

The Importance of Understanding Levels Issues in Cross-Cultural Marketing Research

Alvin M. Chan*

Despite the importance of levels issues in theory development, measurement, and data analysis, awareness of these issues and their implications are generally low in the marketing literature. With the increased interest in cross-cultural marketing research, it is essential that researchers in the marketing discipline are aware of the level fallacies in cross-cultural marketing research: interpreting data from the cultural group level when the data are about individuals and vice versa. Without first establishing the conformity of the level of statistical analysis to the level of theory, many cross-cultural marketing research findings are exposed to possible level fallacies, rendering these findings at best questionable. By bringing the attention of marketing researchers to the levels issues in cross-cultural marketing research, it is hoped that this will help advance the theory and practice in future cross-cultural marketing research.

Field of Research: Marketing, Cross-Cultural Research, Level Issues

1. Introduction

With the increased pace of globalization, cross-cultural marketing research has also received increased attention. In the last decade, we have seen increased number of cross-cultural research published in different marketing functional areas like advertising (e.g., Samiee and Jeong, 1994; Sin, Hung and Cheung, 2001), ethics (e.g., McDonald, 2000), sales negotiations (e.g., Simintiras and Thomas, 1998), tourism marketing (e.g., Dimanche, 1994), brand extension (e.g., Aaker and Keller, 1993), business communications (e.g., Limaye and Victor, 1991), family decision making (Sullivan and O'Connor, 1988), etc. For example, during the first 29 years (1965 – 1994) of its publication, the Journal of Advertising published 29 papers on international advertising, representing some 16% of the papers published in the Journal (Zinkhan, 1994). However, in the subsequent 10-year period (1994 – 2004), a total of 32 international advertising papers appeared in the Journal (Taylor, 2005); this represents an average of 3.2 international advertising papers per year, in comparison to an average of one per year in the first 29 years of the Journal's history. Recently, many marketing and business journals also run special issues on cross-cultural research (e.g., see Albaum and Smith, 2002; Malhotra, 2001; Taylor, 2005).

* Alvin M. Chan, School of Marketing, University of Western Sydney, Locked Bag 1797, Penrith South DC, NSW 1797, Australia. Email: a.chan@uws.edu.au

The increased sophistication in cross-cultural marketing research has both practical and theoretical importance. From a practical perspective, in order to succeed in the global marketplace, marketers must devise appropriate marketing strategies which address cross-cultural similarities and differences in consumer attitudes and behaviors. From a theoretical perspective, cross-cultural marketing research provides a platform for researchers to test the robustness and generalisability of marketing theories.

Most published cross-cultural marketing research studies are in fact “cross-national” research which statistically compare a set of variables drawn from different countries. Any differences found are then attributed to presumed cultural differences among the countries. Unfortunately, researchers who follow this approach often commit the “ecological fallacy” whereas correlations of the group means were substituted for individual correlations (Robinson, 1950); Robinson (1950) has proved mathematically that the two correlations at different levels cannot be equal. The reverse level fallacy is interpreting data from the individual level as if they apply to the cultural group level. The lack of a clear understanding of these levels issues by marketing researchers has rendered many published research results questionable and hindered the advancement in cross-cultural marketing research.

In the following, the paper first reviews the levels issues in cross-cultural research. It then uses an example to illustrate the possible levels fallacies in applying Hofstede’s (1980) cultural dimensions in cross-cultural marketing research. Finally, it discusses the need for more international collaborations to facilitate the development and testing of marketing theories at the true cultural group level and the use of multilevel data analysis methods in analyzing hierarchical cross-cultural data at both the group and individual levels.

2. Levels Issues in Cross-Cultural Research

Defined as “plane or standard in social, moral, or intellectual matter” (The Australian Concise Oxford Dictionary, 1987, p. 616), level implies a hierarchy of relationships. Miller (1978) describes levels as a hierarchy of systems (e.g., organisms, groups, organizations, societies, supranational systems) that the universe contains. This hierarchy implies that there are higher levels encompassing lower level systems. In marketing and social research, at the lowest level, the individuals are the focal units of study. These individuals can be grouped into higher level groups based on criteria like the complexity of a given system level, the size, the physical proximity, the characteristics, and the structure and process characterizing these individual constituent units (Rousseau, 1985). In cross-cultural marketing research, the usual criteria used to group individuals into higher “cultural levels” are nationality (e.g., Australian, American, Chinese, etc.), ethnicity (e.g., Hispanic, Caucasians, etc.), age cohort groups (e.g., teens, baby boomers), etc.

Any research that involves individuals and group(s) as its focal units of study inevitably will have to address the following three levels issues: (1) the level of theory, (2) the level of measurement, and (3) the level of statistical analysis. The importance of the levels issues is particularly obvious in cross-cultural research which involves more than one culture with various sub-cultural groups within each culture, and numerous individuals within respective sub-cultures. However, in much previous

cross-cultural research, the levels of the constructs, the measurement, and the statistical analysis are often either unspecified or misspecified, rendering the reliability and validity of their conclusions doubtful. Greater attention to the levels issues will help improve future cross-cultural research and theory development.

3. Levels of Theory

Levels issues create particular problems when the level of statistical analysis is incongruent with the level of theory. The level of theory is “the levels to which generalization are made” (Rousseau, 1985, p. 4); it describes the target (e.g., individual, group) that a researcher wants to depict and explain (Klein, Danscreau and Hall, 1994). Cross-cultural research has been dominated by the individual-level approach. Many researchers do not realize that if cultural-level differences on a dependent variable, Y, is explained by cultural differences on an independent variable, X, it does not necessarily imply that individual differences on Y within a particular culture can also be explained by individual differences on X. This is due to the fact that when variables are aggregated or averaged over different cultural samples, some third variable may be involved and caused the difference in the relationship between the dependent variable Y and the independent variable X at the cultural group level versus the individual level (Leung 1989).

For example, the level of theory in Hofstede’s (1980) seminal research on cross-cultural work-related values is at a national cultural group level; this is the level to which generalizations are intended to be made and thus should also be the only level that generalizations are made. Unlike individual-level value dimensions which are derived from analyses of individual responses to the values items, Hofstede’s cultural-level values dimensions are based on national means or averages. In response to criticisms about his findings not being applicable at an individual level, Hofstede (1998) defends that “Psychologists sometimes have difficulty in understanding that these questions do not correlate at the individual level. They are meant to be a test of national culture, not of individual personality: they distinguish cultural groups or populations not individuals” (p. 481).

Cultural-level values are appropriate when one seeks to understand how differences between cultures in their beliefs, attitudes, or behaviors are related to cultural emphases. However, individual-level values are appropriate when one seeks to understand how differences between individuals in beliefs, attitudes, or behaviors are related to individual differences in values. However, many cross-cultural researchers fail to make explicit distinction between values at a cultural group level versus an individual level either in their theory specification or in their measurement and analyses, rendering many of their research findings confusing. Although it is practically more difficult to test a cultural-level theory as it requires the sampling of a large number of cultures, with increased international collaborative research networking there is potential to develop cultural-level theories that are not likely to be discovered by individual-level studies.

4. Levels of Measurement

The level of measurement is “the unit to which the data are directly attached (e.g., self-report data are generally individual level, the number of group members is

measured at the group level)” (Rousseau 1985, p. 4). The level of measurement refers to the source of the data. If the level of a theory is well specified, researchers should then collect data at a level in conformity with the level of theory. In specifying a level of theory, researchers are at the same time predicting that members of a group are homogeneous, independent, or heterogeneous with respect to the constructs of the theory which requires different alternative measurement and sampling strategies (Klein, Dansereau and Hall, 1994).

4.1 Specifying Homogeneity

In specifying that individual members of a group are homogeneous with respect to a construct, we are assuming that group members’ ratings on that construct are identical. In theorizing relationships between variables, we should then concentrate on between-group variation rather than within-group variation. To test theories that predict within-group homogeneity, we should: (1) use measures that focus on the unit as a whole (e.g., use an objective measure or expert ratings to obtain a single score representing each group as a whole), and (2) maximize between-group variability by sampling from numerous groups (Klein, Dansereau and Hall, 1994).

Measurement of group-level values may require more creative approaches other than the usual rating or ranking scales. For example, Rokeach and Ball-Rokeach (1989) suggest five different ways that group-level values can be measured: “...(a) through a content analysis of the values contained in societal, institutional, or organizational documents, (b) through an assessment of the values espoused by societal, institutional, or organizational gatekeepers (e.g., priests, educators, or military leaders), (c) by assessing the values of persons aspiring to membership in a society, organization, or institution (e.g. seminary student, military cadets, or graduate students in physics), (d) through gatekeepers’ perceptions of societal, institutional, or organizational values, and (e) through the clientele’s (or members) perceptions of societal, institutional, or organizational values.” (p. 777).

4.2 Specifying Independence

In specifying that individual members of a group are independent of the influence of that group’s influence with respect to a construct, the distinction between within-group and between-group variation becomes irrelevant as group membership is now irrelevant to the constructs of the theory. To test theories that predict individual independence from groups, we should: (1) use survey measures that focus on individual’s unique experiences and characteristics, and (2) maximize between-individual variability by drawing a sample with diverse and independent individuals (Klein, Dansereau and Hall, 1994).

4.3 Specifying Heterogeneity

In specifying that individual members of a group are heterogeneous with respect to a construct, we are talking about neither an individual-level theory nor a group-level theory. Instead, the level of theory is the individual within the group. Theories of this sort are often classified as cross-level theories (Rousseau, 1985) which predict that the effect of an independent variable, X, on a dependent variable, Y, are context dependent. The same X score may yield different Y scores in different contexts. For

example, every person has both an independent and interdependent self construal of the self. The major issue is which self construal is the major factor in influencing a person's behavior in different situations (Gudykunst 1998).

To test theories that predict within-group heterogeneity, we should: (1) use measures that highlight the position of each individual relative to the group average (e.g., ask an expert on each group to rank order the members of the group with respect to the constructs of interest), and (2) to maximize within-group variability by drawing a diverse sample across a number of groups (Klein, Dansereau and Hall, 1994). In summary, the level of a theory should be well specified before we can determine the appropriate data collection strategies that allow the prediction of homogeneity, independence, or heterogeneity of the individuals within a group.

5. Levels of Analysis

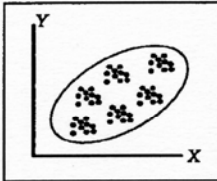
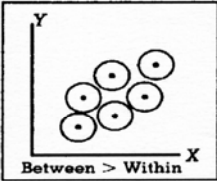
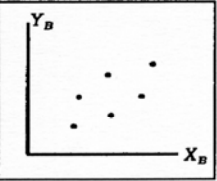
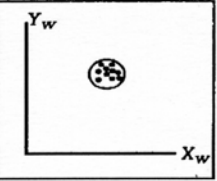
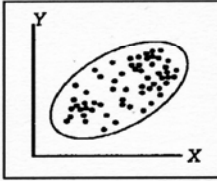
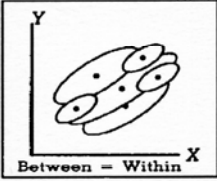
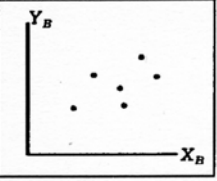
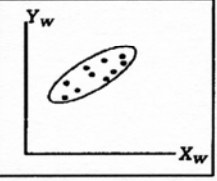
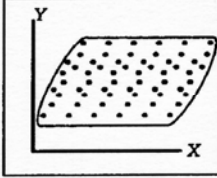
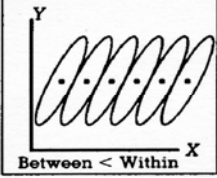
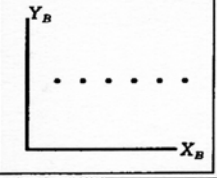
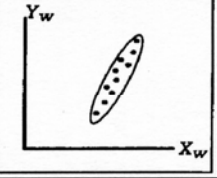
The level of analysis is "the unit to which the data are assigned for hypothesis testing and statistical analysis" (Rousseau 1985, p. 4); it describes the statistical treatment of the data. For example, if the data is collected from individuals, but individual scores are aggregated by using the group mean in data analysis, the level of statistical analysis is the group. It is generally advised that researchers should match the level of their data analysis with the level of theory and measurement (e.g., Pfeffer 1982; Rousseau 1985). However, this is based on the implicit assumption that the data do conform to the predicted level of theory.

To specify a level of theory is to predict (1) the members of a group are homogeneous, independent, or heterogeneous with respect to the constructs of a theory, and (2) the relationship among the constructs is a function of such homogeneity, independence, or heterogeneity. To conform to the level of theory, the data analysis should support both predictions. Unfortunately, the former condition is often ignored or only implicitly assumed rather than tested in many cross-cultural values research. Final conclusions from these studies, therefore, are inconclusive.

6. Consequences of Level Incongruity

When levels of theory and statistical analysis are not identical, researchers may draw erroneous conclusions, or in the levels terminology, commit a fallacy of the wrong level (Klein et al., 1994; Robinson, 1950; Rousseau, 1985). Figure 1, adopted from Klein et al. (1994, p. 214), helps illustrate the consequences of level incongruity. The figure presents hypothetical data depicting the relationship between two variables X and Y. The three rows of the figure depict conformity of data to predictions of (1) homogeneity, (2) independence, and (3) heterogeneity, respectively. The four columns of the figure depict (1) the unaggregated correlation between X and Y, (2) the within-group and between-group variability, (3) the correlation of the group means, and (4) the correlation in one group only, respectively.

Figure 1: Conformity of the Level of Statistical Analysis to the Level of Theory

	1. Unaggregated Correlation	2. Within-Group & Between-Group Variability	3. Correlation of the Group Means	4. Correlation in One Group Only
1. Homogeneity				
2. Independence				
3. Heterogeneity				

If the theory postulates homogeneous groups (row 1), but the data do not conform to this level of theory, an observed relationship between the mean scores of X and Y may be misleading. For example, if the data actual conform to the independent individual level of theory, even though the correlation of the means scores (row 2, column 3) may be significant, the data provide no evidence of such relationship at the homogeneous group level. If the theory postulated independent group (row 2), but the data do not conform to this level of theory, examining the unaggregate correlation may be misleading. For example, if the data actual conform to the homogeneous individual level, even though the unaggregate correlation (row1, column 1) may be significant, the data provide no evidence that the measures assess individual characteristics, independent of groups. Similarly, if the data actually conform to heterogeneity, even though the unaggregate correlation (row 3, column 1) may be significant, the data provide no evidence of individual independence of groups.

If the level of the theory is about the individual within the group and the data do not conform to this level of theory, analyzing the correlation of the deviation across may be misleading. For example, if the data conform to prediction of independence, even though the correlation of the deviation scores (row 2, column 4) may be significant, the data provide no evidence of systematic heterogeneity within groups. In sum, when data do not conform to the level of the theory, data analyses that are performed at the predicted level of theory yield artifactual results.

7. Misuses of Hofstede's Cultural Dimensions

Hofstede (1980) is probably the most widely quoted reference in the cross-cultural values literature that researchers use to justify their choice of the Chinese and Americans as samples representing the collectivist and individualist cultures

respectively. Any differences found between these two cultures are thus attributed to the difference in collectivism and individualism. However, within-group homogeneity of the samples in these studies remains assumed rather than tested. If within-group homogeneity is lacking, aggregating or averaging individual data to the group level and attributing the results to groups represent an ecological fallacy as discussed by Robinson (1950) whereas correlations at an aggregate level are used to infer correlations about individuals, or vice versa.

For cultural values to be an independent variable for explaining and predicting consumer behavior at an individual level, both the values and the behavior have to be measured and analyzed at the individual level. If data is collected at an individual level but analyzed at an aggregated group level then depending on whether the data is analyzed within or between cultures, it may result in different conclusions. There is a possibility that different processes may be operating at the individual and group levels that the aggregated data may reflect relationships among constructs other than those hypothesized at the individual level. Zou (2005) assesses the contributions of individual researchers and institutions from 1990 to 2002, based on their publications in major advertising, marketing, and international business journals and concludes that Aaker and Williams (1998) is the most cited international advertising article by Social Science Citation Index (SSCI) over this period. However, even the “most cited” international advertising article is not immune from possible level fallacies.

Aaker and Williams (1998) examines the persuasive effect of emotional appeals on members of collectivist versus individualist cultures. The results of two experiments suggest that ego-focused versus other-focused emotional appeals lead to more favorable attitudes for members of a collectivist culture, while other-focused versus ego-focused emotional appeals lead to more favorable attitudes for members of an individualist culture. University students in the United States and China, matched in demographic profile, were recruited to participate in the two experiments. The sample sizes are:

	US sample	Chinese sample
Experiment 1	n=60; mean age=21.52; female=75%	n=90; mean age=19.12; female=63%
Experiment 2	n=72; mean age=22.15; female=50%	n=79; mean age=19.82; female=43%

The justification for the selection of the United States and China to represent “highly” individualistic and collectivistic cultures respectively was based on the seminal work by Hofstede (1980). There is no doubt that the publication of Hofstede’s classic *Culture’s Consequences* in 1980 has tremendous influence on cross-cultural research in the subsequent decades. This book is an exhaustive description of Hofstede’s analysis of “work-related values” in 40 countries with IBM managers. Part of the survey is a core of 32 items measuring perceptions, personal goals, Behaviour intentions, and beliefs. Responses to these 32 items were taken in late 1960s from a stratified sample of IBM employees in 74 countries. Forty of these countries are selected for ecological factor analysis and four factors are chosen accounting for 49 percent of the variance: (1) Individualism-Collectivism, (2) Power Distance, (3) Uncertainty Avoidance, and (4) Masculinity-Femininity.

Each of the 40 countries are scored for each of the four dimensions and the factor scores used in a hierarchical cluster analysis to group countries into similar clusters along these dimensions. There are questions about the applicability of Hofstede's country classification today with data collected more than three decades ago (e.g., see Fernandex, Carlson, Stepina and Nicholson, 1997). There are also criticisms of the conceptual and measurement validity of the most widely studied cultural value dimension, individualism-collectivism (I-C) (e.g., see Fiske, 2002; Kitayama, 2002; Voronov and Singer, 2002). However, there are evidence to suggest that Hofstede's dimensions do replicate (e.g., see Merritt, 2000) and the I-C dimension is a valid construct for cross-cultural comparison (e.g., see Schimmack, Oishi and Diener, 2005).

An important contribution of Hofstede's work is the emphasis on the distinction between the cultural and individual levels of analysis; countries cannot be compared on categories developed for comparing individuals (Hoppe, 2004; Triandis, 2004). Hofstede's (1980) four dimensions are cultural-level dimensions derived from national means. In response to criticisms about his findings not being applicable at an individual level, Hofstede defends, "Psychologists sometimes have difficulty in understanding that these questions do not correlate at the individual level. They are meant to be a test of national culture, not of individual personality: they distinguish cultural groups or populations not individuals" (Hofstede, 1998, p. 481).

Many cross-cultural researchers fail to make explicit distinction between cultural group versus individual levels in both their theory specification and statistical analysis, rendering many of their research findings confusing and the generalisability of their results questionable. For example, Aaker and Williams (1998) attributed the differences found in their US and Chinese samples, with respect to responses to emotional appeals, to the differences in individualism and collectivism. However, in these studies, within-group homogeneity of the samples, and the populations from which the samples were drawn, remain assumed rather than tested. There are ample evidence to suggest that there are intra-cultural variations among different consumer segments (e.g., Au, 1999; Consedine, Magai and Horton, 2005; Mageo, 2002; Yang 2004). Consequently, the conclusions that group differences resulted from cultural differences on I-C, as Aaker and Williams (1998) conclude, are at best questionable.

8. Discussion

The level of a theory determines the appropriate levels of measurement and analysis by conceptualizing the constructs to be homogeneous, independent, or heterogeneous. Levels issues are particularly important in cross-cultural research which in many cases involves the study of relationship between constructs at both individual and cultural group levels. While the levels issues in cross-cultural research are well discussed in the organizational behavior literature (e.g., Klein et al., 1994; Rousseau, 1985) and in the psychology literature (e.g., George and James, 1993; Leung, 1989; Ostroff, 1993), they are generally ignored in the marketing literature. If we are to advance in the theory and practice of cross-cultural marketing research, it is critical that marketing researchers are aware of the levels issues in theory and

statistical analysis so as to avoid possible level fallacies in interpreting results at a particular level with data at a different level.

To construct and test marketing theories at the true cultural group level, we need more international collaborations in collecting data in different cultures so as to provide sufficient data points for meaningful statistical analysis at the group level. We have seen international collaborations in cross-cultural research in social psychology (e.g., see Inglehart, Basáñez, Díez-Medrano, Halman and Luijkx, 2004; Schwartz, 1992; The Chinese Culture Connection, 1987). Comparison of constructs at different levels of aggregation, such as the use of I-C at the individual and country levels will help establish structural equivalence across levels (van de Vijver and Poortinga, 2002). Recent advancements in hierarchical linear and nonlinear modeling and multilevel Bayesian modeling techniques also help separate group level effects from individual level effect and allow the modeling of cross-level interactions (e.g., see Biggeri, Dreassi and Marchi 2004; Castro, 2002; Nezlek and Zyzniewski, 1998; Raudenbush and Bryk, 2002; Huang and van de Vliert, 2003). Conformity of the level of statistical analysis to the level of theory is critical in cross-cultural marketing research. It is hoped that by paying greater attention to levels issues, we can further advance the development of theory, measurement, and analysis techniques in cross-cultural marketing research.

9. References

- Aaker, D. A. and Keller, K. L. 1993. "Interpreting cross-cultural replications of brand extension research", *International Journal of Research in Marketing*, 10(1), 55-60.
- Aaker, J. L. and Williams, P. 1998. "Empathy versus pride: The influence of emotional appeals across cultures", *Journal of Consumer Research*, 25 (December), 241-261.
- Albaum, G. and Smith, S. M., 2002. "Cross-cultural consumer and business studies: Introduction to a special issue", *Journal of Business Research*, 55(11), 863.
- Au, K. Y. 1999. "Intra-cultural variation: Evidence and implications for international business", *Journal of International Business Studies*, 30(4), 799-812.
- Biggeri, A., Dreassi, E. and Marchi, M. 2004. "A multilevel Bayesian model for contextual effect of material deprivation", *Statistical Methods and Applications*, 13(1), 89-103.
- Castro, S.L. 2002. "Data analytical methods for the analysis of multilevel questions: A comparison of intraclass correlation coefficients, $r_{wg(j)}$, hierarchical linear modelling, within- and between-analysis, and random group resampling", *Leadership Quarterly*, 13(1), 69-94.
- Consedine, N.S., Magai, C. and Horton, D. 2005. "Ethnic variation in the impact of emotion and emotion regulation on health: A replication and extension", *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 60(4), 165-173.

- Dimanche, F. 1994. "Cross-cultural tourism marketing research: An assessment and recommendations for future studies", *Journal of International Consumer Marketing*, 6(3,4), 123-135.
- Fernandez, D.R., Carlson, D.S., Stepina, L.P. and Nicholson, J.D. 1997. "Hofstede's country classification 25 years later", *The Journal of Social Psychology*, 137(1), 43-54.
- Fiske, A.P. 2002. "Using individualism and collectivism to compare cultures – A critique of the validity and measurement of the constructs: Comment on Oyserman et al.", *Psychological Bulletin*, 128(1), 78-88.
- George, J. M. and James, L. R. 1993. "Personality, affect, and behavior in groups revisited: Comment on aggregation, levels of analysis, and a recent application of within and between analysis", *Journal of Applied Psychology*, 78(5), 798-804.
- Gudykunst, William B. 1998. "Individualism and Collectivistic Perspectives on Communication: An Introduction", *International Journal of Intercultural Relations*, 22 (2), 107-134.
- Hofstede, G. 1980. *Culture's consequences: International differences in work-related values*, Beverly Hills, CA: Sage.
- Hofstede, G. 1998. "Attitudes, values and organizational culture: Disentangling the concepts", *Organization Studies*, 19(3), 477-494.
- Hoppe, M.H. 2004. "An interview with Geert Hofstede", *The Academy of Management Executive*, 18(1), 75-79.
- Huang, X. and van de Vliert, E. 2003. "Comparing work behaviors across cultures: A cross-level approach using multilevel modelling", *International Journal of Cross Cultural Management*, 3(2), 167-182.
- Inglehart, R., Basáñez, M., Díez-Medrano, J., Halman, L. and Luijkx, R. (Eds.). 2004. *Human beliefs and values: A cross-cultural sourcebook based on the 1999-2002 values surveys*, Mexico: Siglo XXI Editores.
- Kitayama, S. 2002. "Culture and basic psychological processes – Toward a system view of culture: Comment on Oyserman et al.", *Psychological Bulletin*, 128(1), 89-96.
- Klein, K. J., Dansereau, F. and Hall, R. J. 1994. "Levels issues in theory development, data collection, and analysis", *Academy of Management Review*, 19(2), 195-229.
- Leung, K. 1989. "Cross-cultural differences: Individual-level Vs. culture-level analysis", *International Journal of Psychology*, 24, 703-719.

- Limaye, M. R. and Victor, D. A. 1991. "Cross-cultural business communications research: State of the art and hypotheses for the 1990s", *The Journal of Business Communication*, 28(3), 277-300.
- Mageo, J.M. 2002. "Toward a multidimensional model of the self", *Journal of Anthropological Research*, 58(3), 339-366.
- Malhotra, N. K. 2001. "Guest editorial: Cross-cultural marketing research in the twenty-first century", *International Marketing Review*, 18(3), 230-234.
- McDonald, G. 2000. "Cross-cultural methodological issues in ethical research", *Journal of Business Ethics*, 27(1/2), 89-104.
- Merritt, A. 2000. "Culture in the cockpit: Do Hofstede's dimensions replicate?", *Journal of Cross-Cultural Psychology*, 31(3), 283-301.
- Miller, J. G. 1978. *Living system*, New York: McGraw-Hill.
- Nezlek, J.B. and Zyzniewski, L.E. 1998. "Using hierarchical linear modelling to analyse grouped data", *Group Dynamics*, 2, 313-320.
- Ostroff, C. 1993. "Comparing correlations based on individual-level and aggregated data", *Journal of Applied Psychology*, 78(4), 569-582.
- Pfeffer, J. 1982. *Organizations and Organizational Theory*, Cambridge, MA: Ballinger.
- Raudenbush, S.W. and Bryk, A.S. 2002. *Hierarchical Linear Models: Applications and data analysis methods*, second edition, Thousand Oaks, CA: Sage.
- Robinson, W. S. 1950. "Ecological correlations and the behavior of individuals", *Journal of the American Statistical Association*, 15(3), 517-536.
- Rokeach, M. and B. J. Ball-Rokeach. 1989. "Stability and Change in American Value Priorities, 1968-1981", *American Psychologist*, 44, 775-784.
- Rousseau, D. M. 1985. "Issues of levels in organizational research: Multi-level and cross-level perspective", *Research in Organizational Behavior*, 7, 1-37.
- Samiee, S. and Jeong, I. 1994. "Cross-cultural research in advertising: An assessment of methodologies", *Journal of the Academy of Marketing Science*, 22(3), 205-217.
- Schimmach, U., Oishi, S. and Diener, E. 2005. "Individualism: A valid and important dimension of cultural differences between nations", *Personality and Social Psychology*, 9(1), 17-31.
- Schwartz, S. H. 1992. "Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries", In M. P. Zanna (Ed.). *Advances in Experimental Social Psychology*, 25, 1-65.

- Simintiras, A. C. and Thomas, A. H. 1998. "Cross-cultural sales negotiations: A literature review and research propositions", *International Marketing Review*, 15(1), 10-28.
- Sin, L. Y. M., Hung, K. and Cheung, G. W. H. 2001. "An assessment of methodological development in cross-cultural advertising research: A twenty-year review", *Journal of International Consumer Marketing*, 14(2,3), 153-192.
- Sullivan, G. L. and O'Connor, P. J. 1988. "The family purchase decision process: A cross-cultural review and framework for research", *Southwest Journal of Business and Economics*, 6(1), 43-64.
- Taylor, C. R. 2005. "Moving international advertising research forward", *Journal of Advertising*, 34(1), 7-16.
- The Australian Concise Oxford Dictionary*. 1987. Melbourne: Oxford University Press.
- The Chinese Culture Connection. 1987. "Chinese values and the search for culture-free dimensions of culture", *Journal of Cross-Cultural Psychology*, 18(2), 143-164.
- Triandis, H.C. 2004. "The many dimensions of culture", *The Academy of Management Executive*, 18(1), 88-93.
- Van de Vijver and F.J.R., Poortinga, Y.H. 2002. "Structural equivalence in multilevel research", *Journal of Cross-Cultural Psychology*, 33(2), 141-156.
- Voronov, M. and Singer, J.A. 2002. "The myth of individualism-collectivism: A critical review", *The Journal of Social Psychology*, 142(4), 461-480.
- Yang, K.C.C. 2004. "The effects of allocentrism and idiocentrism on consumers' product attribute evaluation: An exploratory research from Taiwan's cellular telephone user", *Journal of International Consumer Marketing*, 16(4), 63-84.
- Zinkhan, G. M. 1994. "International advertising: A research agenda", *Journal of Advertising*, 23(1), 11-15.
- Zou, S. 2005. "Contribution to international advertising research", *Journal of Advertising*, 34(1), 99-110.