

A Critical Review of Epistemological and Methodological Issues in Cross-Cultural Research

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Cross-cultural management research suffers from many shortcomings. While some of these shortcomings are related to methodology, others can be identified as epistemological problems. By recognizing that epistemological positions determine methodological approaches, this paper attempts to discuss both epistemological and methodological issues in cross-cultural research. Based on extant literature, major drawbacks are discussed and some suggestions for future research are presented.

Introduction

Over the last decades researchers have shown an increasing interest in cross-cultural studies. Despite this interest, research in the field of cross-cultural management seems to lag considerably behind other fields of management science. In this respect, it has been argued that cross-cultural research suffers from many drawbacks creating impediments for further advances (Cavusgil and Das, 1997; Tayeb, 1994; 2001, Sekaran, 1983). We believe that difficulties encountered in cross-cultural research are various in nature and they may go beyond methodological and practical limitations. While some of these problems can be identified solely as methodological issues, others may be consid-

ered as problems related to epistemological positions. Against this backdrop, our objective in this paper is to discuss both epistemological and methodological issues.

The first part of the paper examines epistemological positions underlying cross-cultural research. It is argued that epistemological orientations determine methodological approaches and shape the research process. Therefore, discussing epistemological issues can provide us with awareness of inherent limitations related to created knowledge and direction of future research. The second part of the paper discusses methodological drawbacks and makes some suggestions for addressing them.

Epistemological Issues

Epistemology or theory of knowledge is concerned with the nature, sources and limitations of knowledge. Epistemological orientations shape and determine our particular view of the world and of reality. They also provide us as researchers with the guiding principles upon which we may base our methodologies (Guba and Lincoln, 1985). Therefore, the epistemological positions are in close relations with methodological approaches and they affect research process in that they permit us to develop questions, design the study and adopt appropriate research strategies.

Most of cross-cultural research is based on a realistic perspective both at ontological and epistemological levels. Ontological realism implies that there is an external reality which does not depend upon cognitive structures of human investigators. On the other hand, epistemological realism assumes that the external reality is cognitively accessible to researcher (Johnson and Duberley, 2000). The realism ontology views cultures as existing, stable and real systems of beliefs and practices. Therefore, it is argued that culture as an independent and objective phenomenon can be accurately measured, observed and investigated. This view of culture leads to an analytical/positivistic research strategy. In this way, the researcher perceives reality as tangible, concrete, stable, hard and real with deterministic relations among its constituent parts (Arbnor and Bjerke, 1997). The goal of analytical/positivistic research is to explain (*erklären*) objective reality as fully as possible, and most of the time it is assumed that there is only one possible answer to a research question. Influenced by triumph of natural sciences, the proponents of the positivistic approach insist on methodological unity of all sciences and deny fundamental differences between natural and social sciences.

The researchers who make a distinction between the methods of the classical natural sciences and those of the social sciences are often called hermeneutics. The hermeneutics maintain that natural science methods are essentially unsuitable in social science domains (Arbnor and Bjerke, 1997). They underline a decisive difference between two domains. The difference of

these two perspectives is, however, more than divergence in methods being used to create knowledge. The very essential difference between the two paradigms can be considered in terms of their objectives in creating knowledge. While the positivists attempt at explaining the phenomena (*erklären*), the hermeneutics aim to understand them (*verstehen*). The explanation (*erklären*) and understanding (*verstehen*) may have some blurred boundaries, but they have substantive differences. To explain (*erklären*) is to present general relations among characteristics, behaviours or both (Arbnor and Bjerke, 19997). By contrast, understanding (*verstehen*) is interpretative understanding of the meaning of actions through some form of contact with actors. In other words, explanation (*erklären*) is to provide a deterministic account of external causal variables which shed light on an observed behaviour (Johnson and Duberley, 2000). The explanations should contain operational definitions as far as possible. Otherwise, these results (explanations) might be based on concepts that are not related to objective reality, something that may lead to misunderstanding and confusion (Johnson and Duberley, 2000).

A review of the literature shows that most of the cultural/organizational research is based on a realist perspective and adopts a positivistic approach (E.g. Hofstede, 1980). However, the extent to which positivistic approach can be used to examine a complex concept such as culture has been questioned by many researchers. It is argued that man and his culture are historical concepts that should be understood in social context and they cannot be studied in vacuum. Some critiques assert that positivistic approach has rendered cultural phenomena ahistorical, linguistically naïve and psychologically unaware (Arbnor and Bjerke, 19997). Other scholars (Von Krogh and Roos, 1995) assert that the positivistic research can be employed to produce meaningful quantitative measures, but the nature of culture renders its understanding through these research techniques very difficult. The positivistic approach emphasizes the importance of generalizations and universal laws, however, cross-cultural research based on this approach has established quite a few generalizations. Most importantly, these generalizations are neither very general nor exact as those in natural sciences. So, how can we rely on them as knowledge? How can they be applied by other researchers or practitioners? Among so many cross-cultural researches, we know few that can provide us with clear, exact and reliable results. Moreover, the findings of such studies should be viewed as highly embedded in social context. Once removed from their original context, these results are hardly replicable to other cases.

Since culture is a very complicated and fuzzy concept, the researchers adopting a positivistic/analytical approach try to choose for parsimonious models (e.g. Hofstede, 1980) utilizing as few variables as possible, with the variables being of an objective kind. On the other hand, by operationalization, they try to reduce the complex concepts such as culture to concrete indicators. Of course, these parsimonious and highly operationalized models may facilitate

the research design, but at the same time they may distort the concepts and reliability of results. Some researchers hope to find cause-and-effect relations by incorporating only a few operationalized variables. However, by trying to increase the internal validity of the research (whether or not what has been identified as the cause produces the effect), they may sacrifice the external validity (the extent to which the research findings can be extrapolated to other cases). Since much of this research is looking for a supposed narrow causal relationship, it focuses only on very limited aspects of phenomena under investigation and fails to provide an in-depth understanding of cultural phenomena. In that way, the impetus of researchers is to make a priori predictions and test hypotheses rather than understanding and explaining the nature of cultural phenomena (Earley and Singh, 1995).

Despite all the criticism, it should be acknowledged that positivistic studies are characterized by rigor, internal/external validity and intelligible results. Since the results are to a great extent context-free and independent of researchers, they may be replicated to similar cases and this enhances the predictability of such studies. According to pragmatist/instrumentalist perspective that dominates the knowledge creation of modern world, the value of knowledge equals to its practical use. That is, the more the knowledge is practical, the more it is valuable. Therefore, culture is seen as an instrument to be studied and exploited for better performance and more efficiency. On the other hand, the predictability and practicality may bring more support to further positivistic research. Since these studies try to create practical, hard and relatively context-free knowledge, they are more likely to receive attention and financial support from both scholars and practitioners. For instance, the studies adopting a positivistic/quantitative approach have more chances to be published in top-ranked management journals, especially in USA (Johnson and Duberley, 2000). The proponents of positivist approach maintain that many of the criticisms directed to this approach are due to poor research methods, and therefore more advanced statistical techniques should be developed (Johnson and Duberley, 2000). They argue that the problems encountered in positivistic research are due to underdeveloped methods and as more complicated methods are introduced, the quality of research will improve.

Social Constructivist Perspective

Social constructivist perspective views reality as a social construction which cannot be independent of us as its observers. Accordingly, the objectivity is created by people and can therefore be changed by them. Furthermore, the objective (or objectified) reality and its meanings influence in turn the people who contribute to create them. That is, there are reciprocal and dialectical relations between the realities and people who create them. Based on constructivist perspective the human beings (the generating actors) and the reality (what is

generated) stand both in mutual dialectical relation to each other (Arbno and Bjerke, 1997). Therefore, the researcher attempts to understand and describe the dialectical relations that are continuously reinterpreted.

With respect to culture, social constructivist perspective focuses on the actors' interpretations or constructions of cultures. This means how the actors define their characteristics and those of others. Accordingly, culture is an ongoing interpretation process rather than a stable structure of values and norms. Social constructivism may have many forms. At its radical form, constructivist view claims that cultures and cultural differences only exist when people become aware of them in social interaction (Vaara, 2000). Although researchers adopting a social constructivist perspective are few in number, they have provided interesting and insightful discoveries highlighting the importance of the actors' own interpretations of cultural differences (Gertsen and Soederberg, 1998; Kleppetoe, 1998). It seems that this paradigm is still in its infancy and more advances are needed to distinguish different processes and mechanisms when studying actors' interpretations and constructions of cultural conceptions.

The Constructivist perspective can have important implications for managing cultural differences. The fact that culture should be considered as a construction of actors underlines the importance of managerial issues and perceptions in dealing with cultural differences. This perspective permits us to view culture and cultural differences as mental constructions that can be managed and exploited.

Vaara (2000) argued that rather than contradictory orientations, the realist and constructivist perspectives correspond to two different epistemological commitments and both of them can contribute to a better understanding of the impacts of culture in organizational research. This means that a better knowledge of cultures should take into account both the real manifestations of cultures and the reflexive processes where the actors make sense of their cultures. In other words, one should view culture both as real systems of beliefs and values and actors' interpretations.

Methodological Issues

The term methodology has been used in different and even contradictory ways (Lehane and Vinten, 1994). Despite the differences, it is possible to view method as a demarcation criterion between scientific approaches to the creation of knowledge and non-scientific modes of exploration (Nachmias and Nachmias, 1987). In line with this view, Arbno and Bjerke (1997) define methods as guiding principles for the creation of knowledge. These principles, on one hand, should be in accord with underlying epistemological assumptions and they should fit the problems under investigation on the other. Thus, by relying upon epistemological positions, the methods provide the link between theory and data, but they remain distinct from theory and independent of the data

to be gathered and analyzed (Mulkay, 1991). As mentioned earlier, most of the cultural (and even social) research is based on a positivistic (explanationist) tradition. By adopting this approach, the methods look for models, theories and generalizable law-like principles with a considerable degree of external validity. Accordingly, it is possible to consider typical methodology of cross-cultural research as the study of techniques which are characterized by issues such as conceptualization, operationalization, designing research, formulating hypotheses, building instruments, collecting/analyzing data and building theories. Based on this view of methodology, the following part of this paper is devoted to reviewing recurrent methodological problems encountered in different stages of cross-cultural research.

Conceptualization and Operationalization of Culture

Culture is a fuzzy and abstract notion and the first challenge for researcher is to define it. If culture has important implications for management practices, how can we define it? The problem is not lack of definition but difficulties in operationalization. Kluckhohn and Kroeber (1961) listed more than 164 different definitions for culture. According to these scholars, the proposed definitions can be divided into descriptive, historical, normative, psychological, structural, genetic and incomplete categories. Despite this abundance, every group of definition insists on very limited aspects and neglects other facets of this complex notion.

In the area of organizational science, review of literature reveals that many researchers view culture as a very vague variable representing a wide range of social and economic factors which may be invoked to explain the results of their studies (Dowling, Schuler and Welch, 1994). This issue can be attributed to a lack of agreement on general scientific paradigms in the field of cross-cultural management. According to Kuhn (1970), scientific paradigms can be considered as “universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners” (Kuhn, 1970). This community of practitioners is a community of scientists, who create this paradigm through which they can find solutions to the problems defined by the paradigm. Those whose research is based on shared paradigms are committed to the same rules and standards for scientific practice (Kuhn, 1970). Therefore, an agreement on general paradigms may serve the definition and operationalization of the concept of culture (Ronen, 1986). Due to this lack of general paradigms, the meanings associated to the concept of culture are very diverse and contradictory.

The problem of definition in cross-cultural research stems from two different but interrelated issues: its complexity as a concept and lack of general agreement on scientific paradigms among researchers. In other words, culture resists operational definition, not only because it is a fuzzy and complex con-

cept, but also because there is no commonly accepted language to describe it.

The need for a general agreement on the definition of culture has two important implications; first it serves as a common language among researchers to advance the creation of knowledge and second it serves conceptual equivalence across borders/cultures. Conceptual equivalence implies that the meaning of research concepts, and materials should be equivalent across population under investigation. If culture is not universally defined, it cannot be studied across borders. Disappointed by the complexity of culture and lack of agreement on its definitions, some researchers suggested that it is better simply to abandon the concept of culture. In this respect, some scholars estimate that cross-cultural management research is still in its infancy and more advances are needed to achieve a general agreement about the meaning of culture (Nasif et al. 1991; Adler 1983; Sekaran 1983). By contrast, others are more cynical and maintain that cross-cultural research has passed its infancy and these shortcomings cannot be justified (Tayeb 1994).

For overcoming the difficulties concerning definition and operationalization of culture, it has been suggested that researchers must be precise in their definition of culture a priori rather than post hoc. Another suggestion is to use more tangible and refined constructs. In this respect, Bhagat and McQuaid (1982) proposed that researchers should replace the term culture with more meaningful constructs. To define and operationalize culture, an approach that might be useful is to identify several of its aspects/dimensions along which cultural differences could be compared. The cross-cultural literature provides us with different frameworks based on some aspects or dimensions of culture. For instance, Kluckhohn and Strodtbeck (1961) identified six dimensions along which a society can be categorized; relationship to nature, beliefs about human nature, relationships among people, nature of human activity, conception of space, and orientation to time. Hofstede (1980) has described national cultures in five dimensions; power distance, individualism, masculinity, uncertainty avoidance and long-term versus short-term orientation. In the same way, Herskovits (1989) listed five dimensions of culture: material culture, social institutions, men and universe, aesthetics, and language. Trompenaars (1993) proposed a model that consists of seven dimensions: universalism versus particularism; individualism versus collectivism; neutral versus emotional; specific versus diffuse; achievement versus ascription; attitudes to time; attitudes to the environment. Schwartz et al. (1994, 1992) have proposed a framework by identifying three basic societal issues: relations between individual and group; assuring responsible social behaviour; and the role of humankind in the natural and social world. The cultural adaptations to resolve each of these three issues constitute his framework, which consists of three bipolar dimensions, defining seven cultural domains.

Many cross-cultural researchers focus on a few dimensions and especially those of Hofstede's model to describe and compare cultures. However,

dimensionalization of culture has been subject to extensive criticism. Tayeb (2001) asserts that dimensionalization is a convenient approach to study culture across borders, but it simplifies a complex concept and diminishes the accuracy of investigation. By relying on a few dimensions, many cross-cultural studies neglect the contexts of the cultures within which their studies have been conducted, and they view a few dimensions as the only determinants of cultural differences (Tayeb, 2001). Moreover, since cultural dimensions rely on the typical members of cultural groups, cross-cultural studies built on dimensionalisation focus overlook the effects of intra-cultural variations (Au, 1999). Intra-cultural variation (ICV) refers to the population distribution of a characteristic within a culture. Au (1999) suggests that intra-cultural variation explains as much if not more than inter-cultural variation.

Emic and Etic Approaches

Two major possibilities for studying cultures are emic and etic approaches. Etic and emic are neologisms coined by Kenneth Pike from *Phonetic* and *Phonemic*. The emic approach attempts to describe a particular culture by investigating specific aspects of concepts or behaviours. In other words, the emic approach focuses on studying a construct from within a specific culture, and tries to understand that construct as the people from within that culture understand it. The etic approach, on the other hand, involves developing an understanding of a construct by comparing it across cultures using predetermined characteristics. The use of emic or etic approaches depends upon the nature of study. It should be mentioned that there are important differences between the notions of culture and cultural differences and the ways they are studied (Li et al. 2002). Culture can be studied in every defined society, but cultural differences can be studied only if there are at least two cultures. This has implications for the research approaches since every culture should be identified by taking in account of the other culture. While the effects of culture are testable from one culture alone, the effects of cultural differences are measurable only when individuals from different cultures are compared (Li et al. 2002). Since the etic approach uses variables which are generalizable across cultures (Bhagat and McQuaid, 1982) it is more suitable for broader analyses, usually involving two or more cultures. The main assumption in etic research is that there is a shared frame of reference across culturally diverse samples, and that construct measurement can be applied to all of the samples in the same way, ultimately allowing for more generalizability (Ronen and Shenkar, 1988). While the etic approach permits a better comparison across cultures allowing generalizability by assuming that there are some shared frames among cultures, it may sacrifice conceptual equivalency and precision of the research. On the other hand, if an emic approach is used, a more precise and thorough description of the construct within one culture is obtained, but the ability to make cross-cultural comparisons diminishes because the constructs are developed

within a specific culture and they may not be extrapolated to other cultures. From a measurement standpoint, criteria in an etic approach are considered universal, with less attention being given to the internal characteristics of a particular culture (Berry, 1989). Furthermore, the use of an etic approach may be more practical for organizational researchers in terms of financial limitations and time pressures. However, if etic constructs are used to make cross-cultural comparisons, researchers risk not capturing all of the culture-specific (emic) aspects of the construct relative to a particular culture in the study. When researchers choose an etic approach and assume that the concepts being tested exist across all cultures, they are imposing some predetermined constructs developed within other cultures. These imposed constructs may not have the same meanings in target cultures. For instance, some problems may happen when variables designed for one culture (e.g. leadership) are applied to a second culture without modifications. This is the case for comparative studies that try to replicate theories developed in United States to other countries. Some constructs (e.g. performance, leadership) based on western concepts may have different meanings in other cultures.

A suggestion for dealing with this problem is to use a combined emic-etic approach, rather than simply applying emic dimensions of one culture to other cultures (Berry, 1990). A combined emic-etic approach requires researchers to first attain emic knowledge about all of the cultures in the study. This allows them to put aside their culture biases, and to become familiar with the relevant cultural differences in each setting (Berry, 1990).

Research Design

The main interests of cross-cultural researchers are related to cultural influences on organizations and management methods. That is, researchers often try to compare organizations in various cultures to identify similar and different aspects of organizational behaviour in these cultures. Generally, every study attempting to investigate the effects of culture is based on the implicit assumption that culture is a principal variable and that it has some impact on organizations. As Adler (1983) pointed out, comparative cross-cultural research is based on the assumption that culture plays a measurable role in the development of events, beliefs and attitudes. Therefore, the researchers looking to anticipate the effects of cultural phenomena should treat culture as the main variable. Following this perspective, some researchers define cross-cultural research as the study that has culture as its main dependent or independent variable but not as an extraneous and/or residual variable (Nasif et al. 1991). While this perspective dominates cross-cultural management, some researchers give less importance to culture and treat it as a residual factor. For instance, Ajiferuke and Boddewyn (1970) maintain that much of the importance attributed to cultural factors rests more on speculation than facts. Viewing culture as a residual variable implies that researchers take it not as the principal factor

affecting organizational behaviour but as a factor among others.

By taking culture as the main independent variable many researchers tried to find or establish causal relations between culture and organizational aspects such as performance, stability or some aspects of human resource management (Morosini and Shane and Singh 1998). While culture can be considered as an important variable affecting some aspects of organizational behaviour, in many cases it is questionable to incorporate it as the only independent variable for research. It is suggested that the goal of research should be to provide large variations of independent and dependent variables (Kerlinger, 1986). Therefore, considering culture as the principal independent variable can be justified only if there are substantial variations of both independent and dependent variables.

Unit of Cultural Analysis

Hofstede (1997) described culture as “the collective programming of the mind which distinguishes the members of one group or category of people from another”. Hofstede (1980) distinguishes culture from human nature on one side, and from individual’s personality on the other. According to this view, culture has a collective nature and can be applied to various groups of society such as nation, industry, corporation, department, function, etc. Therefore, cultural groups can be defined and studied at different levels, which are not necessarily exclusive. For instance, Benedict and Steenkamp (2001) distinguished three major levels: meta-culture, national culture, and micro-culture. Meta cultures are clusters of countries that may exhibit a number of common cultural characteristics (Ronen and Shenkar, 1985). National cultures are delineated by national boundaries and micro cultures are subcultures within a country. Whereas meta-culture is even more comprehensive than national culture, micro or sub-culture is more specific. A micro-culture preserves is related to not only important patterns of the national culture but also its own unique patterns of behaviour. Such micro-cultures may be defined on various overlapping criteria, including language, ethnicity, religion, age, urbanization, and social class.

A review of literature reveals that nation is used often as a unit of analysis in cross-cultural management. Hofstede (1991) argued that today’s nations “are the source of a considerable amount of common mental programming of their citizens” due to a relatively similar history, language, political, legal and educational environment. Nation is a suitable and convenient indicator of culture, but viewing it as the sole proxy of culture is questionable. In fact, nation is only one level among others at which culture may be studied. Cultures at national level can be monolithic or pluralistic. Monolithic cultures are homogeneous and provide approximately common values for their members. By contrast, pluralistic cultures are comprised of many subgroups which may share some commonalities but are different in many other issues. While monolithic

cultures have a high degree of homogeneity, pluralistic cultures are characterized by heterogeneity and existence of subcultures. Only a few countries like Japan have relatively homogeneous national cultures which can be considered as monolithic. Most other countries are characterized by some degrees of heterogeneity and existence of distinct subcultures within their borders which hinder researchers from taking nation as equivalent to culture. When conducting a cross-cultural research, attention should be paid to subcultures and their shares in national culture.

In addition to within-country heterogeneity, the use of national culture as a unit of analysis may have other limitations because nation-state is originally a western notion and many generally accepted assumptions about western nations are not necessarily true for other non-western countries. A glimpse at the world history reveals that borders of many countries have been determined rather by political and military factors which are not corresponding to cultural borders.

Considering issues discussed above, it is suggested that researchers should conceptualize culture at the national level only if there are some meaningful degrees of within-country homogeneity and between-country differences. While taking nation as equivalent to culture is a very convenient and practical approach, it is important to consider other levels of culture analysis which can be defined by linguistic, religious, racial, geographical or even economical factors. For instance, Hofstede (1980) who is known as a fervent advocate of national culture has considered other determinants like geographical factors (West Africa, Eastern Africa) and linguistic determinants (e.g. Arab countries) to define the unit of cultural analysis. In addition to nation, other determinants such as language, religion, technology, industry, national boundaries, and climate can be useful in defining the unit of cultural analysis (Peterson and Smith, 1997). Adding these determinants provides researchers with more meaningful and homogenous cultural units which may lead to more reliable findings.

Data Collection

In the case of cross-cultural research the data collection is more difficult and more critical. This difficulty exists with regard to both primary and secondary data. The accuracy of secondary data may vary from country to country and different sources may report various values because measurement approaches may not be equivalent across cultures (Malhotra et al., 1995). Moreover, some countries may not be willing to disclose some data because of political or security reasons.

With respect to primary data, the method employed to collect data has huge impacts on reliability and generalizability of the results. It should be mentioned that it is not possible to suggest a data collection technique which would

be practical and efficient in all countries. Some methods of data collection may be effective in some countries and not effective in others. For example, mail survey techniques are very popular in developed countries but they are less effective in less developed countries because of problems related to low literacy rates and excessive time for mail delivery. Telephone interviewing is not widely used outside United States and email/Internet surveys do not seem practical as the number of generated junk emails is soaring. Personal or face-to-face interviewing is another technique for data collection which might be useful in many parts of the world. However, the person collecting the data may also have an impact on the results of the research.

Low response rate is another issue which can jeopardize the statistical accuracy and external validity of the research. Robust statistical techniques can be based only on satisfactory response rates. However, because of many practical difficulties, cross-cultural studies cannot always achieve a satisfactory response rate. The response rate can be increased by follow-ups, but such efforts essentially represent a trade-off between sample representativeness and sample size (Cavusgil, Das, 1997). Non-response bias can be evaluated by some statistical tests like 'Kolmogorow-Smirnov' test (Siegel and Castellan 1988) and uni-multivariate tests of variance.

Non-equivalence of response rates across cultures may affect the accuracy of data being collected. In this regard, Sekaran (1983) suggested the adoption of uniform data collection procedures in all the target cultures. The uniform data collection implies use of similar or identical procedures to collect data in different cultures. However, it is argued that equivalence of response rates across cultures is almost impossible. In fact, the non-equivalence of response rates is most of time out of control of researcher. For instance, many cultures may be sensible to particular subjects in a questionnaire. Some other inaccuracies may happen, as some cultures (like Japanese) tend to provide positive and plausible answers. Some other biases may result from interactions between interviewer and respondent. Demographic differences in gender, age, education, and marital status can be other sources of inaccuracy. Moreover, environmental characteristics can become problematic when differences exist in terms of social, economic, legal, education, and industry structures among cultures under investigation (Janssens, Brett, and Smith, 1995).

Sampling Cultures

It is possible to distinguish three approaches for sampling cultures: convenience, systematic and random sampling (Van de Vijver and al., 1994). A review of the literature reveals that cross-cultural research is dominated by convenience sampling (Bhagat and McQuaid 1982). In this approach, the selection of cultures is not related to theoretical issues and researchers select some cultures simply because they have access to it. While opportunistic sampling may

distort research results, it can be justified under some circumstances. For instance, Sekaran (1983) has asserted that opportunistic sampling can facilitate the research procedures, especially when the resources are limited.

The notable weakness of convenience sampling is that researchers do not develop a priori predictions about cultural differences and when some cultural differences are found, post hoc explanations are developed (Van de Vijver and al., 1994). By contrast, in systematic sampling approach, cultures are selected systematically or on a theory-guided basis. The selected culture may represent some different degree of values on a theoretical continuum. When a study is exploratory or the theoretical framework is rudimentary, the number of selected cultures should be larger than two. Van de Vijver and al. (1994) suggest that in order to maximize the effectiveness of systematic sampling, cultures that are far apart on the theoretical dimensions should be selected.

The third approach is random sampling. In this approach a large number of cultures are randomly sampled. The random sampling is rarely applied, because most researchers do not have enough resources to select a large number of cultures. The classic studies of Schwartz (1991) can be identified as those using random sampling.

Another issue regarding sampling is the number of cultures under study. As Sekaran (1983) notes the number of selected cultures should be large enough to randomize variance on non-matched variables and eliminate rival hypotheses. Most of cross-cultural studies choose only two cultures to be compared. The two-culture studies cannot provide an objective understanding of the cultures under investigation and their effects. Moreover, the two-culture studies are most of the times replication of an ethnocentric research to another culture (Adler, 1983). While selection of more cultures provides more reliable results, it might not be always feasible because of limited resources.

Sampling Subjects

Sampling subjects represent many challenges for researchers. In order to make valid cross-cultural comparisons, the subjects from different cultures should have similar backgrounds and experiences. When the subjects have different backgrounds, it is hard to conclude whether the observed differences are due to cultural differences or specific characteristics of subjects. It is suggested that for overcoming this problem, the researchers may match the samples based on demographic, linguistic, or professional characteristics. For instance, Hofstede's study (1980) was based on samples from IBM managers who presumably had similar backgrounds and experiences. In that way, by sampling IBM employees, Hofstede (1980) argued that effect of organizational culture and other contextual factors would be minimized.

Representativeness of samples in cross-cultural research is far from practical. Many of cross-cultural researches are typical examples of opportunistic

sampling. For instance, it is very frequent to see that researchers select university students as the proxies of their respective national cultures. It is clear that the results of such studies based on opportunistic data collection can be unreliable. The lack of sample representativeness can be due to various problems in conducting the research. For example, in many parts of the world, it is difficult to draw a sample because of the scarcity of details on the populations being sampled (Samiee and Jeong 1994). Sampling frames and directories are available only in some developed countries (Douglas and Craig 1983). For having a reasonable representativeness it is suggested that researchers carefully select subjects to maximize within sample homogeneity (Samiee and Jeong 1994). With respect to representativeness problem, using matched samples (Adler, 1984; Sekaran, 1983) or conducting randomization at some level of the sampling plan (Cavusgil and Das 1997) can be suggested as possible solutions. Some authors recommend when random sampling techniques are not feasible, the researchers should describe their samples in detail including all the characteristics that can potentially influence the results (Sekaran 1983; Nassif et al. 1991).

Independence of samples in selected cultures is another challenge for cross-cultural researchers. The inter-dependence of samples is known as Galton's problem. This problem is especially becoming very frequent due to globalization and advances in telecommunications devices. Over the course of past years, values have become transfused among different parts of the world and members of different cultural groups have been adopting similar values/behaviours (Nasif et al. 1991). A radical perspective of cultural diffusion is expressed by cultural convergence. The proponents of cultural convergence maintain that different cultures are converging over time. Due to cultural diffusion (or cultural convergence) the borders among cultures are becoming blurring and therefore, the samples taken from different cultures might not be independent. It is obvious that this interdependence among samples can lead to biased results.

For overcoming Galton's problem, researchers should minimize the effects of cultural diffusions by choosing samples that are less likely to be exposed to cultural diffusion. For instance, samples of international students and high-ranked executives are rarely independent because these groups are often in contact with each other.

Instrumentation

When conducting a cross-cultural investigation, the researcher has three options: to apply an existing instrument, to adapt it or to build a new one (Van de Vijver and Leung, 1994). Many measurement scales used in cross-cultural studies are developed originally in the United States and translated into local languages to measure the construct in culturally diverse groups (Sin et al.

1999). The application of an existing instrument can be very risky since in addition to linguistic problems, respondents in different cultures may perceive the same construct differently. The equivalency implies that instruments and constructs used in the research have the same meaning for different cultures. In this respect, the researcher should make sure that the measures of a construct developed in one culture can be applied to another culture. For this purpose, both semantic and scaling equivalences are essential (Schaffer and Riordan, 2003). Many researchers recommend back-translation to the original language after its direct translation to the second language is completed (Brislin, Lonner and Thorndike, 1973). Back-translation has been recognized as an effective technique. Hamblen (1993) proposed three designs to verify the accuracy of translations: 1) bilinguals take the source and target versions of test; 2) source language monolinguals take the original and back-translated versions and 3) monolinguals in both languages take the test. Despite its relative utility, due to substantial differences between languages, the back-translation cannot be regarded as a guarantee for semantic equivalence. Language is narrowly related to culture and every language uses particular expressions that may not have exact equivalence in other languages. Some researchers assert that back-translation should be considered as a minimum requirement for semantic equivalence but it cannot be considered sufficient (Roberts, 1997). With regard to semantic equivalence, another problem may rise from the differences in respondents' experience levels. Scaling equivalence implies that measurement instruments have the same meanings in all cultures under investigation. Different cultures may exhibit different sensitivities, for example, to an 11-point, a 7-point, a 5-point, or a 4-point scale (Sekaran 1983).

Data Analysis

Data analysis is concerned especially with a major issue; the use of qualitative versus quantitative methods (Lim and Firkola, 2000). Generally, the positivistic studies adopt quantitative methods for analyzing data. In this respect, some researchers argue that the choice between quantitative and qualitative methods represent a clear distinction between fundamentally different epistemological positions (Filstead, 1979). For instance, Smith (1989) claims that the realist position underpinning quantitative research stands in direct contrast to the idealist position underpinning qualitative research, and the two methods are incommensurable. However, some argue that the dichotomy between quantitative and qualitative research is not exhaustive. In fact, depending on the research design it is possible to use qualitative or quantitative methods or a combination of both for collecting or analyzing data. Qualitative researches may apply methods that are of positivistic nature to interpret their results.

While many researchers still prefer quantitative methods, the fact that quantitative methods cannot always solve the methodological problems has led

to use of conceptual and qualitative studies (Nasif et al. 1991). It is sometimes assumed that qualitative studies contribute more significantly to the understanding of management. Most of the excellent articles in international business are integrative, conceptual, and theory building type, rather than purely quantitative empirical articles. Furthermore, it is argued that qualitative papers are more useful when they are accompanied complemented by statistical and number-crunching approaches. However, it seems that the qualitative research is in primitive steps and the cross-cultural researchers still prefer to adopt quantitative methods. By recognizing the importance of both methods, some researchers suggested the combination of qualitative and quantitative methods through triangulation (Morey and Luthans 1984).

The techniques developed for reduction of quantitative results were originally relied on the examination of bivariate correlation (Sekaran, 1983). However, it has been argued that the use of bivariate analysis as the sole technique can be misleading. The complexity of cultural issues requires additional data for conducting multivariate analysis and for use of other powerful statistical techniques (Nassif et al. 1991). The use of multiple regression analysis can be useful to examine the impact of multiple variables on the observed phenomena, but additional techniques such as factor analysis might be needed to determine if the variables are independent from each other.

Level of Analysis

The suggested definitions for culture imply that culture is embedded at a collective level. According to Hofstede (1997), culture is shared by the members of a group. In studying values, however, the researchers compare individuals and based on these comparisons try to draw conclusions about cultures. The important issue regarding cultural research is to distinguish between individual and collective levels of analysis as the society and the individual are two different entities with different characteristics. This problem has been labelled as “ecological fallacy” (Hofstede, 1980). The cultural studies which rely on analysis of quantitative data face ecological fallacy, as they should treat data both at individual and societal levels. For instance, the questionnaires collect the data at the individual level, while the comparisons are made between two societies. The ecological correlations are not the same as within-society correlations. In other words, between-group correlations should be based on the mean scores of variables for each group, while the within-society correlations are based on the scores of individuals. Therefore, the terms used for describing an individual cannot be used to describe a society before aggregation.

Conclusion

Knowledge advances through constructive criticism and debate. This paper has been an attempt to discuss some major drawbacks encountered in cross-cultural research at both epistemological and methodological levels. We maintain that many drawbacks of cross-cultural research reside in epistemological positions upon which methodological approaches hinge. In line with this view, the first part of the paper was devoted to epistemological issues. We argued that while positivism dominates cross-cultural research, the extent to which this approach can be used to investigate an abstract notion such as culture is limited. Its oversimplifications and parsimonious models have rendered culture in a poor and linguistically naïve way. Generally, the social Constructivist perspective is recognized as an alternative to positivism. However, few researchers have adopted this approach due to its limitations discussed in the second part of the paper. In this regard, we considered typical methodology of cross-cultural research as the study of techniques related to conceptualization, operationalization, formulating hypotheses, building instruments, and collecting/analyzing data. Based on the existing literature we have highlighted recurrent shortcomings encountered in every stage and have proposed some suggestions that might be useful in conducting future research.

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