

CULTURAL CHANGE IN THE UNITED STATES, CANADA AND MEXICO

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ABSTRACT

A great number of studies have been reported based on Hofstede's seminal work on national culture (1980). Our findings for a very recent sample of people attending executive and MBA programs found no significant differences in Power Distance between the United States (U.S.), Mexico and Canada. Our results suggest that caution should be taken in automatically assuming cultural parity between the U.S. and Canada and that more traditional culture positions between the NAFTA member nations may be more subject to change than stable through phenomena like crossvergence. Our findings suggest that Hofstede's (1980) study provides one useful framework; however, the relative positions of national culture are not necessarily applicable to present day.

Key words: Cultural change, Canada, Hofstede, Mexico, NAFTA, National culture

INTRODUCTION

Are the management approaches of one culture appropriate in another? Can management tools be appropriately adjusted for increased cultural effectiveness? Are the key aspects of management contextual and therefore not culture-free? How stable is culture? How accurate are cultural "clusters" or "types" that place Canada and the U.S. on cultural parity both theoretically (Hofstede 1980, House, Hanges, Javidan,

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Dorfman and Gupta 2004) and for practical research application (Griffith, Hu and Ryans 2000)?

There is a strong, theoretical link between culture and management practice. For example, Vygotsky's (1962) Activity Theory suggests that the way people work affects the way they think, and that modern work is changing (e.g., more communication and teamwork, less hierarchy and greater emphasis on learning). Through a process called mediation, people must navigate the use of tools, which can include a variety of management practices. All higher psychological processes are based on social systems provided by culture. Fundamental to the mediation process is how well a person's culture and psychology are suited to the instrument and related task. The way people work is guided by the social context, which is in turn is conditioned by culture. People's actions cannot be separated from their cultural context.

It has been well-established that different cultures have different views on the practice of management, so there is good reason to question the universal applicability of specific management practices (Adler and Jelinek 1986). Canada and the U.S. are often grouped into the "Anglo culture type" exemplified by low power distance, low uncertainty avoidance and individualism. Basic cultural parity on these dimensions is then assumed for some research purposes. Practically, it is assumed that when societies maintain cultural parity certain management practices can be applied across borders with little or no adjustment – the standardization approach. Assumptions of cultural parity, even on only select cultural dimensions, can have implications both to research and practice. Even single cultural dimension can have important influence on management. While relying on assumptions of cultural parity based on culture typing may be appropriate in some circumstances, it could also serve to obscure real differences or emergent cultural shifts. The result could be heightened instances of disconfirmed expectancy on national levels.

For example, see the discussion of participative management below under *Evidence of Changes in Mexican Culture*. It is likely that the most effective organizational and human resource management strategies are linked to the cultural environment. Researchers can gain increased insight based on empirical examination of the impact of cultural dimensions on management practices. When considering the relation between management practice and cultural dimensions (and a nation's cultural disposition), current or recent research is arguably better.

CULTURAL DIMENSIONS

A cultural system can be defined as people sharing similar assumptions about the world, values, beliefs, customs and opinions (Brislin 2002, Hofstede 1997). Triandis emphasizes a subjective context to culture by which he means the "man-made part of the environment or to a group's characteristic way of perceiving its social

environment” (Triandis 1977, Triandis and Lambert 1980).

Most definitions of culture share the following elements:

- 1) human-made elements that are shared through communication;
- 2) which increase the probability for survival;
- 3) and result in greater satisfaction for those in the community.

Socialization and culture’s affect on one’s values/beliefs, called enculturation, has been well established (Brislin 1981). While not necessarily being static (Kelley, MacNab and Worthley 2006), these elements are passed along and learned longitudinally over time, passed down from generation to generation.

Hofstede (1980, 2001) developed a set of now familiar cultural dimensions that our study will utilize. The Hofstede study sampled 116,000 employees of IBM, representing 40 different countries over a two-year period. Using factor analysis of work-related values, he originally labeled four basic cultural identifiers: “power distance,” “uncertainty avoidance,” “individualism/collectivism” and “masculinity/femininity.”

It is recognized that universally applicable cultural maps are a complicated endeavor and the Hofstede dimensions have not escaped valid critique, suggested improvements, new dimensions, exceptions or altogether different approaches (Bond 1987, McSweeney 2002, Schwartz 1990, Triandis et al. 1995, Trompenaars 1993). For example, while the Hofstede (1980) study examined an enormous number of participants, certain nations had extremely low subject representation as in Pakistan, Hong Kong and Singapore. The study also assumes national homogeneity of culture (McSweeney 2002) even in subject nations like the United States and Canada where significant regional cultural diversity is known to clearly exist (e.g., Bowman 2000, Nisbett 1993). It is also important to note that our study attempts to actually measure these cultural constructs as suggested by Schaffer and Riordan (2003), as opposed to automatically relying on the 1980 rankings from the original Hofstede study. In doing so we are not proposing an exact replication of the Hofstede work. However, our examination of the three subject nations (see Methods section) is regionally more robust, represents of a more industrially diverse group of managers and is certainly current.

Bowman (2000) reviewed the significant differences between the U.S. and Canada while also arguing a case for significant Canadian sub-cultures. The U.S. and Canada cannot be assumed to be the same in terms of culture, even if that parity is limited to the cultural dimensions related to “Anglo culture typing.” Huo et al. (1991) argued that at least four of the national level cultures examined by Hofstede contain significant sub-cultural identities; these are identified as Canada, U.S., Malaysia and Belgium. The authors make the same case for China and explore the sub-cultural nuances.

“Crossvergence” allows for the possibility that opposites may coexist and even

be complementary, as are two sides of the same coin (Ralston et al. 1997). Crossvergence recognizes that economic advancement brings cross-cultural contact, competition and interaction whereby, over time, cultures can retain core elements while at the same time adapting elements of another. National cultures and global management practices can be combined in a kind of hybrid; for example, the company can replace the family as the most important in-group. Individualism and market-orientation can exist side-by-side with traditional collectivism. Homogenization or convergence of management practices based on U.S. models is unlikely.

Because culture is not static, at some stage one would expect differences from the original Hofstede findings (Kelley, MacNab and Worthley 2006). The number one influence on culture is communication - Hall (1990) defines culture as communication. After 25 years could this point have arrived especially considering unique phenomena like specific economic trade blocks and technological advancements such as the Internet? Additionally, global paradigm shifts are likely to affect cultures as phenomena like the World Wide Web make easy access to new ideas, thoughts and realities. In his more recent work, Hofstede emphasizes that external influences on culture related to economic changes and evolving trade patterns can shift cultural perspectives (Hofstede 2001: 12). It could certainly be argued that the increasing integration of the U.S., Mexico and Canada, encouraged by the North American Free Trade Agreement (NAFTA) of 1994, led to potentially significant changes in the three national cultures. However, researchers continue to maintain that culture is "very stable" and this is one assumption often cited with some of the more notable work in cross-cultural examination (House et al. 2004). But just how stable is culture? What is meant by cultural stability? Is culture so stable that assumptions based on work now more two decades old should be maintained as in Anglo culture typing?

Although problems of Western Hemisphere trade are currently being negotiated and dealt with (Hakim 2004), regional integration is a work-in-process which is likely to continue in the future. Chile effectively became the fourth member of NAFTA in January, 2004, and other Central and South American countries are actively negotiating trade agreements with the U.S. and Canada. Much has occurred since 1980 - NAFTA being one big change. The continuing migration of millions of Mexicans back and forth into the U.S. and Canada greatly strengthened the social and economic integration of the three nations. Also, the boom in foreign direct investment and trade stimulated by the explosive growth in maquiladora/in-bond manufacturing and assembly plants exposed thousands of Mexicans to daily work experience with U.S., Canadian, Japanese, Korean and other foreign managers, engineers and technicians. Also, the current war in Iraq and terrorism threats are potential stimuli for an increase in uncertainty, particularly between the U.S. and Canada.

EVIDENCE OF CHANGES IN MEXICAN CULTURE

Many recent studies of management in Mexico provide evidence of significant changes in Mexican culture. Practices which have been considered inappropriate for Mexican culture seem to be very effective in recent years. For example, employee participation in management decision-making has been documented in spite of a long history of centralized decision-making in Mexico (Drost and Von Glinow 1998). Mexican employees respond very enthusiastically to opportunities to learn, grow and change in their jobs, in spite of Hofstede's earlier findings that they avoid uncertainty. Apparently young Mexicans are eager to learn and grapple with change, perhaps because they realize that better knowledge, skills and abilities can lead to advancement and better opportunities outside their current organization. There also seem to be significant cultural differences between the more traditional colonial center of Mexico and the border region with the U.S. (Gowan et al. 1996).

Traditionally, practices such as employee involvement have been thought of as congruent with participative cultures such as the United States, and are believed to be less congruent with more authoritarian cultures such as the Mexican culture. For example, Hofstede's (1980) rankings of power distance show that Mexico is a culture that accepts large power differences. Qualitative accounts also provide evidence of a control or authoritarian culture at work in Mexico (Kras 1995). In addition, empirical research conducted in Mexico on management styles also has shown that, compared to a similar U.S. plant, the management style in the sister Mexican plant was more authoritative, a style considered more congruent with high power distance (Morris and Pavett 1992). However, more recent quantitative examinations cast some doubt on the "traditional" position of power distance in the Mexican workplace. For example, there is evidence that subordinate and worker empowerment is positively related to job satisfaction in Mexico (Robert, Probst, Martocchio, Drasgow and Lawler 2000). House, Hanges, Javidan, Dorfman and Gupta (2004: 539-540) examined power distance in 62 national contexts and for Mexico specifically found it to be a cultural value that was ranked relatively low as a desired societal value. In fact the study ranked Mexico and the U.S. with the same score for power distance as a desired social value.

Mexico ranked high on uncertainty avoidance (Hofstede 1980) meaning that Mexicans should feel uncomfortable with ambiguous and uncertain situations (Gomez 2004). However, the Mexican economy historically has been turbulent, characterized by high inflation and interest rates, as well as frequent peso devaluations. Given the need to deal with this uncertainty in the business environment, Mexican managers may be closer to U.S. and Canadian managers on this dimension (Stephens and Greer 1995).

EVIDENCE OF CHANGES IN CANADIAN CULTURE

The relation between the U.S. and Canada is a curious dynamic and one that is often seasoned with colorful imagery. For example, one common metaphor communicated among Canadians regarding life next to the U.S. relates to a mouse sleeping next to an elephant. The much smaller neighbor is aware of every move that the elephant makes, sometimes painfully, while the elephant continues its normal routine without much interruption or regard for its neighbor.

A more poetic and harmony-focused image depicting the relation between Canada, the U.S., and incidentally England, can be seen at the Peace Arch Park at the border crossing between the U.S., in Washington State, and Canada, in British Columbia. A monument stands to celebrate peace between the three nations and the treaty of Ghent reading, "Children of a Common Mother." The siblings, in this case the U.S. and Canada, can develop quite differently for all their similarities. They have different personalities and yet so often, as evidenced in some management research, the U.S. and Canada are assumed to be similar if not the same in cultural dispositions.

The original Hofstede (1980) study places the U.S. and Canada very close together on most cultural dimensions in what is known as the "Anglo culture cluster." This relative closeness seems to have lured some cross-cultural and management researchers to assume the highest level of similarity between the U.S. and Canada (Griffith, Hu and Ryans 2000). Obvious similarities, like a free market, a democratic political system and the English language, sometimes lead people to forget important differences. Although Canada has a free market, it has elements of a more socialist system like socialized medicine (The Medical Care Act 1968). Similar to the U.S., Canada has a democratic political system; however, it has a parliamentary system and capital punishment is nationally banned. Although it has a similar language, English, it also has significant regions that are bilingual with French and English (New Brunswick) or that hold French as the official language (as in Québec). About 30% of Canadians hold French as their primary language or are officially bilingual with English and French¹.

More distally, Canadian history is significantly different from the history of the U.S. One relevant example is how the U.S. and Canada handled colonial relations with England. The U.S. territories chose war and open resistance while Canada took a less aggressive approach. In part, as a result, Canadian Confederation, or nationhood, as it is basically known today, took place 91 years after the U.S. had declared independence from England. The mixture of both English and French colonial influence in Canada required a different balancing act for development of Canadian nationhood. Along the St. Lawrence River there are significant regions of French influence that create a noticeable multi-cultural effect. Historical components are important considerations in

¹ Information from Statistics Canada (<http://www.statcan.ca/english/Pgdb/demo15a.htm>).

the examination of culture, but limiting attention to the origins can oversimplify explanations of cultural difference (Tipton 2006). While recognizing the importance of distal-historical components of national culture, to assume that cultures are “constant” to these, and other, foundations would be considered excessively simplistic if not completely wrong in certain disciplines like anthropology (Bohannon 1995, Kuper 1999, Tipton 2006).

According to Nevitte (1996: 295), the U.S. and Canada are not converging culturally. Additional management research suggests that the often posed cultural “parity” between the U.S. and Canada is specifically questionable (MacNab et al. 2004) while other cross-disciplinary researchers have been making that case for some time now (Bowman 2000). When considering cultural clusters which group Canada and the U.S. together while excluding Mexico, one must ask what level of detail and accuracy is required for the target research? If there is a requirement for detail and accuracy then these cultural clusters, often based on aging Hofstede (1980) data on national cultural positions, may not be the most appropriate approach.

While the Hofstede (1980) research holds value as foundation work in parameterizing the complex idea of culture, the intention of our research is to demonstrate some evidence that culture is a moving target. The more salient critique belongs not with the actual Hofstede framework but with investigators who assume that cultural patterns have not changed. At times Hofstede also agrees that culture is dynamic but slow to change; so why does there continue to be a notable amount of management research which assumes that the national cultural positions of the Hofstede (1980) study have remained constant? While there is select current work that supports some of the national positions of the original Hofstede findings, other studies do not (Kelley, MacNab and Worthley 2006, McSweeney 2002).

Perhaps the issue is with the idea of culture being “slow to change.” Just how slow to change are national cultures? While cultures may have a tendency to be “slow changing” are they at times capable of changing more rapidly? As suggested by the Ralston et al. (1997) theory of crossvergence, some components of culture are capable of changing quickly while others aspects are more permanent. Considering some profound global paradigm shifts since 1980 (e.g., World Wide Web, unification of Germany, glasnost, European Union and other trade blocks like NAFTA, increased immigration) perhaps management research should carefully examine not the applicability of the Hofstede framework and general approach but rather the current applicability his national cultural positions. More specifically a concern of equal magnitude may reside with research that continues to use Hofstede (1980) national rankings of culture and groupings or culture type as automatically applicable today.

HYPOTHESES

Six hypotheses will be developed for subject nations' (U.S., Canada and Mexico) current cultural position in relation to the 1980 Hofstede dimensions related to Anglo culture typing. It is emphasized that our study examines this not in an attempt to directly relate to the original Hofstede findings and rankings but rather to exemplify: a) the potential for questioning the stability of culture in future research; b) how sample-specific measurements, aggregated to the national group level may be different from some of the more traditional cultural patterns for our subject nations; c) that culture may be a moving target. The following section develops these six hypotheses in relation to each cultural dimension related to Anglo culture typing: Uncertainty Avoidance, Power Distance and Individualism/Collectivism.

Uncertainty Avoidance

"Uncertainty Avoidance" (UA) refers to formalization, and the apprehension in accepting ambiguity that is often related to certain types of risk. Some cultures more rigidly emphasize rules and regulations, while others tolerate ambiguity and deviation from the rules. This dimension indicates how threatened a society will be by ambiguous contexts and the degree to which it will attempt to avoid these situations, not tolerating deviant ideas or behaviors. In other words, high UA involves a belief in absolute truths and lack of comfort with vague rules or procedures. These elements may create greater overall anxiety and a heightened work ethic (Hofstede 1980).

Compared to the U.S. and Canada, Mexico ranked relatively much higher on this dimension in the original Hofstede data (Mexico ranking 18, Canada ranking 42 and the U.S. ranking 43). Based on these rankings, the following hypotheses are proposed:

H1a: The Mexican sample will currently rank relatively higher on UA than both the U.S. and Canadian samples.

H1b: Canadian and U.S. samples will have similar ranks on the UA dimension.

Power Distance

"Power Distance" (PD) refers to the centralization of decision-making authority, or the degree to which position power separates people socially. Higher PD implies greater acceptance of inequality in social relations. In a low PD culture, it is often acceptable to address a high-ranking leader by his or her first name (Cushner and Brislin 1996). In Hofstede's (1980) original sample, the U.S. and Canada were significantly lower than Mexico on this cultural dimension (Mexico ranking 56, the U.S. ranking 38 and Canada ranking 39). Again, the U.S. and Canada ranked just next to each other, indicating relative closeness. There are currently mixed results related to power distance within a NAFTA national context (e.g., Kras 1995, Robert et al. 2000).

However, based on the more traditional perspective typified by the Hofstede (1980) study, the following hypotheses are proposed:

H2a: The Mexican sample will rank higher on PD than both the U.S. and Canadian samples.

H2b: Canadian and U.S. samples will have similar ranks on the PD dimension.

Individualism and Collectivism

Individualism is valued in loose-knit cultures in which people are expected to look out for their own interests, and in which collectives such as families, clans, group affiliations and organizations are less important. The opposite could be said for collective cultures where positive affiliation with certain groups (e.g., such as the in-group) is valued and emphasized.

Individualism versus collectivism is related to the in-group/out-group distinction. In-group/out-group distinctions are less of a focus in individualism oriented societies. In-group is typified by relatives, affiliations, clans and organizational membership where out-groups are those not represented in closer social spheres. Collective societies are organized by tight social frameworks with high degrees of loyalty and in-group/out-group distinction.

Furthermore, this dimension has been examined as interactive with other dimensions (power distance) to create hybrid categories like vertical collectivism and horizontal individualism (Thomas and Au 2003).

In Hofstede's (1980) original sample, the U.S. ranked highest on individualism, followed by Canada, which were both significantly higher than Mexico on this dimension. The Hofstede study again ranks the U.S. and Canada relatively close. The U.S. ranked the highest on individualism and Canada ranked 4 tied with the Netherlands. Mexico, however, ranked 32 on the Hofstede study – relatively high on the collectivism dimension. Based on these rankings, the following hypotheses are proposed:

H3a: The Mexican sample will rank higher on collectivism than both the U.S. and Canadian samples.

H3b: The U.S. will rank lower than Canada on collectivism.

Examining the subject nations on these three dimensions, we hypothesize that, in relation to Canada and the U.S., Mexico will be relatively higher on uncertainty avoidance, power distance and collectivism (lower individualism), while the U.S. and Canada will be similar on UA and PD. Furthermore, we hypothesize that the U.S. will rank relatively lower on collectivism (higher in individualism) than Canada.

METHODOLOGY

As part of a project to examine the potentially important influence of culture on management, this research combines survey data collected in 11 regions of the U.S., Canada and Mexico.

A total of 1,187 business professionals enrolled in executive development courses were sampled for this study. Samples were collected in Canada (n=476), the U.S. (n=463) and Mexico (n=248) during 2003. The average age of our sample is 30.6 years and the total average level of work experience is 8.8 years. Females included in our study are 41%. For all respondents, the survey was administered by a university research collaborator who instructed participants that the survey was examining aspects of cross-cultural management. Participants were provided between 15 and 20 minutes to complete the questionnaire that also included demographic information, two qualitative questions and a research participant agreement form. All of the quantitative questions were measured using a seven-point, Likert-scale format that also included descriptive anchors.

One initial goal of our research effort was to achieve development of a cultural measurement instrument that captured some of the multi-dimensionality of the Hofstede constructs. One critique of the Hofstede cultural dimensions has been their multi-dimensionality. In this aspect of our research effort, we were only partially successful. While we were able to develop acceptable measurement scales for important cultural constructs especially related to the Anglo culture dimensions critical for this study, our effort of gaining a multi-dimensional approach for the femininity/masculinity dimension scale was not achieved. For example, femininity/masculinity relates to issues of adherence to traditional gender roles but also examines completely other values like quality of life orientation. Constructing a single scale to robustly measure such multi-faceted values is the recognized challenge for attempts to measure culture with Hofstede dimensions (McSweeney 2002). Because of the focus for this research effort specifically on those cultural dimensions related to Anglo culture typing, the focus centered on power distance, uncertainty avoidance and collectivism.

This study benefited from a high subject participation rate of over 95 percent. This was due largely by virtue of the personal contact that was established during the data collection process. Additionally, over 95% of the established data was complete for use in this study.

One critique of the Hofstede dimensions is that the conceptualization and measurement of the cultural constructs has been inconsistent across many acceptable studies (Schaffer and Riordan 2003). Because of this, different measures for the dimensions have been used (Early and Gibson 1998). "Despite this challenge, we still believe efforts to operationalize these dimensions in the particular research setting will be more fruitful than relying on pre-established categorizations based on Hofstede's

(1980) country rankings or numeric ratings” (Schaffer and Riordan 2003). Others have also derived their own survey to directly measure select Hofstede dimensions as we have done for this effort (Smith, Dugan and Trompenaars 1996).

Our instrument was initially developed using a two-phase validity process. In phase one, university students (n=97) were sampled and the instrument was evaluated using factor analysis. Based on these initial results, adjustments were made to the instrument and a phase two validity test took place using a separate holdout sample (n=141) that was not used in later analysis. Phase two defined the final latent constructs, creating three manifest measurements for each construct (see appendix for a sample of the items). The BIC specification search in AMOS was used to generate the specific scale items with the following results. All of the scales resulted in excellent fit statistics, Collectivism ($\chi^2=2.23$, $p=0.14$, GFI=0.99, CFI=0.96), Power Distance ($\chi^2=0.45$, $p=0.50$, GFI=0.99, CFI=0.99), and Uncertainty Avoidance ($\chi^2=5.07$, $p=0.02$, GFI=0.97, CFI=0.92).

Because of the multi-linguistic characteristic of our sample regions, the finalized instrument underwent a careful process of back-translation as recommended by Brislin, MacNab and Bechtold (2004). The process included an initial translation of the English instrument into both French-Canadian and Mexican-Spanish by translation collaborators specifically expert of those regions. A second phase then took the instrument and translated it back into English. This English version was compared to the original. Differences were examined, discussed with the research team and translation experts and adjustments made where appropriate for achieving intended semantic equivalence.

This research effort examines potential cultural differences with a word of caution. It is potentially misleading to examine management phenomena on the national level with samples that are confined to one specific area of a culturally complex nation. Because a nation’s cultural diversity can be profound (McDonald 2000, Schaffer and Riordan 2003), our research has endeavored to take care in gathering current samples from multiple regions of each subject nation. For Canada, samples were collected in Vancouver, British Columbia; Hamilton, Ontario; Quebec City, Quebec; Montreal, Quebec and Halifax, Nova Scotia. For the U.S., samples were collected in Honolulu, Hawaii; Los Angeles, California; Columbia, South Carolina and Winter Park, Florida. For Mexico, samples were collected in Tijuana, Baja California Norte and Mexico City, D.F. We realize that our sample regions for each nation are not exhaustive of the total, potentially meaningful regions of cultural influence (e.g., for neither the U.S. nor Canada did the research sample from plains areas). However, we believe there has been enough care in regional recognition to provide a national indication, and having explicitly identified the sample regions, the reader can actually self-determine the level of national applicability.

Another issue applicable to studies that have relied on Hofstede (1980) cultural

dimensions and national positions is the accuracy of national rankings and scores. More than 25 years since said study, it is appropriate to re-examine the national scores in recognition that culture may have elements that could be longitudinally dynamic (Hofstede 2001, Ralston, Holt, Terpstra and Cheng 1997) or that a target sample may be different from the original Hofstede sample of IBM employees (Hofstede 2001, Schaffer and Riordan 2003). We have endeavored to make an indication of this by taking current measurements on Hofstede constructs in the subject nations and applying these to our study. We also carefully describe our subjects, allowing the reader to evaluate their potential comparability to the original sample of Hofstede IBM employees.

RESULTS

Tables 1 and 2 test hypotheses (H1a and b through H3a and b) about country differences with respect to the cultural dimensions used in this study and the original Hofstede positions (1980). Table 1 reports a series of models that have reasonable fit measures (RMSEA=0.03, CFI=0.89, ChiSq/df slightly over 2.0).

Table 1. Summary of Models and Goodness-of Fit Tests for Testing Equal Structural Means (CO, PD, UA)

No	Model Description	χ^2	df	$\Delta\chi^2$	Δdf	P-Value
1.0	Factor Loadings and Intercept Invariance	187.68	90	–	–	–
2.1	Equal Latent Means for CO, PD, UA	233.02	96	45.34	6	<0.001
2.2	Equal Latent Means for CO only	217.693	92	30.01	2	<0.001
2.3	Equal Latent Means for PD only	189.38	92	1.70	2	ns
2.4	Equal Latent Means for UA only	200.87	92	13.19	2	0.001
2.5	CO(US=C), PD (ALL =), UA (US = M)	192.22	94	4.54	4	ns
No	Model Description	RMSEA	CFI	χ^2 / df		
1.0	Factor Loadings and Intercept Invariance	0.030	0.89	2.08		
2.5	CO(US=C), PD (ALL =), UA (US = M)	0.030	0.89	2.05		

CO=Collectivism; PD=Power Distance and UA=Uncertainty Avoidance.

Table 2. Estimated Mean Differences from Model 2.5

No	Mean Difference	Difference	SE	CR	P-Value
2.5	CO (Mexico higher than US and Canada)	0.622	0.112	5.570	<0.001
2.5	UA (Canada lower than US and Mexico)	-0.201	0.074	-2.712	0.007

CO=Collectivism and UA=Uncertainty Avoidance.

Hypothesis 1a that Mexico will have a larger mean for Uncertainty Avoidance than the U.S. and Canada is supported for Canada ($P=0.007$), but Mexico is not shown to have a significantly higher mean for UA than the United States sample. This is also relevant for demonstrating some evidence for potential cultural difference between the U.S. and Canada on this dimension. Hypothesis 1b that the U.S. and Canada will have similar means for Uncertainty avoidance is rejected ($P=0.007$).

Hypothesis 2a that Mexico will rate higher on Power Distance than the U.S. and Canada is not supported since Model 2.5 in Table 1 has Power Distance equal for all three countries and is acceptable when compared to Model 1.0. Hypothesis 2b that the U.S. and Canada will have similar means for Power Distance is supported as seen in Model 2.5 tested against Model 1.0. Hypothesis 3a that Mexico will have a higher level for Collectivism is fully supported with Table 2 showing a significantly ($P<0.001$) higher level for Collectivism in Mexico compared to the U.S. and Canada. Hypothesis 3b that the U.S. will have a lower mean than Canada for collectivism is not supported since Model 2.5 has Collectivism equal for the U.S. and Canada and this model is not significantly different from Model 1.0.

Table 3. Summary Research Hypothesis and Results

Hypothesis	Hypothesis summary	Supported
H1a	UA for Mexico > U.S. and Canada	No
H1b	UA for US and Canada are equal	No
H2a	PD for Mexico > U.S. and Canada	No
H2b	PD for US and Canada are equal	Yes
H3a	CO for Mexico > U.S. and Canada	Yes
H3b	CO for US less than Canada	No

CO=Collectivism; PD=Power Distance and UA=Uncertainty Avoidance.

DISCUSSION

As the reader will recall, this study examined three hypotheses sets through hierarchical hypothesis testing; examination of current cultural measures for our

identified sample in relation to relative subject nation Hofstede (1980) positions (H1a and b through H3 a and b). Also implicit to our study is that current management research should not automatically assume the Hofstede (1980) national cultural positions are currently accurate for testing cultural-related hypothesis. These dimensions should be re-sampled and measured due to phenomena like crossvergence (Kelley, McNab and Worthley 2006, Ralston et al. 1997). We find potential evidence supporting that current research efforts should directly measure culture dimensions and not use Hofstede (1980) as an automatic proxy. In relation to the original Hofstede rankings, we clearly find mixed results.

These findings are emphasized by H1a which strongly supports Schaffer and Riordan's (2003) position that researchers should not assume distal or sample equivalence to the Hofstede (1980) rankings. Additionally, we found in relation to the original Hofstede (1980) findings, that Canada and the U.S. changed positions, with the U.S. indicating a higher measure for UA in our sample than Canada (H1a). Recent geo-political events with the U.S. (including 9-11, the war on terrorism, invasions of both Afghanistan and Iraq) have created a heightened level of anxiety and psychological burden on the U.S. population (Kissinger 2001). Anxiety has been sometimes linked with the dimension of uncertainty avoidance and war (Hofstede 1997). It is perhaps no surprise, given recent political events, that the U.S. sample might demonstrate a higher level of uncertainty avoidance. Also, because many management topics are potentially influenced by uncertainty avoidance, it is prudent to recommend gravitating away from assuming cultural similarity between the U.S. and Canada on this dimension.

The results for power distance and uncertainty avoidance are quite different from the original Hofstede positions. For example, we found no significant differences in power distance for our sample between the subject nations (H2a and H2b). For this dimension, Canada actually ranked the highest in a set of statistically non-significant rankings.

Our current findings seem to support the original Hofstede rankings for individualism/collectivism with Mexico being significantly higher on collectivism than both the U.S. and Canada (H3a). Additionally, as in the 1980 study, our research sample indicates that Canada is slightly higher for collectivism than the U.S. but the difference was relatively small and not significant (H3b).

Based on our results, we recommend that future research involving the U.S. and Canada not assume "cultural parity" in relation to the Anglo-type cultural dimensions. The U.S. and Canada are often grouped together in the Anglo culture cluster and are assumed to have cultural parity on the related dimensions (uncertainty avoidance, power distance and individualism/collectivism). We caution against taking this approach. This recommendation is directly inline with other recent, empirical research that recommends caution when making a cultural "similarity assumption" between the

U.S. and Canada (MacNab et al. 2004, Nevitte 1996). Our finding of significant cultural difference between the U.S. and Canada for uncertainty avoidance (and reverse of the original Hofstede 1980 positions) provides support for our recommendation.

AREAS FOR FUTURE STUDY

It is important that Hofstede's cultural dimension labeled "masculinity/femininity" be examined in this same manner. Also, our findings and general position could be validated by similar work using more established Hofstede-based and other scales (Dorfman and Howell 1988, Schwartz 1990). It is also recognized that our sample may explore characteristics of a specialized sample (young managers) in each subject nation, but that it is also a sample highly relevant to management research. Further studies could endeavor to examine the current validity of national cultural rankings, based largely on Hofstede (1980) rankings, with more cross-representative samples of national populations. Important research has also indicated that culturally complex nations have meaningful sub-cultures and regional cultures that could be lost in national rankings (Huo et al. 1991, MacNab et al. 2004, McSweeney 2002). While our study gathered regional data in each nation, for purpose of focus and scope we examined it at the national level and intend to examine regional nuances in the future. Regional cultural analysis in culturally complex nations would be one natural progression beyond the national examination. More management research in that direction would provide meaningful insight.

The Hofstede dimensions do present some measurement challenges to researchers. For example, Hofstede (1983: 83) himself explained that some of the cultural dimensions include many components "that we do not usually consider as belonging together." Developing scales that robustly measure the multi-faceted aspects for all cultural dimensions is indeed a challenge.

"The naïve assumption that management is the same or is becoming the same around the world is not tenable in view of these demonstrated differences in national cultures" (Hofstede 1983). Yet, cultural groupings like the Anglo culture type which are based largely on Hofstede's (1980) work, continue to lure many (e.g. Griffith, Hu and Ryans 2000) to assume heightened levels of cultural similarity for both management standardization and research approaches. We would supplement Hofstede's own suggestion and recommend that: 1) These same assumptions are also not necessarily tenable within culture type groupings; 2) That, given a culturally complex national landscape, these assumptions may not even be tenable within the same nation; 3) National cultures and the management practices of nations are not static and, given the right circumstances, are perhaps capable of fairly progressive change (Kelley, MacNab and Worthley 2006, Ralston, Holt, Terpstra and Cheng

1997); and therefore, 4) National, cultural positions and rankings based on Hofstede (1980) data may not be currently accurate.

ENDNOTES

1. Hofstede (1980) places the following nations within an Anglo culture type or cluster which is identified with low power distance, low uncertainty avoidance and individualistic: U.S., Sweden, New Zealand, Netherlands, Great Britain, Ireland, Denmark, Canada and Australia. Although Hofstede (1980) did not propose that these cultures are equal, one (perhaps unintended) result of culture typing and clustering has been an assumed equality of culture for some business research.

2. A fifth cultural dimension related to the Hofstede cultural framework is called Confucian dynamism (long-term orientation) (Bond 1986). Two cultural dimensions related to the Hofstede (1980) framework are not included in this study because they are not theoretically related to Anglo culture typing. These dimensions are: 1) masculinity/femininity and 2) Confucian dynamism. Confucian dynamism relates to an array of issues that tend to gravitate toward how the culture views temporal relations. Masculinity/femininity is a multi-layered dimension that relates to quantity of life (e.g., success, achievement, competition) and quality of life (e.g., family time, enjoyment of free time, relationships) (Hofstede 1997).

3. There are generally two avenues for cross-cultural research in relation to using individual responses for generating societal or national-level analysis: 1) Construct measures from concepts using data at the individual level. These individual level responses are then examined and analyzed to determine if they show enough consistency within societies and differences between societies for the use of study at the aggregate level. 2) Aggregation of each item to the national level, then evaluate the measurement structure at that level. (See Peterson 2004). Our study examines aggregated responses for measures examining societal level values as demonstrated in appendix one. The findings of this study are not intended to be used as a direct comparison to the national rankings within the Hofstede (1980) study but rather are a management, sample-specific examination of those cultural patterns aggregated to the group level between the U.S., Canada and Mexico for the purposes stated in the body of this work.

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APPENDIX

SAMPLE LISTING OF MANIFEST ITEMS BY EXOGENOUS CATEGORY

Uncertainty Avoidance

UA1: Employees should have outlines of proper worker conduct, clear and in writing, or else there will be too much ambiguity/confusion.

Power Distance

PD1: Authority figures are normal people - they can be approached just like anyone else.*

Collectivism

IC2: It is more important to have harmonious social relations than to gain independent success.

*= Reverse coded.