Individual and Holistic Information Processing

Meghan E. Pierce

Thesis submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Science

In

Business Administration

Dr. David Brinberg, Chair
Dr. Kent Nakamoto
Dr. Kimberlee Weaver

May 24, 2007
Blacksburg, VA

Keywords: Independent and Interdependent Cultures, Individual and Holistic Information
Processing, Impression Management, Self Construal

Individual and Holistic Information Processing

Meghan E. Pierce

(ABSTRACT)

Significant research in cultural psychology has underlined differences in Eastern and Western cultures. While differences in many cognitive domains have been examined, there is a gap in cross cultural research on information processing and integration. This research explores the effect of independent or interdependent thinking on how a subject processes information. It is hypothesized that subjects with an interdependent mindset will process information holistically and subjects in an independent context will process information individually, or with an attribute based approach.

A preliminary study tested the averaging and additive effects of information processing and served as the foundation for two subsequent explorations. The first examined cultural differences in information processing through presenting subjects of different cultural backgrounds with presenter and evaluator situations.

In the second study, individualistic and collectivist priming methodology was used to prompt subjects' ability to process information individually or holistically. Established measures of religiosity and connectedness were examined as possible moderators of the relationship between self-construal and information integration. Results show that differences between subjects primed in the interdependent condition were moderated by religiosity. Possible explanations for this effect are discussed.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

  With the rapid increase of globalization, it is becoming more and more important to understand cultural differences in the international community, as well as in the diversity of the United States. This trend has changed the face of business, politics, science, economics, and social interaction. While this is an incredible opportunity to learn differing viewpoints and ways of life, in order to maximize the utility of each others strengths (and minimize weaknesses) much research is needed in the behavioral sciences.

  Past research has noted many differences between Eastern and Western cultures, particularly in the area of cognition. Early civilization marked Western thought with "personal freedom, individuality, and objective thought (Nisbett, 2003)" and has since been defined as an independent or individualistic culture. Eastern thought is characterized by unity, collectivist ideals and interdependence. (Markus & Kitayama, 1991)

  After studying ancient history and the origins of these cognitions, Nisbett proposes that there will therefore be differences in:

- "patterns of attention and perception, with Easterners attending more to environments and Westerners attending more to objects, and Easterners more likely to detect relationships among events than Westerners" (44-45)

- "patterns of explanation of events, with Westerners focusing on objects and Easterners casting a broader net to include the environment." (45)

This research is intended to better understand cultural differences in information integration and processing (or more generally, social cognition) and seeks to build off of Nisbett's aforementioned assertions. It is hypothesized that there are cultural divergences in how people think and combine information to form an impression. If this is the case, further knowledge must be obtained to become aware of these differences in social cognition and to find a common ground for intercultural communication.

This study aims to ascertain whether or not members of interdependent cultures will be better at impression management than members of independent cultures. It is hypothesized that those from interdependent cultures will have a propensity to process information more holistically.

Review of the Literature: Defining culture and constructs

A variety of literature has been devoted to understanding cognition and human nature; however the majority has been conducted with a Western mentality and subject pool (Markus & Kitayama 1991). More recent research trends are including a more globalized view of behavioral phenomena and we are therefore becoming more and more aware of the role of culture in cognition.

When first introduced by Lee Ross, the concept of correspondence bias (then labelled the fundamental attribution error), was seen as the foundation of the social psychological perspective. However, recent findings have shown that over attribution to the person is not necessarily a cross cultural occurrence (Gilbert & Malone, 1995).

To explain some of the divergences in ways of thinking, much research has been devoted to studying the differences in Eastern and Western ideologies. The definition of an independent mindset is viewing the "self as an autonomous, independent person; we thus refer to it as the *independent construal of the self.* Other similar labels include *individualist, egocentric, separate, autonomous, idiocentric,* and *self-contained.*" This mindset is typical in Western countries (i.e. in the United States of America and western Europe). An interdependent mindset is "seeing oneself as part of an encompassing social relationship and recognizing that one's behavior is determined, contingent on, and, to a large extent organized by what the actor perceives to be the thoughts, feelings, and actions of *others* in the relationship." This mindset is typical to Eastern and Hispanic

countries, where people are often characterized as thinking contextually or collectively (Markus & Kitayama, 1991).

Keeping these distinctions in mind, it is clear that individuals from interdependent cultures process information differently than individuals from independent cultures. In a study conducted by Kitayama, Duffy, Kawamura, and Larsen evaluating the differences in perceptions of Japanese and American students, the researchers concluded that "Japanese are more capable of incorporating contextual information in making a judgment." In another study, Morris and Peng assessed the cultural differences in attributing causes of a murder between Chinese and American students. Chinese students relied on the situational context of the murder, while American students held the individual responsible.

Choi et al reviewed past research on cross cultural psychology to develop the Analysis-Holism Scale (AHS) to measure analytic and holistic thinking. The authors examined four categories of research and summarized assumptions in cultural differences between East Asian and Western cultures. In the category of attention, Choi et al noted that East Asians focus on relationships between objects as opposed to Westerners who tend to focus on individual aspects of situations. (Choi, Koo, Choi, 2007)

Our study intends to go beyond differing focal points of information processing, as cited in these examples, to include a deeper understanding of information integration. How information is combined has previously been studied in a self presentation and evaluation context. (Weaver & Garcia, 2005) This research, however, has not included cultural variables. Knowing that people combine information in opposing ways depending on whether they are presenting information or evaluating information, combined with the knowledge that culture affects cognition, leads to the logical investigation of determining whether or not culture plays a role in information integration.

Hypothesis and Research Overview

Because interdependent cultures think more contextually than individuals from independent cultures, it is hypothesized that subjects who are assigned the evaluator condition will be better at information integration. Morris and Peng suggest that "if Chinese people are more likely to react to a problematic behavior by mentally simulating counterfactual situations in which the behavior does not occur, then they would be more aware of situational interventions for the problematic behavior." This could have considerable implications in policy decisions and legal settings. For example, when assessing the severity of the crime which penalty is seen as more strict: a fine or a jail sentence? If, for example, a sign on the highway says: Don't drink and drive, penalties for a DUI are 10 years in prison and a $1,000 fine.

In this case, our study seeks to discover how drivers (evaluator) from different cultures combine the penalties – i.e. whether an individual adds or averages the penalties, as well as how policy makers (presenter) from different cultures would combine information when deciding what to print on the sign to discourage drinking and driving. Adding the penalties will produce a stronger effect on the severity of the penalty, while averaging the penalties will reduce the severity of the penalty (i.e. one might say hey, $1,000 fine, that's no so bad) (Anderson, 1965). Morris and Peng's statement therefore predicts that people from interdependent cultures will be better at foreseeing the averaging effect and will hence choose to only present a 10 year prison sentence as punishment for driving while intoxicated, because alone, it seems more severe and will discourage such behavior.

While an ideal situation would allow for the collection of data from subjects representing different cultures and ideologies, recruitment of subjects and translation of questionnaires would be quite difficult, costly and time consuming. Recent work by Oyserman and colleagues has

investigated cultural priming. Cultural priming suggests that certain tasks activate differing schemas of the self, and can therefore trigger one to behave as if they were of independent or interdependent cultural origins (Fiske, 1995; Oyserman 2006). If an individual from an independent culture is asked to read or write a paragraph that involves collectivist pronouns, such as we, us, and our, then an interdependent mindset will be activated and be reflected in behavior. Alternatively, if an individual from an interdependent culture is primed with a paragraph involving individualistic pronouns, such as me and I, then an independent mindset will be more salient and will be reflected in behavior.

Gardner, Gabriel and Lee examined self-construal priming and its effects on social and value judgments. With the knowledge that Eastern cultures typically view the self as "socially embedded" while Western cultures perceive it as an "autonomous entity," the authors hypothesized that self-construals could be primed and would have an effect on judgments.   (Gardner, Gabriel and Lee, 1999)

Theoretical Framework: Exploring Potential Moderators

There are many potential factors which could serve as moderators in the relationship between culture and information processing. I decided to use two variables which I perceived to be similar to the cultural values included in the prime.

Religiosity

Santa Clara Strength of Religious Faith Questionnaire consists of ten questions intending to determine the strength of religious faith which can be used across all religious affiliations or denominations. This simple tool was shown to have reliability and validity through a study conducted by Plante and Boccaccini in 1997. Similarly, Lewis, Shevlin, McGuckin and Navratil

conducted a factor analysis confirming that each item in the ten point questionnaire measures religiosity. This questionnaire has been widely cited and used in psychological literature.

It was hypothesized that with greater strength of religious faith, subjects would be more likely to think collectively and therefore process information holistically, and alternatively, lower religious faith would lead to individual thinking.

Connectedness

Inclusion of other in self scale was used to measure the degree of connectedness. In this scale, seven venn diagrams with varying overlaps are presented to represent relationships among family, friends, neighbors, etc.

It was hypothesized that higher connectedness would lead to holistic information processing, while lower connectedness would lead to individual thinking.

Preliminary study: Information Processing: Testing the Averaging Effect

Sample

A total of 118 students from the University of Michigan were recruited to participate in the preliminary study designed to test whether subjects would average or add information.

Method

Using a between subjects design, subjects were randomly assigned to an evaluator condition and exposed to either one or two penalties in a littering scenario. Subjects were asked to rank the severity of the punishments on a seven point scale: 64 subjects were exposed to one punishment ($750 fine) and 54 subjects were exposed to a combined punishment ($750 fine and 2 hours of community service).

Subjects assigned to the first evaluator condition were asked to answer the following question:

> Imagine you are driving on the highway, and you see a sign stating the penalty for littering:
>
> "The penalty for littering is a $750.00 fine"
>
> How severe does this penalty seem to you?

Subjects assigned to the second evaluator condition were asked to answer the following question:

> Imagine you are driving on the highway, and you see a sign stating the penalty for littering:
>
> "The penalty for littering is a $750.00 fine and 2 hours of community service"
>
> How severe does this penalty seem to you?

Results

In a descriptive analysis comparing the populations of the two evaluator conditions, those who judged the scenario where the penalty was solely a $750 fine, rated the punishment as more severe than those who judged the scenario where the penalty consisted of the fine and community service.

Condition	Mean*	Standard Deviation	N
Saw $750 fine only	5.8125	1.27086	64
Saw $750 fine and 2 hours of community service	5.2222	1.48790	54

*Mean severity rated on a 7-point scale

Table 1: Preliminary Study Means

Testing the between-subjects effects with one degree of freedom, showed that these results are significant at the .05 level.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	10.205*	1	10.205	5.403	.022
Intercept	3566.273	1	3566.273	1888.266	.000
Condition	10.205	1	3566.273	5.403	.022
Error	219.083	116	1.889		

* R Squared = .045

Table 2: Preliminary Study Between-Subjects Effects

Discussion

The results of the preliminary study are consistent with previous literature, and demonstrate that instead of adding the penalties to increase the severity of the punishment, subjects are significantly more likely to average penalties and therefore lower the intended severity of the punishment. Within the range of this research, the implications of this outcome reveal that in order to discourage littering on campus, authorities should post signage expressing a $750 penalty. Keeping this in mind, the next study explores the ability of interdependent and independent cultures to predict information integration, or averaging. Further research, beyond the scope of this master's thesis, is needed to explore the extent of this effect on a variety of information processing scenarios.

Study 1: Information Processing in Independent vs. Interdependent Cultures

Sample

A total of 20 subjects were recruited from the University of Michigan to participate in the first study examining the difference in information processing between independent (Western) and interdependent (Eastern) cultures. Nine subjects were non-Asian participants and eleven subjects were of Asian decent.

Hypothesis

We hypothesized that Asians would process information holistically and therefore anticipate that University of Michigan undergraduates would average the punishments, diminishing their

intended severity. According to this hypothesis, Asians would choose to impose the $750 fine as a penalty in order to deter more students from littering. Similarly, we hypothesized that non-Asians would process information individually and therefore choose to impose the $750 fine combined with two hours of community service, not foreseeing the averaging effect on other University of Michigan undergraduates.

Method

Subjects were asked to answer the following question:

Every year the highways become filled with tons of litter. Suppose that the governor has charged you with the task of curbing littering in the state. Before designing the road signs, however, you must decide the penalty structure. You are considering modeling the penalty structure of either State A or State B. If your goal is to make the penalty seem as severe as possible to UM undergraduates, which would you choose?

State A: $750.00 fine and 2 hours of community service

State B: $750.00 fine

The order of the penalties was counterbalanced.

Results

In a descriptive analysis comparing which penalty the two ethnic groups would recommend, Asian participants were more likely to recommend the $750 fine, while non-Asians were more likely to recommend the combined penalty.

Ethnicity	Mean*	Standard Deviation	N
Non-Asian	1.8889	.33333	9
Asian	1.4545	.52223	11

*Means closer to one reflect 1 penalty structure (fine only) and closer to 2 reflect the combined penalty structure

Table 3: Study 1 Means

Testing the between-subjects effects with one degree of freedom show that these results are significant at the .05 level.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	.934*	1	.934	4.648	.045
Intercept	55.334	4	55.334	275.433	.000
Ethnicity	.934	1	.934	4.648	.045
Error	3.616	18	.201		

* R Squared = .205

Table 4: Study 1 Between-Subjects Effects

Discussion

Results of this study are consistent with the hypothesis that Asians are significantly more likely to process information holistically and therefore anticipate the averaging effect. The implications of this outcome are far-reaching. Knowing that Asians are able to forecast this effect could mean they will do better in anticipating other situational outcomes; are better suited for careers in policy design; or could be more competent in managerial roles (an area where the ability to process information holistically is certainly essential). While these tangents are interesting, they are beyond the scope of this research. In the next study, I intend to explore whether or not it is possible to induce holistic thinking.

Possible limitations to these data are the small sample size and the potential confounds which were not controlled for during data collection, including gender, origin of Asian decent (Japanese, Chinese, Korean, Filipino, etc.), and the generation removed from Asia (first, second, etc.). In using a convenience sample of American university undergraduates, it might be interesting to conduct this research in the context of the Asian cultures, and amongst populations who are both educated and non-educated.

Study 2: Cultural Priming

Sample

A total of 35 participants were recruited to participate in a study on decision making using. While this was a convenience sample consisting of a group of very similar people (third year business majors at Virginia Tech), any significant differences between the responses of the participants exposed to the differing conditions (the collectivist and independent culture prime) can serve as a stronger case for support of the hypothesis. Significant differences in a non-diverse sample might lead to a magnified effect when replicated using a cross-cultural sample.

Hypothesis

It was hypothesized that those exposed to the interdependent (We) prime, would process information holistically and anticipate averaging in the littering scenario and would therefore recommend the $750 fine as a penalty. Furthermore, those exposed to the independent (I) prime, would process information individually and anticipate adding in the littering scenario and therefore recommend the $750 fine along with 2 hours of community service. Because the sample consisted of American university students, subjects should already think individually, and any main effect or interesting interaction should be visible under the collectivist condition.

Method

Independent variables:

- Culture as an instructional variable
  - Interdependent –"We" prime
  - Independent – "I" prime
- Task variable
  - Presenter condition

Potential Moderators:
  - Religiosity Scale
  - Connectedness Scale

This study employed a two by two between subjects design, with the I vs. We condition crossed with version 1 and versus version 2 of the presenter condition. This design exposed participants to only one condition of the paradigms, ensuring that responses are naïve to the other conditions. One disadvantage of this design is its potential to confound results, as it calls for two groups to be exposed to different conditions. Any differences in the results could be due to the culture variable (independent vs. interdependent cultural prime) or to a discrepancy between the groups of participants. In order to ensure equivalence across the groups of participants, participants were randomly assigned to either a collectivist or individualistic prime and were subsequently given a counterbalanced presentational condition.

To simulate the essence of interdependent and independent cultures, participants were asked to write a paragraph describing themselves or a group to which they belong. As previously mentioned, past research shows that writing using pronouns such as I, me, my, myself, and mine will prime an individualistic cultural mindset, while writing with pronouns such as we, us, our, ourselves, and ours will prime a collectivist cultural mindset. Using these pronouns should provoke certain schemas for independent or interdependent cognition. (Oyserman, Sorensen, Cha & Schwarz, 2005)

Those assigned to the collectivist condition were primed with the following task:

"In the task below, we ask everyone to shortly describe a group they belong to. Please use **all** the space provided below to tell briefly about your group. While doing so, in <u>each</u> sentence you use, make sure to employ only the following pronouns: *we, us, ourselves, ours*. <u>Do not</u> use any other pronouns. We ask this to standardize responses across individuals."

Those assigned to the individualistic condition were primed with the following task:

"In the task below, we ask you to shortly describe yourself. Please use **all** the space provided below to tell briefly about yourself. While doing so, in <u>each</u> sentence you use, make sure to employ <u>only</u> the following pronouns: *I, me, my, myself, mine*. <u>Do not</u> use any other pronouns. We ask this to standardize responses across individuals."

Following the I/We prime, participants were presented with the littering scenario from the previous study, asking them to make presentational decision on which penalty they would recommend. Additionally, subjects completed religiosity and connectedness scales as well as a series of demographic questions.

The Santa Clara Strength of Religious Faith Questionnaire was used to measure the degree of religiosity. Subjects were given the ten item questionnaire and asked to answer the questions on a five point scale.

Santa Clara Strength of Religious Faith Questionnaire

Please answer the following questions about religious faith using the scale below. Indicate the level of agreement (or disagreement) for each statement.

    1 = strongly disagreemms   2 = disagree   3 = agree   4 = strongly agree

_____1. My religious faith is extremely important to me.
_____2. I pray daily.
_____3. I look to my faith as a source of inspiration.
_____4. I look to my faith as providing meaning and purpose in my life.
_____5. I consider myself active in my faith or church.
_____6. My faith is an important part of who I am as a person.
_____7. My relationship with God is extremely important to me.
_____8. I enjoy being around others who share my faith.
_____9. I look to my faith as a source of comfort.
_____10. My faith impacts many of my decisions.

Figure 1: SCSORF Questionnaire (Plante and Boccaccini, 1997)

The Inclusion of Other in Self (IOS) Scale was used to measure the degree of

connectedness. Subjects were presented with a series of seven venn diagrams and asked to choose

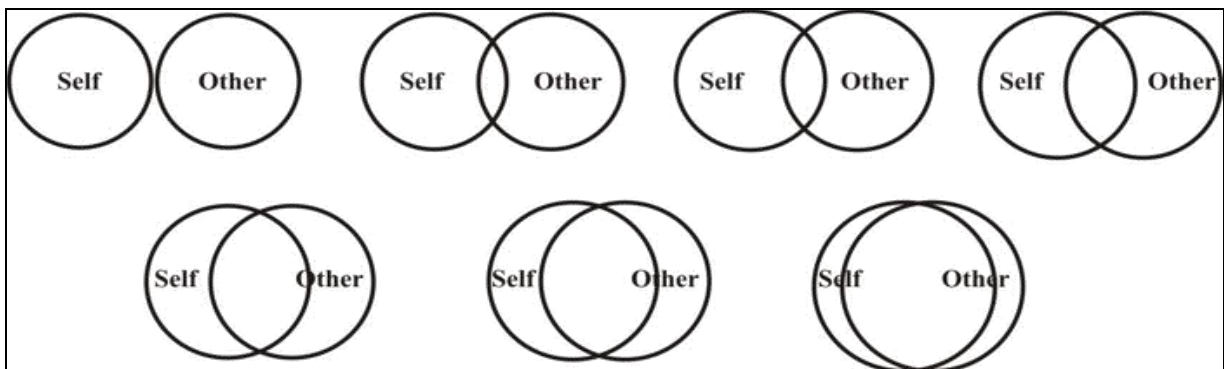which overlapping circles represented various relationships in their lives.

Figure 2: IOS Scale (Aron, Aron, Smollan, 1992)

Results

In a descriptive analysis comparing which penalty the groups exposed to the different primes would recommend, those under the collectivist condition (We prime) were more likely to process information holistically, foresee the averaging effect, and recommend the $750 fine. Those in the independent condition (I prime) had a tendency to process the scenario individually and were more likely to recommend the combined penalty.

Condition	Mean*	Standard Deviation	N
Independent (I) Prime	1.94	.236	18
Interdependent (We) Prime	1.76	.437	17

* Means closer to one reflect 1 penalty structure (fine only) and closer to 2 reflect the combined penalty structure.

Table 5: Study 2 Means

The independent variables are dichotomous variables (i.e. either interdependent or independent) with a binomial distribution.   Using the cultural prime and presenter factors, a two way ANOVA was conducted to determine the existence of a main effect. The results are marginally significant and produce a linear trend towards the hypothesized effect. The non-significant results could be a function of sample size and should be explored in subsequent studies.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.282	1	.282	2.328	.137
Intercept	120.282	1	120.282	991.520	.000
Condition	.282	1	.282	2.328	.137
Error	4.003	33	.121		

Table 6: Study 2 Between-Subjects Effects

Pronouns as a Covariate

We tested to see if the strength of the manipulation could be measured by the number of pronouns written in the paragraph during the I/We instructional variable. We held the number of pronouns constant by treating it as a covariate. No difference was found in the number of pronouns the subjects used during the manipulation.

Potential Moderating Variables

Connectedness was tested as a potential moderating variable, but was not found to be significant. It is unclear if it was a function of sample, proposed relationships, or the scale. Religiosity, however, produced an interesting result. The possibility of a moderated causal relationship was explored using ideas put forth in the work of Jaccard and Turrisi (2003). We conducted an interaction analysis which combined the I/We prime, religiosity and the interaction between religiosity and the prime in a regression equation.

Regression Model with the predictors of mean centered religiosity, and the I/We prime, and the interaction between these two predictor variables, the R squared was .278 with a standard error of .316.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.194	3	.398	3.989	.016
Residual	3.092	31	.100		
Total	4.286	34			

Table 7: Study 2 Interaction ANOVA

While the I/We prime alone is not a significant predictor for holistic thinking, when the We prime is moderated by religiosity, the regression equation becomes significant at the .05 level.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.070	.195		10.625	.000
	I=1, We=2	-.076	.127	-.108	-.594	.557
	Mean centered religiousity1	.586	.234	1.357	2.500	.018
	creligio *I1 We2	-.467	.160	-1.600	-2.922	.006

a. Dependent Variable: 750=1, other = 2

Table 8: Study 2 Regression Coefficients

Main Effects

After conducting a confirmatory factor analysis on the religiosity scale, we transformed the responses into a dichotomous variable, so that each subject would be categorized as either high or low on the religiosity scale. The I/We prime and dichotomous religion (labelled direl on the plot below) were treated as fixed factors, with the interaction as a moderator in an analysis of slopes. When there is low religiosity, there is no relationship between the I/We prime and holistic processing (see Figure 3). However, when religiosity is high, there is a negative relationship.

Estimated Marginal Means of 750=1, other = 2
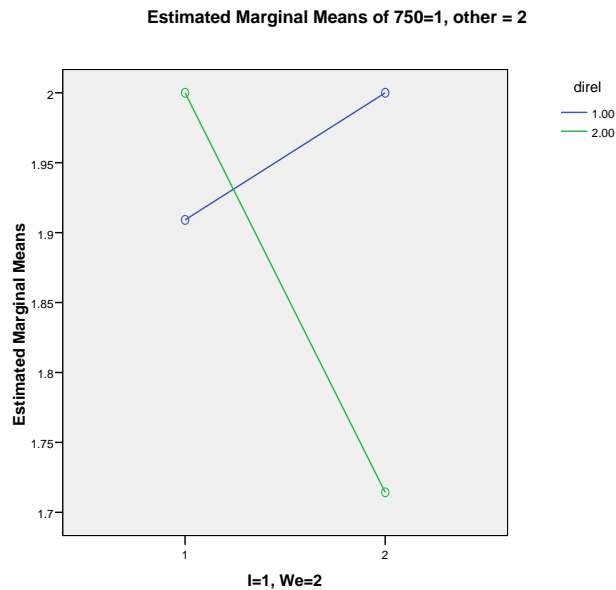
*High Estimated Marginal Means indicates individual processing, while low EMM indicates holistic processing (anticipate averaging and choose $750 fine only)

Figure 3: Study 2 Estimated Marginal Means using Interaction Analysis

Therefore the moderated relationship's regression equation to predict information processing is:

Prime ⬌ **Religiosity** ⬌ **Interaction** between Prime and Religiosity ⟹ Information Processing
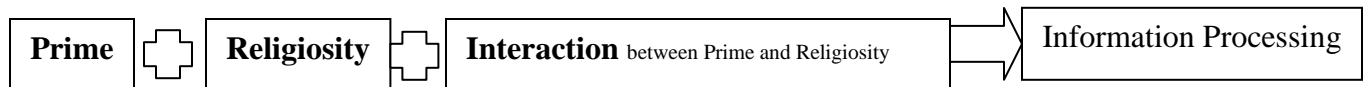
Subjects who were exposed to the "We" prime (collectivist) condition and who rated high on the religiosity scale were significantly more likely to process information holistically. Therefore we can conclude that "We" prime, high religiosity, and the interaction between the two are significant predictors of holistic processing.

Discussion

The most interesting aspect of the second study is the interaction effect between religiosity and the I/We prime, namely how higher religiosity combined with the collectivist prime seems to

18

magnify the main effect and inspire holistic processing. This interaction effect could occur because religion tends to encourage a sense of community, connectedness and interdependent mentality. When primed by "We", this aspect of religion is made more salient and therefore religion acts as a moderator to increase the effect of the prime.

While our results conclude that there is a significant difference in the responses of the participants exposed to the different primes when moderated by religiosity, we still must consider other potential confounds that could alternatively explain the results. Because we are dealing with subject variables, we cannot control for all the potential confounds. When dealing with subjects and conducting behavioral research, it is important to realize the variety of internal, existing characteristics which can explain for a lot of the variation in R squared values. It is likely that there are additional important moderating and mediating variables, which could include gender, education, degree of emotional intelligence, etc. which was not included in the questionnaire due to sample homogeneity (primarily female and third year business and communication majors at Virginia Tech) and time constraints. Furthermore, religion as moderator might be confounded by denomination.

Reliability and Validity of the Data

Evaluating the reliability of measures involves using different measures to assess the same construct. To measure information integration, we therefore should use multiple questions or scenarios in a similar format to try to replicate the behavior of holistic processing (or individualized processing) in subsequent studies.

The validity of these types of questions as a measurement of averaging and information integration is founded in past research (Weaver& Garcia 2005). Construct validity is rooted in the definitions of the independent and dependent variables. This research and the definitions of the

variables draw from prior work on culture and information integration, and are therefore well defined and tested. Internal validity was controlled by the methodology and systematic assignment to the independent variables and counterbalancing of the information presented in each of the conditions. Due to the fact that our study produces significant differences using a homogenous sample to represent divergent cultures, it increases the likelihood that our findings can be generalized to populations with actual interdependent ways of thinking.

References

Anderson, N. H. (1965). Averaging versus adding as a stimulus-combination rule in impression formation. *Journal of Experimental Psychology, 70*, 394-400.

Aron, A., Aron E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596-612.

Baron, R. M., & Kenney, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173-1182.

Brewer, M. B., & Gardner, W. (1996). Who is this "we"? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, *71*, 83–93.

Choi, I., Koo, M., & Choi, J.A. (2007). Individual differences in analytic versus holistic thinking. *Personality and Social Psychology Bulletin*, 33, 691-705.

Fiske, S., & Taylor, S. (1991). *Social cognition*. New York: McGraw-Hill.

Gardner, W. L., Gabriel, S., & Lee, A. (1999). "I" value freedom, but "we" value relationships: Self-construal priming mirrors cultural differences in judgment. *Psychological Science*, *10*, 321-326.

Gilbert, D. T., & Malone, P. S. (1995). *The correspondence bias. Psychological Bulletin*, 117, 21-38.

Jaccard, J., Turrisi, R. (2003). Interaction Effects in Multiple Regression. Thousand Oaks: Sage Publications.

Jagacinski, C. M. (1995). Distinguishing adding and averaging models in a personnel selection task: When missing information matters. *Organizational Behavior and Human Decision Processes, 61,* 1-15.

Jones, E. E. (1990). Interpersonal perception. Chapter 3 (pp. 39-76). New York, NY: Freeman.

Jones, E. E. (1990). Interpersonal perception. Ch. 7 (pp. 167-200). New York, NY: Freeman.

Jones, E. E., & Pittman, T. S. *(1982). Toward a general theory of strategic self presentation. In J. Suls (Ed.)* Psychological Perspectives on the Self *(Vol. 1, pp. 231-262). Erlbaum: Hillsdale, NJ.*

Kitayama, S. (2002). Culture and basic psychological processes: Toward a system view of culture. *Psychological Bulletin*, **128**, 189–196

Kitayama, Shinobu, Duffy, Sean, Kawamura, Tadashi & Larsen, Jeff T. Perceiving an object and its context in different cultures:.*Psychological Science* **14** (3), 201-206.

Leary, M. R., & Kowalski, R. M. (1990). The two components of impression management: A literature review and theoretical integration. Psychological Bulletin, 107, 34-47.

Lewis, C., Shevlin, M., McGuckin, & Navratil, M. (2001). *The Santa Clara Strength of Religious Faith Questionnaire: Confirmatory factor analysis*. Pastoral Psychology, 49, 379-384.

Li, H. Z. (2002). Culture, gender and self-close-other(s) connectedness in Canadian and Chinese samples. European Journal of Social Psychology, 32, 93-104.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, **98**, 224–253.

Masuda, T., & Kitayama, S. (2002). Perceiver-imposed constraint and attitude attribution in Japan and the US: A case for culture-dependence of correspondence bias. Unpublished manuscript, University of Michigan, Ann Arbor.

Masuda, T., & Nisbett, R.E. (2001). Attending holistically vs. analytically: Comparing the context sensitivity of Japanese and Americans. *Journal of Personality and Social Psychology*, **81**, 922–934.

Miyamoto, Y., & Kitayama, S. (2002). Cultural variation in correspondence bias: The critical role of attitude diagnosticity of socially constrained behavior. *Journal of Personality and Social Psychology*, **83**, 1239–1248.

Morris, M.W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social Psychology*, **67**, 949–971.

Nisbett, R. (2003). *The geography of thought*: How Asians and Westerners think differently…and why. New York: NY: Free Press.

Nisbett, R.E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic vs. analytic cognition. *Psychological Review*, **108**, 291–310.

Oyserman, D., Coon, H.M., & Kemmelmeier, M. Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta analyses. *Psychological Bulletin*, 128, 3-72.

Oyserman, D., & Lee, S. (in press). Priming "culture": Culture as situated cognition. In S. Kitayama and D. Cohen (Eds.), *Handbook of Cultural Psychology*. New York: Guilford Press.

Oyserman, D., Sorensen, N., Cha, O.,&Schwarz, S. (2006). Thinking about "me" or "us" in East and West: Priming independence and interdependence and Stroop performance. Manuscript under editorial review.

Plante, T. G., & Boccaccini, M. T. (1997). The Santa Clara Strength of Religious Faith Questionnaire.
Pastoral Psychology, 45, 375-387.

Plante, T. G., & Boccaccini, M. T. (1997b). Reliability and validity of the Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology*, *45*(6), 429–437.

Plante, T. G., Yancey, S., Sherman, A., Guertin, M., & Pardini, D. (1999). Further validation for the Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology*, *48*(1), 11–21.

Ross, L., & Nisbett, R. E. (1991). The person and the situation: Perspectives of social psychology (Chapters 1 & 2, pp. 1-58). New York: McGraw-Hill.

Weaver, K. & Garcia, S.M. (2005). The self presenter's paradox: Motivated reasoning in information integration. *Unpublished manuscript, University of Michigan.*

Witkin, H.A., & Berry, J.W. (1975). Psychological differentiation in cross-cultural perspective. *Journal of Cross-Cultural Psychology*, **6**, 4–87

Meghan E. Pierce_____

Via Montarina 1
CH – Lugano 6900
Cell: 0041 76 544 2941
mpierce@vt.edu

Education

2006   B.S. Virginia Polytechnic Institute and State University. GPA 3.80/4.00
                   Major: Marketing Management

2006   B.A. Virginia Polytechnic Institute and State University. GPA 3.80/4.00
                   Major: Foreign Languages and Literatures/Spanish

2007   M.S. Virginia Polytechnic Institute and State University. GPA 3.54/4.00
                   Major: Marketing Research
                   Minor: Statistics

Professional Experience

Graduate Research Assistant, Virginia Tech Marketing Department, Spring 2007 to Present
- Developed marketing and business plan for a South African nongovernmental organization
  - Conducted in-depth interviews to identify and evaluate needs
- Designed, implemented and analyzed questionnaire data to determine cultural differences in information processing

Graduate Research Assistant, Sloan Forest Industry Center, Fall 2005 to Present
- Senior member of project team to design, implement, and analyze interview and questionnaire data to assess customer satisfaction for a major cabinet manufacturer
- Senior member of project team to improve the design and functionality of the Hardwood Market Report website
- Senior member of project team to assess research priorities in the hardwood industry for the National Hardwood Lumber Association

Interim Executive Director, Fairfax County Park Foundation, Summer 2004
  In addition to previous duties:
- Managed daily operations
- Reported financial and operational information to the Park Foundation Board of Directors and the Director of the Park Authority
- Managed and maintained a computerized fundraising system

Management Analyst and Intern, Fairfax County Park Foundation, 2002-2005
- Designed and developed several marketing pieces and press releases for mass-production and circulation
- Proposed marketing strategies to target specific audiences
- Streamlined procedures
  - Established online giving system
  - Implemented and trained others to efficiently use fundraising and financial reporting software
- Created, maintained and managed a database for incoming donations
- Planned, coordinated and executed special events and board meetings
- Redesigned and updated the foundation website
- Contacted corporate and community members to raise funds
- Compiled financial figures for monthly and annual reports
- Conducted web research (to identify donor prospects)
- Performed a full range of clerical duties to include: writing, editing, word processing, mailing, data entry, administrative support

International Experience

Proficient in Spanish
Knowledge and experience in Italian

Foreign Exchange Program, Universidad San Francisco de Quito, Spring 2004
- Studied Spanish phonetics, literature, Ecuadorian government
- Lived with an Ecuadorian host family

Study Abroad Program Lugano, Switzerland, Spring 2005
- Studied Italian, Marketing and Communications

Study Abroad Program Coordinator Lugano, Switzerland Spring 2006, Spring 2007
- Managed recruitment team
- Organized program logistics
- Chaperoned 35 undergraduate students
- Facilitated intercultural communication between Swiss and American students

Technical Skills

Proficient in Microsoft Office (Word, PowerPoint, Excel), GiftMaker Pro, and SPSS

Honors

Summa Cum Laude Graduate
Dean's List, all semesters
Virginia Tech Honors Program, 2002-2006