ostroff et al., 2003). For example, they might be previously trained to be an anthropologist, or a sociologist, or a psychologist. Given the different focuses that people from these different disciplines might have, it is corollary that different definitions of the concept will arise. For instance, while sociologically trained researchers may propose a definition that focuses on an organisation's system or structure, a psychologically trained researcher is more likely to propose a definition that focuses on the individual employees of an organisation.

As an illustration, let's consider these two definitions of "organisational culture". According to Kunda (2003), organisational culture is defined as the goals and values of an organisation. It is something that can be created by a company, and it is something a company can communicate to its employees clearly via means such as "teaching them" it in classes. It is also a rationale for the behaviour of a company's employees, and a guideline for their thoughts and actions. On the other hand, Schein (1992) defined organisational culture to be a set of assumptions that a group of employees holds collectively. It is learnt by employees through their daily experiences in the organisation, and is passed down by them to new comers. From these two definitions, we can see that while Kunda's (2003) definition was more orientated to the organisational system, Schein's (1992) definition had a greater focus on the employees.

Nevertheless, despite the use of different definitions by authors to describe organisational culture, common elements can be found across these definitions. Based on the common elements that can be found in the different definitions, "organisational culture" can be defined as the collective values, beliefs, and norms of an organisation's employees (Barney, 1986; Hofstede, 1998; Mennell et al., 1992; O'Reilly, 1989; O'Reilly & Chatman, 1996; Schein, 1992). In addition, in line with the definition of culture, organisational culture is learnt and shared by the members of the organisation via their common experiences (Barney, 1986; Hofstede, 1998; Mennell et al., 1992; O'Reilly, 1989; O'Reilly & Chatman, 1996; Schein, 1992).

In organisational culture research, the concept of "values" has been further divided into the categories of "espoused value" and "shared value" by some researchers (for example, see Ostroff et al., 2003; Schein, 1999). In layman's terms, while an espoused value refers to the type of value that organisations want their employees to have, or the type of value that organisations have declared their employees to have, a shared value refers to a value that employees really have. Although it may be subtle, these two types of values can be significantly different in some situations.

There are also arguments about whether culture exists in organisational context, and if it does, what form shall it takes? In her book *Cultures in organizations: three perspectives*, Joanne Martin (1992) proposed that research in organisational culture could be grouped "neatly" into three categories to reflect the perspectives of researchers towards organisational culture research: the integration perspective, the differentiation perspective, and the fragmentation perspective.

In the integration perspective category, we can find research that adopted the stand that there is a "one organisational culture" in each organisation, and members of an organisation were often assumed to have something in common. Hence, researchers who adopted this perspective of organisation culture would usually propose that "for a set of beliefs or attitudes to count as culture it must be shared by a group" (Handel, 2003, p. 348).

Different from those in the integration perspective, researchers who adopted the differentiation perspective do not believe that there is a "one organisational culture" within each organisation. Instead, they believed that the so-called "organisational culture" that could be observed by a researcher was in fact a sum of a number of "sub-organisational cultures". That is, they believed that it was not likely for a set of beliefs or attitudes to be shared across an organisation. Instead, they proposed that only sets of common beliefs or attitudes could be observed at the sub-organisational level.

As an illustration, let's take the example of two organisational departments that were often contrasted by academics: the accounting department and the finance department. Although these two departments may be in the same organisation, they are not likely to share exactly the same culture. For example, while accountants will usually associate themselves with the tenet of "prudency", those who work in the finance department are likely to associate themselves with the tenet of "no risk, no gain; high risk, high gain".

Hence, when a researcher observes the culture of an organisation, the result is more likely to be a sum of all the subcultures of the departments than for the result to be a "one organisational culture" that is shared by everybody in the firm, from the CEO all the way to the security guard.

In addition, researchers who adopted this differentiation perspective also generally focused their research on issues such as interclass conflicts caused by cultural gaps between different groups in an organisation, and they might view managerial efforts to inculcate a strong culture among employees as a manipulative act backed by malicious intentions (Handel, 2003, p. 348).

There were also arguments on whether the presence of multiple subcultures within an organisation is a boon or bane to the organisation when these subcultures interact. While some researchers argued that the effect is going to be a negative one, some researchers argued that such interactions between different subcultures within an organisation can bring benefits, such as innovation, to the organisation (Ng, 2013).

The third perspective on organisational culture proposed by Martin (1992) was the fragmentation perspective. The central idea underlying the arguments classified under this perspective was that one will never know if the concept of organisational culture has ever existed in organisations in the first place. That is, when employees are observed to behave in a certain similar way, one will never know

if this is representative of the organisation's culture or only the way that the employees usually behave.

In other words, even if somebody is able to show empirically that "organisational culture" exists in organisations, researchers who adopted this perspective on organisational culture may still argue that such observations are just random observations made due to factors such as sampling error, but not because the concept of organisational culture is really in existence. To them, the existence of such data may just mean that there were researchers who believed in it, but this does not necessarily imply that such a concept really exists objectively in the world independent of the researchers' thoughts.

In our opinion, although each of these arguments have its own merits, we propose that while it is not impossible for the integration and differentiation perspectives to be both valid and co-exist, the fragmentation perspective is not valid. Although we can observe that there were disagreements among researchers on whether culture existed in organisational context, and, if it did, what form it would take from the preceding paragraphs, the cause of such disagreements might not be the nature of organisational culture. The cause might be the methodology that was used to conduct those researches in the past.

First, it should be noted that many early organisational culture researches were conducted using qualitative methodologies (Ostroff et al., 2003; Schneider et al., 2011). Given that qualitative methodology is known to have low reliability (Neuman, 2006), it is no wonder that disagreements on the nature of organisational culture could arise upon the study of such research reports. However, given that more and more organisational culture were conducted using quantitative research methodologies, the effect of this potential cause should be mitigated over time.

Second, it should be noted that regardless of whether the research methodology used to conduct a study is qualitative or quantitative, the source of data in both types of studies is the perception of the employees. That is, it is the opinions of the employees. Given that no two people are identical, it should be within our expectation that we will not observe a "one culture" phenomenon in most places.

Moreover, in the usual days of work, most employees do not interact across departments. In some industries, such as the financial industry, it is a recommended practice for employees from the research department to be barred from communicating with the employees from the trading department and sales department. Under such circumstances, it is understandable that departmental cultures might be formed in the company.

Nevertheless, this will not necessarily forbid the formation of an over-arching organisational level culture. That is, in the present age organisational

context, the possibility of an over-arching organisational level culture to co-exist with departmental cultures should be recognised. Taking a very simple example, although a company may have only one set of mission, vision, and core values that all employees embrace for their daily work, differences such as the different preferences for employees to have lunch together daily, or to party after work, can still exist between departments (Ng & Ng, 2012).

However, it is not really possible for the fragmentation perspective to be true in the real world. This is because even when the extreme scenario of every employees of a company have different views about the company's culture is observed, such extreme discrepancy is a form of culture itself: a highly individualistic culture in which nobody agrees with the others. Given this, the fragmentation perspective of organisational culture is not valid.

Organisational Climate:

Organisational climate research was first started in the late 1960s (Ostroff et al., 2003; Schneider et al., 2011), and it was derived from sociology research (Hofstede, 1998). Lewin, Lippitt and White (1939) were the first to use the term climate in social science research (Schneider et al., 2011). Although the term climate was used in that research, it should be noted that it might be categorised as a form of leadership research if such categorisation is to be done in the present age, as what was done in that research was to find out the effect of leadership styles of boys camp counsellors on the other boys' subsequent behaviours (Schneider et al., 2011).

Similar with organisational culture research, there is not yet a single definition of organisational climate that is agreed by most climate researchers (Schneider et al., 2011). One of the potential causes of this problem may be due to the number of concepts that is involved in climate research is simply far too many, and it continues to increase over time. Commenting on the trend, some researchers had even given such opinions as "any number of kinds of climates may be identified depending upon the criterion of interest" (Schneider, 1975, p. 472). Nevertheless, although differences in the term's definition exist, they have one thing in common: they are all very general and encompassing.

For example, according to Hofstede (1998), in an authoritative study conducted by Litwin and Stringer (1968, p. 1), organisational climate was defined as: "a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behavior". In Ostroff et al. (2003, p. 571), the authors proposed that organisational climate is "widely defined as the perception of formal and informal organizational polices, practices, and procedures". In a more recent

review, Schneider et al. (2011) proposed that organisational climate should be defined as "the policies, practices, and procedures and the behaviors that get rewarded, supported, and expected in a work setting and the meaning those imply for the setting's members" (Schneider et al., 2011, p. 39).

Early organisational climate research focused mainly on such topics as leadership and job attributes, and employees' wellbeing and job procedures and job practices (Schneider et al., 2011). However, by late 1970s, concepts that were investigated under the name of organisational climate research had grown to include a big group of concepts from other fields of research, and new concepts were added on to organisational climate research's big umbrella whenever a researcher thought that it was relevant (Ostroff et al., 2003). For example, some of the concepts that were investigated under the name of organisational climate research were "structure, reward, risk, warmth, support, standards, conflict, identity, democraticness, autocraticness, supportiveness, innovativeness, peer relations, cooperation, cohesion, pressure" (Ostroff et al., 2003, p. 573); job satisfaction (for e.g. see Harrison, Newman, & Roth, 2006); organisational justice (for e.g. see Naumann & Bennett, 2000); ethics (for e.g. Martin & Cullen, 2006); industrial relations (for e.g. Dastmalchian, 2008); and others.

Affected by its sociological roots, organisational climate research tended to be conducted using quantitative methodologies (Hofstede, 1998; Schneider et al., 2011). It tended to be survey research conducted on individual employees of an organisation, and the data collected were used to represent organisational characteristics after the individual data were aggregated (Ostroff et al., 2003; Schneider et al., 2011). Part of the reasons behind this tendency was because some researchers tended to propose their theory with an organisational perspective, but then conducted their research on the individual level (Schneider et al., 2011). To "resolve" this problem, climate researchers started to resort to advanced statistical methodologies (Schneider et al., 2011).

One interesting point about organisational climate research is that many researchers from other fields of research had tried to argue that climate research was the same as their own field of research, while climate researchers had been trying to defend that they were not the same.

For example, in a recent review by Schneider et al. (2011, p. 31), it was mentioned that in 1973, "Robert M. Guion (1973) argued (a) that climate is old satisfaction wine in a new bottle and (b) that unless there was 100% agreement in climate perceptions in a unit-organization, then there was no climate there." That is, what was done in those climate researches that he had reviewed back then were satisfaction research conducted under the name of climate research.

Similar opinion was also held by other such researchers as Johannesson (1973) (Hofstede, 1998), who commented that climate studies were not much more than satisfaction research.

About two decades later, in one of his reports on organisational culture research, Hofstede (1998) commented on the relationship between organisational culture research and organisational climate research. According to Hofstede (1998, p.486), the differences between climate research and culture research were: (1) climate was derived from sociology and culture was from anthropology, (2) climate was more focused on the individual level of analysis while culture was more focused on the organisation level, (3) climate had an evaluative connation and was partly overlapped with satisfaction research but culture could be different, and (4) "climate can be fruitfully be seen as a sub-set of culture (Poole, 1985, p. 84)."

In 2003, Ostroff et al. (2003) proposed that organisational climate research and organisational culture research were different. According to them, "culture was studied with qualitative methodologies using case studies, whereas climate research has been largely quantitative and survey based (Ostroff et al., 2003, p. 575)." However, during the 1990s, when some organisational culture researchers started to use quantitative methodologies, the differences between the climate research and culture research began to blur (Ostroff et al., 2003). For example, Ostroff et al. (2003, p.576) mentioned that such items as innovation that were measured in climate research were also measured by culture research. This caused the differences between the two fields of research to look less significant.

Almost a decade later, in 2011, researchers such as Schneider et al. (2011) were still arguing that climate research was different from such other researches as organisational culture research and job satisfaction research.

Discussion:

We started this paper by discussing what culture research, organisational culture research, and organisational climate research were in general. In this section, we shall discuss the similarities of these three types of research, and then we will propose a way to conduct an integrative research with a simultaneous focus on all these three concepts.

Similarities between Culture, Organisational Culture and Organisational Climate:

Organisational culture research is essentially culture research in organisational context. Both of them focus on the values, beliefs and norms of people belonging to a group (Barney, 1986; Hofstede, 1998; Mennell et al., 1992; O'Reilly, 1989; O'Reilly & Chatman, 1996; Schein, 1992). When a group of people join a

company, they will bring their own native values, beliefs and norms to the company, which will then interact with the values, beliefs and norms of the others. Such interactions will influence an organisation's culture.

Hence, although culture research and organisational culture research both focus on the values, beliefs and norms of the employees, the specific cultural items that will be observed when each type of research is conducted separately should be different. Given that the employment and departure of employees are routine organisational events, we can anticipate that the interactions between the native cultures of individual employees with the organisation's culture should be an ongoing event.

On the other hand, climate research is defined as research that has a focus on the employees' perception of formal and informal organisational polices, practices and procedures (Ostroff et al., 2003). On prima facie, the definition of organisational climate is different from its culture counterpart. However, on deeper thoughts, they are overlapped.

A standard notion of organisational culture is "how we do things here" (Robbins et al., 2008). Although we cannot observe the values, beliefs and norms of employees directly, we can infer it from organisational practices and policies. This is because organisational policies and practices are the results of employee interactions and employee experiences.

It was mentioned in Ng (2013) that when employees learn, one of the processes the organisation can use to capture the experiences gained is routinisation: make the more efficient or effective way of doing things that the employee had found in the process the organisation's new standard operation procedure. Some companies may also document the details of the event involved, and send a summary of it in the form of memo to the other employees.

Hence, by defining organisational climate research to be research that has a focus on the employees' perception of formal and informal organisational polices, practices and procedures (Ostroff et al., 2003), we can collect data on organisational culture variables, culture variables, and organisational climate variables at the same time during surveys.

Nevertheless, this does not mean that a single question can be used to collect data for all three concepts. This is because while organisational climate items focus on the employees' perception of organisational practices, policies and procedures, cultural items focus on the values, beliefs and norms that underlie these practices, policies and procedures. While culture items might reflect individual native values, beliefs and norms, organisational culture items reflect organisational values, beliefs and norms, which are the results of the interactions of individual employees' native cultures. Hence, the survey that is used in such research should include items that measure the employees' culture, the organisation's climate and the organisation's culture.

An integrative Approach:

Depending on the researcher's interest, data on any culture variables, organisational culture variables and organisational climate variables can be first collected via survey. As mentioned previously, the researcher is likely to have to use different questions for each of the three concepts to get valid data. After the data are collected, a multi-level analysis can be conducted using the advanced statistical method: multi-level modelling.

According to Hofstede (1998), the minimum sample size for statistical analyses should be 20. But to decrease the chances for Type II error by giving the results of analyses bigger statistical power, a bigger sample size should be strived to be obtained by the researcher whenever possible.

For such research, the collected data should be separated into three different levels. The data collected on the culture aspect of the participants should form the first level of analysis. Organisations are formed by individual employees, and organisational practices are formed by the interactions of the practices of the employees. Given that culture variables reflect individuals' native values, beliefs and norms, data from this group of variables should form the first level of analysis. Then, the data collected on organisational culture variables should form the second level of analysis.

The data collected on organisational climate variables should form the third level of analysis. This is because organisational policies, practices and procedures are the final products of employees' experiences and learnings. Given this, we can essentially view organisational practices, policies and procedures to be the "aggregation" of employees' values, beliefs and norms.

Conclusion:

The call for an integrative approach towards organisational climate research and organisational culture research is not lacking. However, a call for an integrative approach towards culture research, organisational culture research and organisational climate research is lacking. Based on the similarities between these three concepts, we call for the conduct of future research with a simultaneous focus on all three concepts using multi-level modelling. The use of this method is likely to bring new insights on the interactions between the variables of the three concepts, and will open up new synergistic research opportunities for future researchers.

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