

# **Culture and IS: A Criticism of Predefined Cultural Archetypes Studies**

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## **ABSTRACT**

Although there are many different models of national culture, most IS research has tended to rely almost solely on Hofstede's cultural model (Keil et al., 2000; Straub, 1994; Tan et al., 1995; Watson et al., 1994; Myers and Tan, 2002; Kirkman et al. 2006). This is perhaps not surprising, given that Hofstede's typology of culture has been one of the most popular in many different fields of management (Myers and Tan, 2002). Although, this paper focuses on Hofstede's model of national culture, but many of the criticisms of Hofstede's model apply equally well to most of the other predefined cultural models. This paper provides a criticism of predefined cultural archetypes and highlight some recommendations for researchers in the filed of culture and IS discipline.

## **Keywords**

Hofstede, National Culture, Sub-Culture, Organizational culture, Predefined Cultural Archetypes.

## INTRODUCTION

The study of culture is rooted in sociology, social psychology, and anthropology. In particular, cultural anthropology seeks to understand the similarities and differences among groups of people in the contemporary world. Within the last 20 years, the practical relevance of researching cultural issues, and especially comparing phenomena across cultures, was questioned (Ferraro, 1990). However, the importance of cultural issues is becoming increasingly evident in many applied disciplines; these include the management of information technology (IT) (Davison and Martinsons, 2003).

Over the past decade there has been increasing interest in the IS research literature in the impact of cultural differences on the development and use of information and communications technologies. Since many companies are now doing business beyond their national boundaries – and these global activities are facilitated and supported to a large extent by current communications and information technologies – it is important to understand the impact of cultural differences on these activities (Ives & Jarvenpaa, 1991; Shore & Venkatachalam, 1995; Tractinsky & Jarvenpaa, 1995; Myers and Tan, 2002).

In the following section of this paper, the key concepts of culture will be discussed. These include definitions of culture, culture levels, and different themes of IS research where culture has been studied. That is followed by a taxonomy of different national cultural dimensions that has been developed through a normative literature review of IS and culture research area. Following that, a criticism of using predefined cultural dimensions to study cultural aspects of IS phenomena is discussed. Last, the researcher finalizes the papers with concluding remarks and recommendations for researchers within culture and IS research area.

## CULTURE DEFINITION

Leung et al. (2005) define culture as values, beliefs, norms, and behavioural patterns of a group – people in a society for national culture, staff of an organization for organizational culture, specific profession for professional culture, etc. Hall, (1976) has asserted that beliefs and values dictate the way people think, behave, solve problems, make decisions, plan and lay out their homes and cities, and even organize their economic, political, and transportation systems.

Definitions of culture vary from the very inclusive as Herskovitz (1955) defines it as the human-made part of the environment; to the highly focused as Shweder and LeVine, (1984, p.110) who define it as ‘culture is a shared meaning system’.

Groeschl and Doherty (2000, p.14) point out that culture is complex and very difficult to define: “Culture consists of several elements of which some are implicit and others are explicit. Most often these elements are explained by terms such as behaviour, values, norms, and basic assumptions”. Some researchers proposed culture as tacit or implicit artefacts such as ideologies, coherent sets of beliefs, basic assumptions, shared sets of core values, important understandings, and the collective will (Jermier et al., 1991; Sackmann, 1992; Groeschl and Doherty, 2000), others suggest that culture includes more explicit observable cultural artefacts such as norms and practices (Jermier et al., 1991; Groeschl and Doherty, 2000; Hofstede 1998), symbols (Burchell et al. 1980), as well as language, ideology, rituals, myths, and ceremony (Pettigrew 1979; Karahna et al., 2005).

The socio-cultural system and the individual system are two theoretical frameworks likely to be studied when researchers investigate cultural aspects. The former is concerned with the institutions, norms, roles, and values as they exist outside the individual, and the latter is concerned with the subjective culture as reflected by the individual’s perception of the elements of the culture system (Dorfman and Howell, 1988).

Triandis (1972) defines culture as an individual’s characteristic way of perceiving the man-made part of one’s environment. It involves the perception of rules, norms, roles, and values, which is influenced by various levels of culture such as language, gender, race, religion, place of residence, and occupation, and it influences interpersonal behaviour. This definition has at least two implications. The first is that it assumes that by analysing the behaviour of an individual of a society would not provide a specific identification of the rules, roles, norms and values of that society but rather shows the perception of that individual of the shared cultures he/she belongs to. The second is that behaviour of an individual would be influenced by the shared culture which is influenced by different levels of cultures.

Culture in the sense of a meaning-constituting horizon of the collective life-world determines the perception and use of IT. This may be for the organizational level where culture can influence whether employees are able and willing to use certain technologies. It may also be true on a social level where people shared perceptions have some bearing on the use of IT. A national culture that emphasizes sharing and the collective, for example, will likely lead to different uses of IT compared with one that emphasizes the individual and competition (Raboy 1997; Riis 1997).

## **CULTURAL LEVELS**

National culture (or cross-cultural) research and organizational culture research have emerged as largely separate research streams within IS/IT discipline. While the two streams have experienced little overlap, they both share a focus on defining the values that distinguish one group from another (Leidner and Kayworth, 2006).

Culture has been studied within IS discipline at various levels, including national (macro level, cross-cultural), organizational, group (sub-culture, professional, special interest, social class, etc.) and individual (micro level, subjective culture) (Triandis, 1972; Hofstede, 1984; Dorfman and Howell, 1988; Myers and Tan, 2002; McCoy, 2003; Ali and Alshawi, 2004a).

Culture at a social or national level is the culture shared between people in a society or a country (Hofstede, 1984). On the other hand, culture that is shared between people working in an organization is called organizational culture (Stahl, 2003). Also, culture that is shared between people with a similar profession or occupation is called professional or occupational culture or sub-culture of a specific interest group i.e., political party or a social class (Myers and Tan, 2002). However, individual culture is referred to as the subjective culture of an individual which is related to how much an individual takes from the different cultures that the individual is part of (Dorfman and Howell, 1988; Karahanna et al., 2005).

It is theorized that the relative influence of the different levels of culture on individual behaviour varies depending on the nature of the behaviour under investigation. Thus, for behaviours that include a strong social component or include terminal and moral values, national cultures might have a predominant effect. For behaviours with a strong task component or for those involving competence values or practices, organizational and professional cultures may dominate (Karahanna, et al, 2005).

In an organizational setting, national culture is not the only type of culture that influences managerial and work behaviour. Rather, behaviour is influenced by different levels of culture ranging from the national level, through organizational levels to the group and other sub-cultures level (Hofstede, 1991; Karahanna, et al, 2005).

Straub et al., (2002) based on Social Identity Theory has proposed that these levels interact. They propose that different layers of culture can influence an individual's behaviour and that each individual is influenced more by certain layers and less by other layers, depending on the situation and their own personal values.

The various levels of culture are laterally related (see Figure 1). The levels of culture are not necessarily hierarchical from the more general (national) to the least general (group) (Karahanna, et al, 2005). For instance, in the case of multinational corporations, organizational culture can span national, professional, and other sub-cultures. Furthermore, groups may include members from several organizations, professions, nations, religions, ethnic backgrounds.

In figure 1, the area labelled individual represents the subjective culture or the individual level of culture where an individual's culture is the product of several levels of culture. Each individual belongs to a specific national culture. Individuals may also have a religious orientation, a professional degree, belong to a specific ethnic, linguistic group, and so on, which is represented by different sub-culture groups. Individuals may work in an organization, which is represented by organizational culture. Some of these cultures may dominate depending on the situation. The cultures that enfold the individual interact and comprise the individual's unique culture, eventually influencing the individual's subsequent actions and behaviour (Karahanna, et al, 2005).

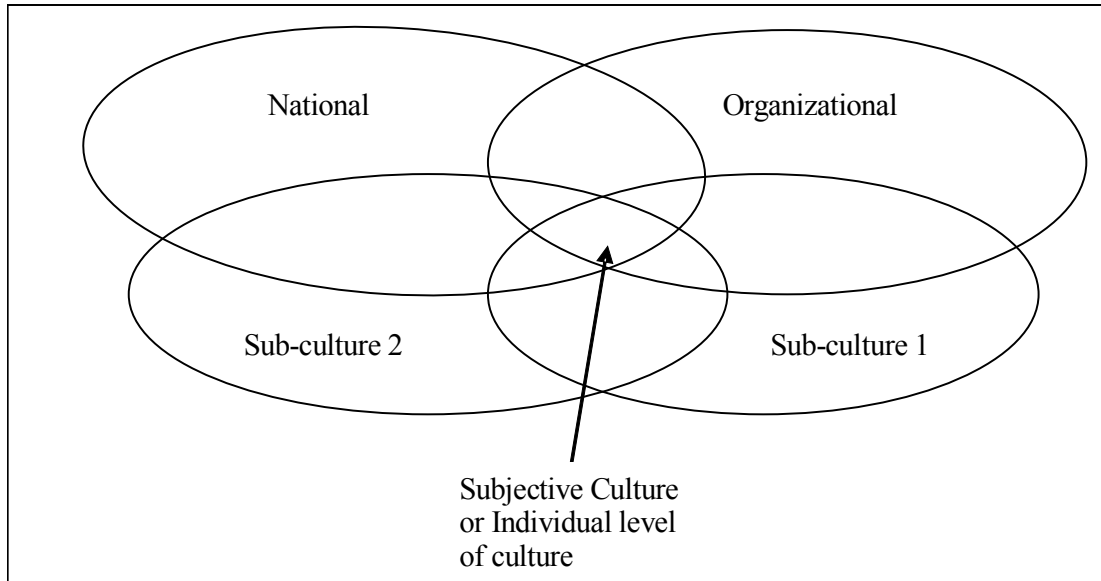


Figure 1: Interrelated levels of culture (Ali and Brooks, 2008)

**NATIONAL CULTURAL VALUES DIMENSIONS**

Schein (1985a) argues that values are more easily studied than basic assumptions, which are invisible and preconscious and therefore not easily identified, as well as cultural artefacts (technology, art, visible and audible behaviours) that, while being more visible, are not easily decipherable.

It is not surprising, then, that the vast majority of theories that conceptualize culture do so in terms of reference group value orientations (Jackson, 1995) such as value dimensions of national culture (Hofstede, 1980).

Even while the focus has largely been on values, there is a tight linkage between cultural values and the subsequent behaviours and actions of social groups (Posner and Munson 1979). In this sense, values can be seen as a set of social norms that define the rules or context for social interaction through which people act and communicate (DeLong and Fahey 2000; Keesing 1974; Nadler and Tushman 1988). These social norms have an impact on subsequent behaviours of firm members through acting as a means of social control that sets the expectations and boundaries of appropriate behaviours for members (O’Reilly and Chatman 1996). Thus, the study of organizational values may be particularly useful in explaining certain behaviours with respect to how social groups interact with and apply IT in organizational contexts (Leidner, and Kayworth, 2006).

There is general acceptance that the value-based framework for measuring cultures has been helpful in deciphering cultures (Leung et al., 2002; Smith et al., 2002; Leung et al., 2005). Although the construct is inherently complex, it is possible to label many different aspects or dimensions of it. A summary of the cultural dimensions which have been cited within the IS discipline has been developed and is presented in Table 1. The researcher develops the summary of cultural dimensions through a normative literature review within ‘IS and Culture’ research area. This constrain has limited the previous literature to be considered in this paper. The researcher categorized the different cultural vales dimensions when these dimensions have the same meanings.

Culture Dimension	Definition
Uncertainty Avoidance (Hofstede, 1980, 1983, 1991)	Degree to which people in a country prefer structured over unstructured situations: from relatively flexible to extremely rigid. Also, this refers to the degree that people in a society bear risk, from risk averse to risk taker. Also, the degree that people in a society trust and feeling comfortable with dealing with the unknown.
Free Will vs. Determinism (Kluckhohn and Strodtbeck, 1961)	
High Trust vs. Low Trust (Fukuyama, 1995)	

Power Distance (Hofstede, 1980, 1983, 1991) Hierarchy vs. Egalitarian (Schwartz, 1994) Authority Ranking Relationships (Fiske, 1992) Equality – Hierarchy (Hampden-Turner and Trompenaars, 1994)	Degree of inequality among people, which the population of a country considers as normal: from relatively equal to extremely unequal.
Masculinity/femininity (Hofstede, 1980, 1983, 1991)	Degree to which “masculine” values like assertiveness, performance, success and competition prevail over “feminine” values like the quality of life, maintaining warm personal relationships, service, caring, and solidarity: from tender to tough.
Individualism/Collectivism (Hofstede, 1980, 1983, 1991) Individualism/Communitarianism (Trompenaars, 1993) Wide sharing vs. Non sharing (Newman et al., 1977) Communal Sharing Relationships (Fiske, 1992) Idiocentric – Allocentric (Triandis, 1995)	Degree to which people in a country have learned to act as individuals rather than as members of cohesive groups: from collectivist to individualist.
Confucian Dynamism (Long-term orientation vs. short term orientation) (Hofstede and Bond, 1988; Hofstede, 1994)	Long term orientation cultures value virtues oriented toward future rewards, in particular perseverance and thrift. Short term orientation stands for the fostering of virtues related to the past and present, in particular respect for tradition, preservation of ‘face’ and fulfilling social obligations.
Universalism-Particularism (Trompenaars, 1993; Hampden-Turner and Trompenaars, 1994)	Degree to which people in a country compare generalist rules about what is right with more situation-specific relationship obligations and unique circumstances
Neutral vs. Emotional Relationship Orientations (Trompenaars, 1993) Analyzing vs. Integrating (Hampden-Turner and Trompenaars, 1994) Objective- Emotional (Newman et al., 1977) Rationalism- Humanism (Lessem and Neubauer, 1994)	Degree to which people in a country compare ‘objective’ and ‘detached’ interactions with interactions where emotions is more readily expressed.
Specific vs. Diffuse Orientations (Trompenaars, 1993) Inner-directed vs. outer-directed (Hampden-Turner and Trompenaars, 1994)	Degree to which people in a country have been involved in a business relationships with in which private and work encounters are demarcated and ‘segregated-out’
Achievement vs. Ascription (Trompenaars, 1993) Achieved status vs. Ascribed Status (Hampden-Turner and Trompenaars, 1994) Merit based vs. Relationship based (Newman et al., 1977)	Degree to which people in a country compare cultural groups which make their judgments of others on actual individual accomplishments (achievement oriented societies) with those where a person is ascribed status on grounds of birth, group membership or similar criteria.

Equality Matching Relationships (Fiske, 1992)	
Conservatism vs. Affective/intellectual autonomy (Schwartz, 1994) Improvement vs. maintaining status quo (Newman et al., 1977)	Degree to which people in a country emphasis maintenance of status quo (Conservatism), or emphasis creativity or affective autonomy emphasis the desire for pleasure and an exciting life.
Harmony vs. Mastery (Schwartz, 1994) High context vs. Low context (Hall, 1960, 1976; Hall & Hall, 1990)	Degree to which people in a country concerned with overcoming obstacles in the social environment (Mastery) vs. concern beliefs about unity with nature and fitting harmoniously into the environment.
Market Pricing Relationships (Fiske, 1992) Accumulation of Wealth vs. 'Just Enough' (Kluckhohn and Strodtbeck, 1961)	Degree to which people in a country think in terms of prices and investment.
Monochronic vs. Polychronic (Lewis, 1992) Time as sequence vs. time as synchronization (Hampden-Turner and Trompenaars, 1994)	Attitudes toward use of time in performing tasks either focusing on issues one at a time (monochronic) or performing of activities in parallel (polychronic)
Monomorphic – Polymorphic (Bottger, et al., 1985)	A population in which virtually all individuals have the same genotype at a locus.
Paragmatism – Idealism (Lessem and Neubauer, 1994)	Pragmatism is characterized by the insistence on consequences, utility and practicality as vital components of truth. The pragmatists' world is pluralistic, attentive to context, relativistic about truth and value, devoid of metaphysical concerns except as they have practical consequences

**Table 1: A Summary of Cited National Culture Values Dimensions in IS Domain (Ali and Brooks, 2008)**

### PREDEFINED CULTURAL ARCHETYPES STUDIES CRITICISM

A summary of different categories of criticisms of predefined cultural models has been developed, these categories have been identified by the researcher based on a normative literature review, and these are discussed in the following sections:

#### Different Culture Levels:

Hofstede's cultural model assumes that all the differences between respondents are a result of national cultures differences, which is questionable as it is also a result of national, organizational, and other sub-cultures (McSweeney, 2002). It doesn't show the interaction between different levels of culture, which avoids the need to investigate the influence of different cultural levels on the IS phenomena to be studied (Ali et al., 2006a).

The use of one company in data collection has been the focus of most criticism of Hofstede's country scores, as it neglects the influence of organizational culture (McCoy, 2003).

The nation-state which Hofstede built his model upon is a relatively recent phenomenon - it did not exist for the greater part of human history. Also, the nation-state has continued to change in its form and makeup. Thus, not only have the physical boundaries of many nation-states changed in recent years, but so has the ethnic and racial mix within them. In addition to that, the idea that each nation-state has its own distinct culture is questionable. Many nations are composed of more than one culture and/or many sub-cultures (Huo and Randall, 1991; Peppas, 2001), and the same cultural group may span multiple countries.

#### Dynamic nature of culture

Hofstede's cultural model doesn't show how the culture has emerged, which avoids dealing with the dynamic nature of culture, which would give inaccurate results while investigating any potential influence of culture on the implementation and use of IS (McCoy, 2003; Ali et al., 2006b). Culture is seen as something that is interpreted and re-interpreted, and constantly produced and reproduced in social relations (Myers and Tan, 2002).

It might not be appropriate to assume that the cultural scores of Hofstede still hold true over three decades since they are first measured (McCoy, 2003).

#### **Culture homogeneity:**

It might not be appropriate to assume that the culture score of the entire country under investigation is the same as the score of the people within their sample; individuals might have drastically different cultural outlooks, even within the same country (McCoy, 2003; Bottger, et al., 1985). Straub et al. (2002) contend that individuals may or may not identify with the national culture; the researcher should not assume that they necessarily do.

It is assumed that national culture is homogenous; subcultures are often assumed to not exist in the use of Hofstede's taxonomy (Myers and Tan, 2002).

#### **Level of analysis:**

Hofstede (2001), in response to many misused applications of his model to study culture, specifies that his cultural model cannot be used to test individual level relationships, and should be used only at the national level, or sub-culture group level (Ford, et al., 2003).

The most common concern regarding Hofstede's dimensions is the level of analysis implied by the dimensions and subsequent uses of the dimensions. The five dimension indexes are national level measures; however, several studies apply this national measure to groups or individuals (Straub, 1994).

Hofstede fails to satisfactorily justify his claim that an average tendency based on questionnaire responses from some employees in a single organization is also the national average tendency. His generalisation to the national from the micro-local is unwarranted (McSweeney, 2002).

Schwartz (1992), points to 'dynamic relations among values' rather than values that are appropriately classifiable into four (later five) 'largely independent' (Hofstede, 1983) dimensions. Dimensions are depicted by Hofstede as bi-polar in the sense that each is composed of contrasting positions, for instance 'individualism' and 'collectivism' are treated as opposite poles of his 'individualism /collectivism' dimension but as Triandis, (1994).states: 'the two can coexist and are simply emphasised more or less ... depending on the situation. All of us carry both individualist and collectivist tendencies ' (in McSweeney, 2002).

It should be noted that all the analyses from Hofstede's work reflect an "ecological" level of analysis- correlations among items in each scale and factor analyses used to define the measures use mean scores from respondents aggregated at the national level before being subjected to analysis. Analysis at the individual level results in an entirely different picture from analysis at the ecological level (Dorfman, and Howell, 1988). The ecological level of analysis severely restricts the meaningfulness and usefulness of the scales for those researchers who operate at the micro level of analysis (Dorfman, and Howell, 1988).

The generalisations about national level culture from an analysis of sub-national populations necessarily relies on the unproven, and improvable, supposition that within each nation there is a uniform national culture and on the widely contested assertion that micro-local data from a section of IBM employees is representative of that supposed national uniformity (McSweeney, 2002).

#### **Comprehensiveness of cultural dimensions:**

Hofstede suggests that a major step in his research was the inclusion of a fifth dimension called Long- versus Short-Term Orientation, based on Bond and colleagues' work with Chinese culture (Bond and Chi, 1997; Chinese Culture Connection, 1987). The IBM survey did not include any items related to this dimension, because presumably IBM had no interest in it. Therefore, using the IBM data as the basis for discovery, Hofstede's work did not include this dimension. Such an incremental approach of adding to the list of dimensions is due to the limitations of the original design and begs the question: what other dimensions are missing because IBM was not interested in them? (Javidan et al., 2006).

#### **DISCUSSION AND RECOMMENDATIONS FOR CULTURAL RESEARCH**

Myers, and Tan (2002) have proposed that IS researchers interested in conducting research on culture and global information systems should adopt a more dynamic view of culture – one that sees culture as contested, temporal and emergent. They proposed a research agenda for global information systems that takes seriously the idea that culture is complex and multidimensional and can be studied at many different levels. It can be studied at the international (e.g. West vs. East),

national, regional, business, and organisational levels of analysis (Fan, 2000), and these levels are often interconnected and intertwined. Redding (1994) says that the comparative management literature as a whole suffers from an excess of simple empirical reportage, and is theoretically weak at the middle and higher levels.

Tayeb (1994), says that the enthusiasm for, and interest in, cross-cultural research has not generally been matched by careful attention to the design and methodologies required to conduct such research. Myers and Tan, (2002) recommend that the IS researchers conduct more in-depth case studies and ethnographies of the relationship between IT and culture in many different parts of the world.

Culture is much more dynamic than has been assumed in much of the comparative management and IS research literature. Myers and Tan, (2002) suggest a research agenda that adopts a more dynamic view of the relationship between culture and global information systems – one that does not simply take culture as given and one which uses appropriate research methodologies to develop thick descriptions of the culture and its impact on IT development, implementation, management and use.

## **CONCLUSION AND FUTURE RESEARCH**

In this paper, the researchers have provided a platform for IS researchers who are willing to study culture within IS discipline. Culture definitions, characteristics, levels, layers, and dimensions have been discussed through covering the literature review of culture and IS. Also, the researchers have provided a comprehensive criticism of various predefined cultural archetypes. In future research, the authors are going to compare the predefined archetypes cultural models with other cultural perspectives model especially situated culture.

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