

**BEYOND HOFSTEDE: CHALLENGING THE TEN COMMANDMENTS OF
CROSS-CULTURAL RESEARCH**

VASYL TARAS

Department of Business Administration
Bryan School of Business and Economics
University of North Carolina at Greensboro
POB 26165, Greensboro, NC 27402-6165
Tel: (336) 256-8611
e-mail: v_taras@uncg.edu

PIERS STEEL

University of Calgary
Human Resources and Organizational Development
444 Scurfield Hall, 2500 University Drive N.W.
Calgary, Alberta, Canada T2N 1N4
Tel: 1-403-220-8428, Fax: 1-403-282-0095
piers.steel@haskayne.ucalgary.ca

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Chapter 3

BEYOND HOFSTEDE: CHALLENGING THE TEN COMMANDMENTS OF CROSS-CULTURAL RESEARCH

Culture is a pervasive construct. A Google search for “culture” provides over half a billion hits, while the Yahoo search engine generates a figure over two billion, which is more than for other such popular terms as politics, war, the environment, or sex. As for academic sources, the construct of culture has enjoyed immense interest from the scholarly community; major social science electronic databases provide links to 100,000–700,000 scholarly articles when “culture” is used as the search keyword.

While cultures have been explored for centuries by anthropologists, the phenomenon had been largely ignored in other fields of research until several decades ago. The explosion of interest in cross-cultural issues in management, psychology, and education was triggered by Hofstede’s (1980) *Culture’s Consequences*. Although a number of similar studies had been conducted before (e.g., Haire, Ghiselli, and Porter, 1966; Kluchhohn and Strodbeck, 1961; Kuhn and McPartland, 1954; Rokeach, 1973), Hofstede was the first to offer a model of culture derived from a large international sample with fairly advanced, for its time, research design and data analysis techniques. The outcome of what is now known as the IBM study described and ranked countries along several cultural dimensions with a concise set of quantitative indices. The study provided an elegant model of cultural differences and made it easy to operationalize culture and include it as a variable in various models.

The need for quantitative culture indices became evident through its popularity. Hofstede’s *Culture’s Consequences* is a “super classic,” having been cited about 5000 times. Interest in Hofstede’s model remains very high even decades later, cited on average 288 times each year in

2000–07 according to the Web of Science; Google Scholar indicates twice as many citations. Furthermore, Hofstede’s cultural indices have been used in over 500 empirical studies.

The effect of Hofstede’s (1980) *Culture’s Consequences* on the field of cross-cultural studies has been tremendous. By and large, all subsequent research in the area has been based on a Hofstedean approach to studying culture. Even though Hofstede never claimed that his approach was the only right way, and in fact was very explicit about possible alternatives, subsequent research generally did not deviate from the paradigm he described.

Several postulates, generally derived from Hofstede’s work, have dominated the field of cross-cultural studies in the past three decades: (1) cultures are values; (2) values are cultures; (3) cultures are extremely stable; (4) culture is the cause, not an effect; (5) a cross-level analysis of culture leads to the ecological fallacy; (6) cultures cluster within geographic boundaries; (7) mean scores and ranking sufficiently quantify culture; (8) matched samples should be used to study cultural differences; (9) self-response questionnaires adequately measure culture; and (10) the Hofstedean framework is unique and the only viable framework for studying culture.

Even though Hofstede never explicitly stated some of these assumptions, and even warned against some of them, his thoughts and propositions expressed in his publications have often been misapplied, generalized to an extreme, or simply misinterpreted, leading to a crystallization of these ten “commandments” of cross-cultural research. The limitations of these assumptions have been increasingly recognized and highlighted. Nevertheless, these concerns have been relegated primarily to review pieces, whereas the vast majority of empirical cross-cultural comparison studies automatically took the traditional assumptions for granted, never straying far from the dominant paradigm.

The present chapter examines the ten assumptions, explicates their meaning, discusses their viability, and outlines possible alternatives and directions for further research. We support our arguments with the results of numerous empirical studies, including some of our own.

Traditional Assumptions in Cross-Cultural Studies

Assumption 1: Cultures Are Values

In *Culture's Consequences*, Hofstede (1980) discussed in detail the multi-level nature of culture. Using an “onion” diagram, he suggested that values represent the core of culture, while practices, expressed in rituals and symbols, represent the outer layer. Even though Hofstede acknowledged that culture is by no means limited to values, the sole focus of his four-factor (later, five-factor) model and instrument for quantifying culture, the Value Survey Module, is values.

Following Hofstede's approach, scholars commonly limit their analyses solely to values. Even though the existence of other layers of culture is usually discussed in the literature review sections of many cross-cultural empirical papers, the variables included in the analyses are virtually always limited to the measurement of values. Our analysis of 136 publicly available instruments for measuring culture (for details see Taras, 2008a; Taras, Roney, and Steel, 2007) revealed that almost all existing instruments and their underlying models of culture are preoccupied with values and overlook other attributes of culture. Virtually all items included in the culture measurement instruments are attitudinal statements about various norms and beliefs. Furthermore, our review of the dimension definitions included in the underlying models confirmed that almost all existing culture measures, much like Hofstede's Value Survey Module, were specifically designed to quantify values and not other aspects of culture.

Even the few models and their corresponding instruments that were designed to go beyond values did not appear to provide a clean measure of other attributes of culture. For example, the model used in the GLOBE project (House, Hanges, Javidan et al., 2004) differentiates between cultural values and practices. However, any careful inspection of the instrument used in the GLOBE study reveals that items designed to measure practices were often referring to perceptions about existing values and norms, rather than practices per se (e.g., In this society: “it is worse for a boy to fail in school than for a girl to fail in school”; “being accepted by the other members of a group is very important”).

It is ironic that despite the general agreement that values could be observed “only through behavior” (Hofstede, 2001, p. 10), most scholars chose to operationalize culture via self-reported values and not via directly observable practices. This choice is partly understandable, as cross-cultural samples are uniformly difficult to obtain under the best of conditions, making the more easily obtained attitudinal value surveys very tempting, aside from also being the traditional method for quantifying cultures. Unfortunately, due to the focus on values, to the exclusion of other aspects of culture, in the empirical literature, the nature and magnitude of the relationship between different layers of culture remains unknown, and it is still uncertain whether measuring solely values adequately captures the construct of culture.

Assumption 2: Values Are Cultures

The popularity of the assumption that cultures are values leads to an assumption that all values are cultural. That is, it has become common to attribute any value difference to cultural differences. Hofstede never argued that all values are cultural; rather, he selected the values that he believed were determined by cultural background. However, the popularity of his value-based

model of culture has been so enormous that it has, unfortunately, overshadowed alternative views. As Stephen Jay Gould (1996, p. 57) states, “The most erroneous stories are those we think we know best - and therefore never scrutinize or question.” When great ideas are raised to the status of unquestionable truth, devoted followers stop noticing important nuances, even those specifically pointed out by the originator. Over time, it became common to assume not only that cultures are values but also that all values are cultural.

To clarify the issue, we composed a comprehensive list of 27 cultural value dimensions used in 136 instruments to quantify culture and their underlying cultural models. The list included attitudes toward achievement, ambiguity avoidance, assertiveness, ritual suicide, believing in evil/good and changeable/unchangeable basic human nature, conformity, conservatism, determinism, family, gender equality, pleasure-seeking, humane orientations, teamwork, independent/interdependent self-perceptions, emotions, Machiavellism, personal independence, power distance, relationship depth, views of the environment, risk avoidance, self-identity, self-reliance, time perception and orientation, status attribution, and rule application (for details see Taras, 2008a; Taras et al., 2007). We sent the list to 36 leading cross-cultural management scholars and asked them to evaluate, based on their experience, the extent to which each of the dimensions was determined by culture. Close to 80 per cent of the scholars anonymously responded to our call. The results were surprising: Only a few types of values commonly used in cross-cultural studies scored as being highly related to culture. The majority of the dimensions were rated as unaffected or marginally affected by cultural background, including most facets of the extremely popular construct of individualism–collectivism.

It is possible to dismiss these results as an opinion. The respondents, however, were renowned experts in international management and demonstrated very high inter-rater reliability.

If we give credence to experience and consensus, the findings of the survey strongly suggest that not all values are cultural, not even many of those that are commonly used in cross-cultural comparison studies. Many types of values seem to be culture-free and determined by personality, experiences, or even temporal states or emotions. As noted by Durvasula and colleagues (2006), simply finding a mean difference between two countries along a value dimension does not automatically make the dimension cultural. The mean difference may be due to various reasons other than culture, including differences in question interpretation, response styles, sample characteristics, or survey administration.

Assumption 3: Cultures Are Extremely Stable

Although Hofstede never empirically tested hypotheses about culture change, in his publications, he expressed a series of assumptions about cultural change. Essentially, he believed in extreme cultural stability. Hofstede (2001) saw theories of culture change as “naïve” (p. 34) and predicted that national cultures should not change substantially “until at least 2100” (p. 36). As for individuals, he assumed that individual cultural values formed in early childhood and remain unchanged throughout one’s life. As Hofstede and colleagues (1990, p. 312) state, “by the time a child is ten, most of his or her basic values are probably programmed into his or her mind.”

Following publication of Hofstede’s (1980) *Culture’s Consequences*, cultures have been traditionally viewed as unchanging. Hofstede’s original, decades-old indices, derived using data from the IBM study of 1967–73, are still frequently used in secondary empirical analyses, even in the most recent years (e.g., Lim, Leung, Sia et al., 2004; Litvin and Kar, 2003; Metcalf, Bird, Peterson et al., 2007; Newburry and Yakova, 2006). Nevertheless, there is a good reason to

believe that cultures can change more rapidly than Hofstede's adherents would believe. As far back as Marx's (1867) *Das Kapital*, there have been theories of cultural change. Today, two theories of cultural change are typically espoused: modernization and convergence. They indicate that societies will converge around some set of values as they modernize, usually those associated with Western, free-market economies. Considerable support for modernization or convergence has been found both theoretically (e.g., Bell, 1973; Eisenstadt, 1973; Kerr, Dunlop, Harbison et al., 1960; Webber, 1969) and empirically (Adams, 2005; e.g., Inglehart and Welzel, 2005; Ralston, Pounder, Lo et al., 2006).

Based on an analysis of World Value Survey data from 81 societies, Inglehart and colleagues find evidence of "massive cultural change" (Inglehart and Baker, 2000, p. 19) and that "cultural values are changing in a predictable direction as socioeconomic development takes place" (Inglehart and Welzel, 2005, p. 1). Similarly, American cultural dimensions, from authority and individuality to sexism and risk preference, have been measured by Adams (2005) every four years since 1992. He found repeated evidence of significant change, most notably from the apparent impact of the 9/11 attacks on the World Trade Center. This act of terrorism reversed what had been a steady decline in authoritarian values. Many other regions provided similar evidence of rapid cultural change (Fernandez, Carlson, Stepina et al., 1997; Ralston et al., 2006). In particular, based on meta-analytic data covering a 35-year period, Taras and Steel (2006b) found a significantly persistent change toward lower power distance and higher individualism and achievement orientation worldwide, especially in countries that experienced dramatic economic and political changes, such as China or the former USSR republics. Another good example is Hofstede's own work. A portion of his sample was assessed twice with a hiatus of six years. As he admitted, "from a comparison between the two survey rounds, it became clear

that there had been a worldwide shift on some questions” (Hofstede, 2001, p. 53). Regretfully, this finding was greatly downplayed, and instead, the author went on to defend extreme cultural stability.

Furthermore, extreme cultural stability belies cohorts. Cohorts are a well-established construct in which people develop common characteristics as a result of a shared social history. They are explicitly cultural, that is, “a property of cultures themselves, and as something that can be compared across historical periods or between nation-states” (Settersen and Mayer, 1997: 235). Cohorts are consequently a product of history, and new ones should be generated regularly, such as “Baby Boomers” or “Generation X,” with at least 28 of them created in America over the past 300 years. In this context, cultural stability is an extremely aggressive position, as it implicitly rejects cohorts and emphasizes an unchanging uniformity of culture.

Finally, generational cohorts themselves have been observed to change. Using the General Social Surveys from the National Research Center, Smith (2000) summarized over 100 attitudes and values from 1973 to 1997. The general trend was change along with a diminishing generation gap (i.e., increased homogeneity across all cohorts) for topics ranging from social welfare to sexual permissiveness. Others report a similar change within the relatively brief span of a generation (e.g., Brewster and Padavic, 2000; Smola and Sutton, 2002).

These theoretical and empirical conclusions clearly show that either what Hofstede labeled cultures is not culture, assuming culture is extremely stable, or culture can change much faster than postulated by Hofstede. If the former is true, we need to reevaluate if Hofstede’s approach to operationalizing culture is valid. Otherwise, we have to reconsider our assumptions about the extreme stability of culture at both the national and individual levels.

Assumption 4. Culture Is a Cause, Not an Effect

Numerous studies, including Hofstede's (1980) IBM project, have found a strong relationship between cultural values and various individual- and national-level phenomena. For example, Hofstede reported correlations of up to .85 between cultural values and wealth, economic growth, economic inequality, and other country characteristics, as well as with such individual characteristics as socio-economic status, education, or profession. Similar findings have been reported in numerous subsequent studies. In terms of causality, culture traditionally is seen solely as the cause, while the other variables in the equation are "culture's consequences" (e.g., Franke, Hofstede, and Bond, 1991; Hofstede, 1980; Offermann and Hellmann, 1997).

Cultural determinism has dominated cross-cultural research for several decades. As evident from numerous reviews of cross-cultural research (Gelfand, Erez, and Aycan, 2007; Kirkman, Lowe, and Gibson, 2006; Ricks, Toyne, and Martinez, 1990; Sondergaard, 1994; Tsui, Nifadkar, and Ou, 2007; Werner, 2002), culture as a cause has been the almost exclusive focus of cross-cultural scholars. In a pair of comprehensive reviews by Kirkman and colleagues (2006) and Tsui and colleagues (2007), cross-cultural studies were classified into Type I and Type II. Type I represented studies that explored culture as a main effect on various outcomes. Type II represented studies that explored culture as a moderating effect. There was no Type III category that explored predictors of culture, an absence that strongly reflects the general trend in the field of cross-cultural research.

Cultural determinism largely stems from the cultural stability paradigm. If culture does not change for generations, then culture must be the cause and cannot be the effect. For example, the relationship between individualism and wealth for China and the United States has been traditionally assessed from the culture-as-a-cause point of view. That is, America is wealthier

because it is more individualistic. However, considerable empirical evidence clearly indicates that cultures do change much more often and rapidly than previously thought (e.g., Adams, 2005; Inglehart and Welzel, 2005; Taras and Steel, 2006b), and it is becoming evident that the recently well-documented rise of individualism in China is due to economic growth and not vice versa.

Unfortunately, establishing causality is extremely difficult in any relationship, especially when phenomena as complex as culture are involved. However, the Hofstedean paradigm of cultural determinism and culture's consequences can and should be questioned. It is plausible to expect that as countries, such as China or India, continue to experience economic and political changes, the values of the people in these countries will be changing as a result.

The same is true at the individual level; individual maturation and changes in the level of education and socio-economic status affect individual values. This development leaves many previous correlations with culture open to debate regarding causation. The causal arrow may well be reversed for many observed relationships, making culture a consequence, not a cause, or as Erez and Gati (2004) suggest, the relationship may be bi-directional.

Assumption 5. Cross-Level Analysis of Culture Leads to Ecological Fallacy

Since *Culture's Consequences* and other publications authored by Hofstede, there has been an unwritten rule in the field of cross-cultural studies: "Never Mix National and Individual Levels of Analysis." Hofstede consistently warned against using his model with individual-level data and about the fallacy of making generalizations from his national cultural averages to individuals (Hofstede, 1995, 2001, 2002b). We do not question his logic, as indeed his instrument and model were obtained using aggregated data and designed for the national level of analysis. However, his repetitive warnings about the pitfalls of cross-level generalizations of his

specific data set formed a perception that any cross-level analysis would lead to the ecological fallacy. As a result, multilevel models have become taboo in cross-cultural studies, and papers attempting to bridge national and individual cultures still tend to be red-flagged by reviewers.

There are two basic forms of cross-level inference error. Wrongly generalizing relationships observed at the group to the individual level is the ecological fallacy, which has a long history. Although mentioned earlier by Thorndike (1939), the researcher most remembered for his critique is Robinson (1950). The second type, wrongly generalizing relationships from the individual to the group, is known as the atomistic, the individualistic, or the reverse ecological fallacy (Diez-Roux, 1998), which is Hofstede's primary concern. The fear of these fallacies is so ingrained in our minds that any attempt at ecological inference—that is, bridging levels of analysis by going from the group to the individual level or vice versa—generates a predictable, negative, knee-jerk reaction.

Fortunately, we have progressed considerably since Robinson (1950), whose own examples were shown, ironically, to represent model misspecification and not ecological fallacy at all (Hanushek, Jackson, and Kain, 1974). In the words of Jargowsky (2004, p. 721), “the ‘ecological fallacy’ has lost some of its sting, and should not cause researchers to abandon aggregate data.” Ecological fallacy is simply a *threat* to validity, one of several (e.g., differential attrition, self-selection, maturation), and not a necessary or perhaps even common confound. We need to stop dysfunctionally elevating its status to an absolute and consider the few situations in which it is of concern. As Steel and Ones (2002) review, misleading results due to the ecological fallacy are rare, as individual and group analyses typically provide substantially similar results.

Furthermore, there are many times when ecological inference is the preferred manner to investigate. For example, Jargowsky (2004, p. 721) states, “aggregate data may be better than

individual data for testing hypotheses, even if those hypotheses are about individual behaviour.” Similarly, Schwartz (1994a, pp. 819-820) concludes, “as a result of the grouping operation, one may have controlled for the effects of other variables, making the ecological estimate less biased than the individual estimate.” In other words, a reflexive terror of ecological inference tarts the times when it can be equivalent to an individual-level analysis, or even superior. For example, the ecological fallacy should not occur, given a properly specified model, if the grouping is based on random sampling or a predictor (Jargowsky, 2004). Consider an investigation of the effects of sex using two groups that consist exclusively of men and women. Range restriction may still occur, as the variance may be smaller at the group level, but this issue is easily correctable. We do this type of group-level analysis regularly when we conduct t-tests, one of the most basic of statistical procedures. Using group-level summary statistics, means, and standard deviations, we draw conclusions about average differences between individuals within these groups.

However, as Hofstede (2001) correctly contends, ecological fallacy is more of a concern at the national level, where we are grouping by geography. Specifically, cultural stability is due to institutions, in particular “the family, educational systems, political systems, and legislation” (Hofstede, 2001, p. 11). Any national-level average will be due to both individual effects and the effects of national institutions. This combination *potentially* makes it difficult to generalize from the group to the individual, as these national institutions *may* obscure individual effects, *possibly* enhancing, erasing, or reversing them. Again, as per the words italicized in the previous sentence, the possibility of a threat is not the same as its realization.

Finally, recent progress in data analysis techniques has offered some great solutions for cross-level research. For example, hierarchical linear modeling (HLM) provides a formal way of

achieving ecological inference with data representing multiple levels of analysis. Essentially, HLM allows us to determine statistically how variance is accounted for at the micro (individual), the meso (group or organization), and the macro (nation) levels, as well as the interactions among levels (Raudenbush and Bryk, 2002). Already a staple in the study of health and disease (Blakely and Woodward, 2000), HLM is becoming increasingly popular for cross-cultural research (e.g., Cheung and Au, 2005; Fischer, Ferreira, Assmar et al., 2005).

Assumption 6. Cultures Cluster within Geographic Boundaries

Hofstede (2001, p. 9) defined culture as “the collective programming of the mind that distinguished one group or category of people from another.” In his work, these “groups or categories” were countries, and their cultures were described by national averages. As Hofstede (2002a) noted in his response to McSweeney’s (2002, p. 1536) remarks about the inappropriateness of national averages: “[nations] are usually the only kind of units available for comparison.” The research that followed did not deviate from the Hofstedean paradigm, and the outcome of subsequent cross-cultural comparison studies has traditionally been a set of national cultural averages. Although many scholars recognized substantial within-country variation in cultural values (e.g., Au, 1999; Huo and Randall, 1991; Smith and Bond, 1999; Taras et al., 2007; Taras and Steel, 2006a), the issue of subcultures usually has been addressed by refining geographic borders and offering separate scores for different geographic regions within countries (e.g., House et al., 2004; Huo and Randall, 1991; Maznevski and DiStefano, 1995; Ralston, Kai-Cheng, Wang et al., 1996; Vandello and Cohen, 1999).

The dominance of the geography-based clustering of cultures has led to some potential misuse. In particular, assumptions about cultural values frequently have been made based on

country of origin. Based on a review of 210 cross-cultural studies published between 1995 and 2001, Schaffer and Riordan (2003) found that in 79 per cent of the cases, nationality or country of residence was used as a proxy for culture. For example, Offermann and Hellmann (1997, p. 346) state that “cultural background was measured by the current citizenship (passport status) of each of the managers,” and Eylon and Au (1999, p. 378) report, “participants were divided into high and low power distance groups by county-of-origin.” This pervasive methodology is troubling, as Oyserman et al. (2002, p. 7) conclude: “Lack of empirical support for these assumptions [that national averages represents the individual] makes this approach vulnerable to criticism.”

Within-country variations in cultural values have been well-documented (e.g., Au, 1999; Huo and Randall, 1991; Smith and Bond, 1999). Although cultural regions are common in many countries, such as Anglophone and Francophone parts of Canada, it is very questionable that geographic boundaries are optimal for clustering cultures. A characteristic is justified as a clustering dimension only if it can effectively predict membership in target groups. Simply finding a significant mean difference for different regions is not sufficient to confirm discriminant validity of geographic boundaries (Durvasula et al., 2006). We are not aware of any studies that directly address this issue, but a study by Taras and Steel (2006a) may shed some light on the problem. One of the findings of their meta-analysis of 508 empirical studies was that, depending on the value dimension, a hefty 81–92 per cent of the variation in cultures resides within countries. This result strongly suggests weak discriminant validity of geographic boundaries. Consequently, at least for the work-related cultural values as defined in Hofstede’s model, it appears that socio-economic and demographic factors are much more relevant dimensions for clustering cultures and subcultures.

Years ago, area of residence (i.e., a country or region within a country) probably was a much better predictor of cultural values. In today's "global village," geographical boundaries are becoming less relevant in studies of culture and national, or even regional, averages. Analyses of cultures of socio-economic classes, professions, or generational cohorts are probably much more meaningful than analyses of national or regional cultures, at least within the framework of Hofstede's model, with its dimensions of individualism, power distance, uncertainty avoidance, and masculinity. It is time to reexamine the boundaries of cultural clusters.

Assumption 7. Mean Scores and Rankings Sufficiently Quantify Cultures

The most important piece of information in the over 300 pages of Hofstede's (1980) *Culture's Consequences* are the tables providing the national cultural statistical averages and rankings. Although Hofstede raised a number of other issues in his numerous publications, the national averages are the cornerstone of his work. Such is Hofstede's emphasis on averages that his result tables did not offer any information about score dispersion within groups (e.g., variance).

Following Hofstede's path, most of the subsequent research focused on cultural means, be it national or group averages. The mean comparisons, typically using t-tests, have been the main tool for studying and describing cultures. Taras and Steel (2006b) conducted a meta-analytic review of 532 empirical studies that involved culture measurement. Although all the reviewed studies reported sample means along cultural dimensions, less than half of the papers contained information about the dispersion of cultural scores within groups, such as standard deviations or ranges, and only about 2 per cent of the studies explicitly referred to the measures of dispersion

in their discussions. We found no study that analyzed cultural score dispersion within groups at a more advanced level, such as by considering skewness or kurtosis.

Although a mean provides important information about the culture of a group, it is certainly not sufficient to understand the phenomenon fully. Focusing solely on means may create a false perception of cultural homogeneity within a group, obstructing the detection of subcultures. For example, a statistical average provides no meaningful description of scores within groups with bimodal or otherwise non-normal distributions. At the same time, measures of value dispersion and skewness could provide useful information about the cultural composition of the group. After all, cultural diversity may be an important characteristic of a group and perhaps even a facet of culture.

Furthermore, cultural diversity or cultural homogeneity could be an important predictor of attitudes and behaviors. For example, it could be hypothesized that culture has a stronger effect on individual attitudes and behaviors in culturally homogeneous societies or groups. Unfortunately, with the focus solely on cultural means, many important issues could not be addressed or have been overlooked.

Assumption 8. Matched Samples Should Be Used to Study Cultural Differences

Hofstede's IBM study was based on a uni-organizational design. While some criticized him for this approach (e.g., McSweeney, 2002; Schwartz, 1994b), Hofstede repeatedly argued that matched sampling was what allowed him to detect systematic *differences* in cultural values across countries and isolate effects of other factors, such as organizational culture, demographics, or economy (e.g., Hofstede, 1980, 2001, 2002a). Hofstede's argument is well-taken. Indeed, it would be inadvisable to contrast national cultures by comparing samples of

wealthy people from one country with a sample of relatively poor people from another country, as it would be difficult to determine whether the differences in cultural values are due to national or socio-economic differences.

Following in Hofstede's footsteps, later scholars have tried their very best to conduct their cross-cultural research using matched sampling. Traditionally, between-sample inconsistencies and within-sample heterogeneity have been seen as limitations. Unfortunately, matched sampling, while indeed minimizing some threats to validity, greatly obstructs progress in cross-cultural research. First of all, matched samples limit generalizability and often provide results that are not useful for many intended purposes. For example, as noted by Schwartz (1994b, p. 91), "highly educated well-paid IBM employees' ability to represent the general population likely differs from country to country, with the discrepancy probably being greater, for example, in the Third World nations (e.g., El Salvador, Pakistan) than in industrialized Western nations (e.g., Switzerland, United States)." In other words, most researchers are looking for indices that represent the entire nation, not just a subculture of that nation (e.g., technology professionals), which may have only the most tenuous of connections to the general population.

Second, the use of matched samples obstructs the detection of subcultures. Ironically, matched sampling is an implicit acknowledgement of the existence of subcultures, yet decades of having strived to make "clean" comparisons using highly homogeneous matched samples greatly limit the diversity of data available for their analysis. Consequently, we have very limited knowledge about how individual characteristics, such as age or gender, affect cultural scores, despite implicitly acknowledging that they should have a significant effect.

Assumption 9. Self-Response Questionnaires Adequately Measure Culture

While many scholars have explicitly voiced concerns and pointed out limitations of self-response attitudinal surveys (Harzing, 2006a, 2006b; Hui and Triandis, 1989; Johnson, Kulesa, Cho et al., 2005), the review of hundreds of studies in the area clearly confirms that Hofstede's approach (i.e., self-report questionnaires) has traditionally been almost the only way to quantify culture (Taras, Roney, and Steel, 2006). Starting with Hofstede's IBM study, data in all major culture comparison projects have continued to be collected this way. We have made considerable psychometric progress since Hofstede's original Value Survey Module instrument though. For example, Hofstede (2008) himself just announced the release of a new and improved version of his instrument. Still, the improvements in the area of culture measurement have remained within the ubiquitous self-response questionnaire paradigm and have been limited to developing better item sets, improving scale reliabilities, and refining scoring schemes.

Limitations of self-report attitudinal surveys have been widely recognized and discussed in detail in various fields, in particular in personality and attitude psychology (Funder, 1995; Ozer and Reise, 1994; Schwarz, 1999). Some of the commonly cited limitations are the difficulties of giving accurate self-reported numerical assessments of the constructs encapsulated by the questionnaire and the subjectivity of responses.

Furthermore, the validity of self-reported questionnaires is likely reduced in cross-cultural settings as several problems, such as translation, cross-cultural differences in response styles, and differences in interpretation of the scale anchors, are exacerbated (Harzing, 2006a, 2006b; Hui and Triandis, 1989; Johnson et al., 2005). As a result, the degree to which the responses represent true scores (i.e., culture) is not known, and thus, it is not known whether score differences across countries indeed indicate cultural differences or are simply due to, for example, differences in the propensity for extreme responses in some cultures.

A number of methods have been suggested to control and correct for cross-cultural differences in response styles and response biases in international surveys (Hofstede, 1980; Leung and Bond, 1989; McCrae and Costa, 1997; Spector, Cooper, and Sparks, 2001). Unfortunately, these methods are rarely utilized and, in any case, are not without limitations (Smith, 2004). Future research should find ways to minimize these sources of self-report data contamination as well as explore alternative approaches to data collection, such as observations and experiments. At the very least, alternative assessment procedures can provide convergent validity for self-reported measures.

Assumption 10. The Hofstedean Framework Is Unique and the Only Viable Framework for Studying Culture

Although cross-cultural research was conducted before Hofstede, his 1980 *Culture's Consequences* marked the beginning of the research field of cross-cultural business and management, one that has developed fairly independently ever since. Rather young areas of research at that time, cross-cultural management, business, and marketing studies firmly embraced Hofstede's cultural framework. His numerous devoted followers, captivated by the novelty and apparent comprehensiveness of his model, did not actively seek and at times fiercely denied the viability of alternative solutions.

As a result of this entrenchment, the interaction between international business scholars and those representing the older but related fields of cultural psychology, sociology, and anthropology was drastically curtailed. Scholars from these different fields tend to present their work at different conferences, publish in different journals, and neglect one another's work. As a result, cross-cultural management and marketing scholars, as well as those interested in cross-

cultural issues in education, business strategy, and I/O psychology, embraced and started building upon Hofstede's framework without much consideration for the existence of alternatives in related fields. For example, published research on acculturation (for reviews see Berry, 1994; Berry, 2003; Rudmin, 2003), a closely related field by definition, has virtually zero overlap with cross-cultural research literature that relies on Hofstede's framework. Similarly, empirical research on personality that relies on a very similar theory and methodology had been virtually unknown to cross-cultural management scholars until fairly recently. Only recently have calls for a closer look at the similarities and attempts to merge the bodies of research on cross-cultural management and acculturation (Taras, 2008b) and personality (e.g., Hofstede and McCrae, 2004; McCrae and Terracciano, 2005; Wallace and Fogelson, 1961) become more frequent.

While some sociologists and psychologists often referred to Hofstede's models in their work (e.g., McCrae, 2001; Smith, Peterson, Schwartz et al., 2002; van de Vijver and Leung, 2000), cross-cultural business researchers tended to overlook the research in other fields. The lack of cross-pollination and interaction with other fields formed a perception among many cross-cultural business scholars that Hofstede's framework is the only, or at the very least the only viable, framework for studying culture. The lack of knowledge about existing relevant methodologies and models often leads to stagnation or needless duplication. For example, Mesoudi and colleagues (Mesoudi, Whiten, and Laland, 2006) argue for unification, particularly noting that the study of culture would greatly benefit from adopting principles from biological evolution. We agree. It is time to start exchanging ideas and build upon one another's experience.

Conclusions

The present chapter reviewed the unofficial yet firmly institutionalized assumptions about what culture is and how culture should be studied. The ten “commandments” of cross-cultural research, at least to some extent, are all rooted in Hofstede’s work, though most of them arose from misinterpretations of Hofstede’s statements or the reification and improper extension of his propositions. While these traditional assumptions certainly have some merit, their validity is often greatly exaggerated, far beyond what considerable theoretical and empirical evidence would suggest. Due to the overadoption of these assumptions, many previous studies were based on flawed logic and questionable research designs. The taboos imposed by this dominant paradigm greatly obstruct progress in cross-cultural research by limiting the scope of data and types of analyses that are “welcomed” in the field.

The future of cross-cultural research begins with us establishing and communicating under which circumstances these assumptions hold water, where they leak, or even when they sink completely. Only with this understanding will new research that breaks free from the currently dominant Hofstedeian paradigm be conducted in any quantity and, importantly, be rewarded by publication. As we discussed here, such research should consider which values are indeed cultural, what is significantly cultural aside from values, and how best either should be measured. How stable are the different dimensions of culture, and how often do they need to be updated? What is the relationship among different layers of culture? What are the meaningful boundaries of cultural entities? What theories and methodologies could be borrowed from other fields of research to study culture? Answers to these questions would provide the foundation for future research beyond Hofstede’s framework.

Challenging Ten Commandments of Cross-Cultural Research

The world has a need for increasingly sophisticated cultural advice on a multitude of fronts. Headline news stories cover issues, such as immigrants' assimilation problems, the difficulty of transferring democratic values to countries with authoritarian traditions, and the cultural problems that transnational or global companies have in implementing their business models around the world. Given the seriousness of these issues, we should not bypass any avenues that promise an improved quality in our results. Rather, to the degree we address any weaknesses in our field, we would be rewarded with a concomitant increase in the practical relevance and adoption of our findings.

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Challenging Ten Commandments of Cross-Cultural Research

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