

Inter- and intra-cultural variations in self–other boundary: A qualitative-quantitative approach

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Past research on the theories of self-construal and individualism-collectivism in cross-cultural contexts presents inconsistent and inconclusive results. Some researchers have seriously questioned the validity of major instruments measuring self-construal across cultural groups. To address the validity issue, this study developed quantitative measures from ethnographic data. In five scenarios mapping self to close-other boundaries, 171 Anglo-Canadians and 224 Mainland Chinese were asked to make a decision and offer a reason for the decision. Two intriguing findings emerged from the data. (1) In comparison with Anglo-Canadians, Mainland Chinese were more likely to share material belongings with close-others and less likely to share their thoughts/opinions. The first part of this finding provides unequivocal support for the theories of self-construal and individualism-collectivism, whereas the latter part challenges an important assumption of these theories, which contends that collectivists should be more likely than individualists to share everything they own (including opinions) with close-others. This unconventional finding proposes the division of material belongings and thoughts/opinions sharing of the self–other boundary in future cross-cultural self-construal research. (2) There were significant differences in the reasons Canadians and Chinese offered for what they would or would not do in a specific situation. For example, the reasons for not telling the truth about a roommate's nonmatching outfit were "tastes differ from person to person" for a Canadian and "I don't tell others what I think of them" for a Chinese. The Canadians clearly show respect for the other's personal preference and the Chinese were thinking "what can I benefit from telling her the truth?" It was reasoned that underneath the giving and generous Chinese lies a shrewd mind, and underneath the frank Canadian lies a materialistic mind. In conclusion, this article contributes to the field in that it reports pioneering research, via both qualitative and quantitative means, on sharing material belongings and opinions/thoughts in samples from individualistic and collectivistic cultures. The findings of this study illustrate, specify, and challenge the universal utility of the theories of self-construal and individualism-collectivism.

Les recherches antérieures sur les théories de l'interprétation de soi dans la situation sociale et sur l'individualisme-collectivisme à travers les contextes culturels présentent des résultats inconstants et non concluants. Certains chercheurs ont sérieusement questionné la validité des principaux instruments mesurant l'interprétation de soi chez divers groupes culturels. Pour aborder la question de la validité, la présente étude a développé des mesures quantitatives à partir de données ethnographiques. Dans cinq scénarios couvrant diverses limites de la proximité avec les autres, 171 Canadiens anglais et 224 Chinois continentaux devaient présenter une décision appuyée d'une raison. Deux résultats surprenants furent soulevés. (1) En comparaison des Canadiens anglais, les Chinois continentaux furent plus susceptibles de partager des biens matériels avec les autres et moins susceptibles de partager leurs pensées et opinions. La première partie de ces résultats supporte les théories de l'interprétation de soi et de l'individualisme-collectivisme. Pour sa part, la seconde partie remet en question une importante supposition de ces théories, soit que les collectivistes sont plus susceptibles que les individualistes de partager tout ce qu'ils possèdent, incluant leurs opinions. Ce résultat non conventionnel propose de diviser le partage matériel et le partage de pensées et d'opinions dans les futures recherches interculturelles sur la représentation

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de soi en situation sociale. (2) Des différences significatives furent soulevées quant aux raisons évoquées par les Canadiens et les Chinois concernant ce qu'ils feraient ou non dans chaque situation. Par exemple, les raisons de ne pas dire la vérité sur l'habillement mal appareillé d'un compagnon de chambre étaient "les goûts diffèrent d'une personne à l'autre", pour un Canadien, et "je ne dis jamais aux autres ce que je pense d'eux", pour un Chinois. On observe que les Canadiens montrent clairement un respect pour les préférences personnelles des autres et que les Chinois se disent "qu'est ce que je peux retirer de lui dire la vérité?" Le raisonnement qui est apporté est que sous les aspects de générosité et de partage du Chinois repose un esprit astucieux, tandis que sous la franchise du Canadien repose un esprit matérialiste. En conclusion, cet article est une contribution pour ce champ de recherche relativement récent, à la fois des points de vue qualitatif et quantitatif, sur le partage de biens matériels et de pensées et opinions chez des échantillons de cultures individualiste et collectiviste. Les résultats illustrent, précisent et remettent en question l'utilité universelle des théories de la représentation de soi en situation sociale et de l'individualisme-collectivisme.

La investigación antecedente acerca de las teorías sobre la interpretación de sí mismo ante situaciones sociales y el Individualismo-Colectivismo entre contextos culturales presenta inconsistencias y resultados no conclusivos. Algunos investigadores han cuestionado seriamente la validez de los instrumentos principales que miden la interpretación de sí mismo ante situaciones sociales entre grupos culturales. Para abordar el aspecto de la validez, este estudio desarrolló medidas cuantitativas de datos etnográficos. Se pidió a 171 anglo-canadienses y 224 chinos continentales que tomaran una decisión en cinco escenarios que delineaban límites sobre ellos mismos respecto a otras personas y ofrecieran la razón por la que la habían tomado. Surgieron de los datos dos hallazgos que intrigan. (1) En comparación con los anglo-canadienses, los chinos continentales tendían a compartir sus pertenencias materiales con otras personas cercanas, pero en menor medida sus pensamientos y opiniones. La primera parte de este hallazgo proporciona apoyo inequívoco a las teorías de la interpretación de sí mismo ante situaciones sociales y del Individualismo-Colectivismo, en tanto que la última parte desafía una suposición importante de estas teorías, que propone que los colectivistas debían tender más que los individualistas a compartir todo lo que poseen (incluyendo opiniones) con otras personas cercanas. Este hallazgo no convencional propone, para las investigaciones futuras sobre la interpretación de sí mismo ante situaciones sociales entre culturas, una división de lo que se comparte con otras personas en términos de lo material y los pensamientos/opiniones. (2) Hubo diferencias significativas en cuanto a las razones por las cuales los canadienses y los chinos hubieran o no hecho algo en una situación específica. Por ejemplo, para los canadienses la razón por la cual no dirían la verdad a un compañero, cuyo atuendo estuviera mal combinado es "los gustos difieren de una persona a otra", pero para los chinos "no digo a los demás lo que pienso sobre ellos". Los canadienses claramente muestran respeto hacia las preferencias personales de los demás y los chinos piensan "¿en qué me beneficiaría decirles la verdad?" Se razonó que al generoso chino subyace una mente astuta, en tanto que al canadiense franco, una mente materialista. En conclusión, este artículo contribuye al campo en la medida en la que informa sobre investigación pionera que emplea, tanto medios cuantitativos como cualitativos, sobre la forma en que dos muestras pertenecientes, una, a una cultura individualista y, otra, a una colectivista, comparten con otras personas sus pertenencias materiales y sus opiniones/pensamientos. Los resultados de este estudio ilustran, específicamente, y desafían la utilidad universal de las teorías de la interpretación de sí mismo ante situaciones sociales y del individualismo-colectivismo.

INTRODUCTION

One of the mysteries of human nature is the tendency to retain an inaccessible region within the self (Lewin, 1948). The diameter of the inaccessible region defines the person's self-other boundary (Greetz, 1975). It has been asserted that North Americans have a larger diameter of the inaccessible region in comparison with Asians. That is, North Americans construe themselves more independently than Asians and Asians construe themselves more interdependently than North Americans (Markus & Kitayama, 1991). According to this theory, Asians (e.g., Chinese) would be more willing than North Americans (e.g., Anglo-Canadians) to share material belongings as well as thoughts with close others. As a sojourner in North America who grew up in Mainland China, I have observed a differing pattern: Chinese are more likely than North Americans to share their material belongings but not their thoughts. The

goal of the present study was to test this hypothesis. My rationale was that Chinese culture, being 5000 years old, is very complex, and the Chinese are multi-faceted. They may not be as "other-oriented" and "altruistic" (Markus & Kitayama, 1991, p. 248) as they appear to be. As an old Chinese saying goes, "if a man were not for himself, the earth and sky would cease to exist." Therefore the assumption guiding this study was that the most inaccessible region within the self for the Chinese is their thoughts. Using a combination of qualitative and quantitative means, this research intended to illuminate and complement results of previous research that relied on quantitative means alone.

Theoretical framework

Two theories, independent-interdependent self-construal (Markus & Kitayama, 1991) and individualism-

collectivism (I-C) (Hofstede, 1980; Triandis et al., 1986; Triandis, Bontempo, Villareal, Asia, & Lucca, 1988) constitute the theoretical configuration for this article. Markus and Kitayama's independent-interdependent self-construal theory states that in their behaviour, the independent self is more likely to "be true to one's own internal structures of preferences, rights, convictions, and goals" (Markus & Kitayama, 1994, p. 459), whereas the interdependent self is more likely to take others' feelings and interests into consideration. The theory of I-C contends that in North American and European cultures, individuals rate high on individualism, whereas in Asian and Latin American cultures, persons rate high on collectivism. The two modes of self-construal in Markus and Kitayama's theory (1991) correspond to the theory of I-C in that independent self-construal is the primary cognitive pattern in individualistic cultures, as is interdependent self-construal in collectivistic cultures (Gudykunst & Kim, 1997).

Situated in the theories of independent-interdependent self-construal and I-C, the main goal of this study was to examine whether Anglo-Canadians were more independent than Mainland Chinese in defining their personal boundaries with close others, and whether Chinese were more interdependent than Canadians in construing the same relationships (Hypothesis 1). A secondary goal was to examine whether males were more independent than females in defining their personal boundaries with close-others, and whether females were more interdependent than males in construing the same relationships in both Canadian and Chinese samples (Hypothesis 2).

The rationale for Hypothesis 2 was Cross and Madson's (1997) assertion that male-female differences in Western societies may synchronize with the differences between persons of individualistic and collectivistic cultures. In other words, males are more individualistic and females are more collectivistic as persons from individualistic and collectivistic cultures, respectively. They argue that in Western societies, males are encouraged to be independent and autonomous, whereas females are expected to be interdependent. These double standards in Western societies may cultivate males to be different from females in their self-construal.

It can be argued that the same male-female differences may be found in the Chinese culture, in which all members are encouraged to be collectivistic, but some are supposed to be more so than others. According to the teaching of Confucius (Tu, 1985; Wu, 1984), the female's role is to serve, to follow, and to obey the male. The role of a male is to lead the household and to distinguish himself in society. In spite of Maoism, as well as Western influence, much of the Confucian

tradition remains in contemporary China (Elvin, 1985; Tu, 1985). Therefore, one would expect Chinese females to be more interdependent in their self-construal in comparison with Chinese males.

In the following sections, literature testing independent-interdependent self-construal was grouped into two categories. The first group contained literature comparing North Americans and Asians and the second compared North Americans and Chinese.

Self-construal: Comparisons between North Americans and Asians

Kanagawa, Cross, and Markus (2001) reported that Americans were more likely than Japanese to describe themselves in positive terms and Japanese were more likely than Americans to describe themselves in negative terms. Also the Americans' self-descriptions were less influenced by situations than those of the Japanese. These findings support the notion that Americans have more independent self-construals than Japanese and Japanese have more interdependent self-construals than Americans, in that the Americans were self-assertive and Japanese were self-effacing.

Lay et al. (1998) found that Asian-Canadians scored higher on the allocentrism scale than Euro-Canadians, indicating that Asian-Canadians had a more interdependent self-construal in relation to family members than Euro-Canadians. Their instrument was a Family Allocentrism Scale made up of 21 items measuring independent and interdependent self-construal in relation to family. For example, item 1 stated "I am very familiar to my parents" and item 21 was "it is important to feel independent of one's family."

Kashima, Yamaguchi, Kim, Choi, Gelfand, and Yuki (1995) found that Japanese and Koreans saw themselves as more interdependent than Australians and Americans, with Hawaiians in between. Gender differences were found in the degree of emotional relatedness to others. In all five samples, men felt more connected with friends than women did. In this study, several questionnaires were used including the Collectivism Scale by Yamaguchi (1994), Kanjin-shugi Scale by Hamaguchi (1985), Allocentrism Scale by Triandis et al. (1993), and the Friendship Questionnaire by Triandis et al. (1988).

Singelis (1994) found that Euro-Americans scored significantly higher than the four Asian-American groups on the independent scale and lower on the interdependent scale. His instrument contains a 12-item scale measuring independent-interdependent self-construal.

Dhawan, Roseman, Naidu, Thapa, and Rettke (1995) tested the hypothesis that Americans had more

independent self-construal than Indians. Their hypothesis was supported by the data in four categories: social identity, interests, ambitions, and self-evaluation. A significant gender difference was found in one category, social identity. Males in both cultures tend to have a stronger social identity than females. The instrument used in this study was developed by Kuhn and McPartland (1954) and validated by Bond and Taksing (1983). In this study, participants were asked to complete 20 sentences starting with "I am." Later, Bochner (1994) reduced the 20 statements to 10. This study found that the Malaysians had more interdependent self-concepts than Australians and British.

In a comparison between Asian and American students, Cross (1995) found no significant difference in terms of the mean scores of independent self-construal. However, a significant difference was found on the ratings of interdependent self-construal. Asian students were more interdependent than American students. This study used Yamaguchi's Collectivism Scale (1994) as well as Breckler, Greenwald, and Wiggins' (1986) Private Ego-Task subscale. In this study, participants were instructed to rate the importance of phrases such as "being unique—different from others in many respects" and "maintaining harmony in one's group."

Misra and Giri (1995) examined gender differences in self-construal among 25 male and 25 female Indian university students. They developed a scale of 31 items measuring independent and interdependent self-construal. The independent self-construal scale contained two subcategories, "self/others differential" and "self-knowledge," and the interdependent self-construal consisted of "others evaluation" and "maintaining self/other bonds." No significant gender difference was found in terms of the mean scores measuring independent and interdependent self-construal.

Self-construal: Comparison between North Americans and Chinese

When comparing American and Hong Kong Chinese university students, Bond and Cheung (1983) and Ip and Bond (1995) found that Americans evaluated themselves as more individual-oriented, self-assured, and self-enhanced than Hong Kong Chinese. Hong Kong Chinese provided a more group-oriented and modest self-description than their American counterparts.

Wang (2001) studied the individualistic and collectivistic tendencies among 119 American and 137 Mainland Chinese university students. When recalling

early childhood events, participants were asked to describe themselves by completing 20 sentences beginning with "I am." A number of measures were compared, which included the following: (1) reference to personal needs, desires, or preferences; (2) reference to personal dislikes and avoidance; (3) reference to personal evaluations, judgments, or opinions regarding other people, objects, or events; and (4) reference to retaining control over one's own actions and resisting group or social pressure. Significant differences were found between the American and Chinese samples in the way they remembered their early childhood events. For example, American memories were more self-oriented, promoting individual experiences or feelings. On the other hand, Chinese memories were more other- or group-oriented, promoting collectivistic experiences or feelings. No consistent gender differences were found in the American and Chinese samples.

Li (2002) examined whether Anglo-Canadians were more independent than Mainland Chinese in construing their relationship with family members and friends. Strong cultural differences were found in self-family connectedness, but not in self-friends connectedness. Chinese were closer to their family members than Canadians, but Canadians were as close to their friends as Chinese. In Li's study, it was also found that not all Canadians were independent, and not all Chinese were interdependent. The differences lay in the proportions of Canadians and Chinese in each category.

Li reported that although a large difference was found in the connectedness of the self-family members at the cultural level, no gender difference was found in either the Canadian or the Chinese sample. In terms of self-friends connectedness, gender difference was found in both samples. In the Canadian sample, females were closer to their friends than males were, while in the Chinese sample, males were closer to their friends than females were. The instrument used in this study was an adapted IOS Scale (Aron, Aron, & Smollan, 1992). This scale has seven Venn diagrams of two same-size circles. In the first two pictures, the two circles are apart and adjacent to each other. From the third picture to the seventh picture, the degree of overlap progresses linearly (Aron et al., 1992, p 597).

Brockner and Chen (1996) examined differences in self-construal between samples from the People's Republic of China and the United States. Surprisingly, they found no significant difference between the Chinese and Americans. They used a scale developed by Triandis et al. (1986), which was made up of 11 items. Participants were asked to mark their answers, on a 7-point scale from "strongly disagree" to "strongly agree," to statements such as "One should live one's life independently of others as much as possible" and

“One does a better job working alone than working with a group.”

In 1988, Hui developed a 63-item scale measuring a person’s individualistic-collectivistic tendencies in relation to specific targets such as parents and friends. Unexpectedly, this author found that Hong Kong Chinese students were significantly more individualistic than American students.

As can be seen from the above literature review, the instruments used are diverse and results highly controversial. Two potential factors may have contributed to this pattern. First, translation of a questionnaire from one language to another may either compromise the form and/or the content of the questions (e.g., Li, 1999a, 1999b, 2002; Li & Browne, 2000). Second, different cultural groups may interpret the same or similar questions differently (e.g., Cross, Bacon, & Morris, 2000; Kanagawa et al., 2001). As a result, the cross-cultural measurements may or may not be sensitive to all the cultural groups involved (Cross et al., 2000). To improve the situation, the present study used questions that were placed in scenarios. In comparison with the commonly used one-sentence statement-type of question, a contextualized questionnaire is less susceptible to cross-cultural misconstrual.

To examine the perplexing picture of self-construal research, this study used a combination of qualitative and quantitative tactics. Applying the traditional cultural anthropology method, ethnographic data were first collected and then open-ended questions were developed. The qualitative approach claimed three advantages: (1) the scenarios and questions were derived from real-life occurrences; (2) the open-ended questions allowed participants room to elaborate their answers; and (3) the why questions permitted participants to offer insight. Built upon the qualitative data, the quantitative analyses pointed out patterns and allowed inter-group comparisons. The combination of both qualitative and quantitative methods achieved an effect which one approach alone would not.

METHOD

Participants

Participants were 170 Canadians from a university in western Canada and 224 Chinese from a university in Wuhan, People’s Republic of China. The Canadian sample was made up of 53 males and 117 females. In the Chinese sample, 96 were male, 127 were female, and 1 Chinese participant did not identify his or her gender. All Canadian participants spoke English as their first

language. The Chinese participants spoke Mandarin Chinese as their first language and none had visited a foreign country prior to this study. Both the Canadian and Chinese samples were drawn from first-year and second-year university classrooms. Approval to conduct the study was granted by a university ethics review committee in Canada. Consent to carry out this study in the Chinese university was obtained from the dean of the College where this sample was drawn. Upon completion of the questionnaire, each participant signed his or her name to indicate willingness to take part in the study.

Eighty-nine per cent of the Canadian participants were between the ages of 18 and 26 years and all Chinese participants were within this age range. There was no statistically significant difference between the mean ages for the two samples.

Developing scenario-based questions

The scenarios and questions used in this research were derived from ethnographic data. As a Chinese living in North America, I first observed that in comparison with mainland Chinese, North Americans were much less likely to share their material belongings with their family members and close-others, and more likely to express their opinions. As my stay grew from months to years, instances accumulated that supported my initial hypothesis. I recorded my participatory observations and the following is an example:

My first Christmas in the U.S. was spent with an American couple, Arthur and Judith—my old friends from 5 years before when they worked in China. The day after Christmas, Arthur’s parents came for a visit. After looking around the sitting room, Arthur’s father began to admire the cloisonné vases. There were altogether five with different sizes, colours and patterns. Arthur was a China scholar and had Chinese gifts all over the house. It was obvious that Arthur’s father loved the vases.

Later on Arthur drove me home. He had a great sense of humour and we liked to make fun of each other. I had always felt comfortable telling him what was on my mind.

“Arthur, do you think it’s a good idea to give one of your vases to your father? He really likes them,” I suggested tentatively.

“Why should I? Xiao Li (that’s my nick name), if you could give me a good reason, I’ll give him a vase.” He looked at me, somewhat amused.

He carried his usual proud air about him. He told me it was because he was smart, he was a physician and made \$40 an hour. Nevertheless I had always enjoyed him.

“Let me tell you the reasons: first of all, he is your

biological father; second, he has brought you up, and third, he sent you to medical school. Are these reasons sufficient?" I looked at him triumphantly.

"First of all, I don't like the name he gave me; secondly, he didn't bring me up the way I would bring up my children, and thirdly, he didn't send me to medical school. I sent myself, I borrowed money from the bank."

"But you do like him, don't you?"

"Sure, I like him. He is a nice fellow. He has been a good father. But it doesn't mean that I have to give him everything I own."

I was speechless.

"Xiao Li, we need to revolutionize you with western ideas. This is America, not China. Now you are in America, remember that." He apparently enjoyed defeating me.

He turned on the radio in the car. It was Rock and Roll.

Based on the above observation, a scenario and a question were developed:

Arthur is a China scholar, he has been to China many times and has Chinese art objects all over his house. One day, Arthur's father came to visit him. After looking around the living room, Arthur's father began to admire the cloisonné vases. There were altogether five, of different sizes, colours and patterns. It was obvious that Arthur's father loved the vases.

Question: If you were Arthur, what would you do and why?

In a similar fashion, four other scenarios and questions were developed (see Appendix A). The final version of the questionnaire was derived after several modifications based on the pilot data as well as suggestions from the pilot participants.

Scoring standards

Scenario 1. If the answer was essentially "not giving him one of the five vases with no qualifications" (e.g., I will thank him for his appreciation of the vases), it was scored as 1. If the answer was essentially "not giving him one of the five vases with qualifications" (e.g., I will make a note and buy him a similar one later), it was scored as 2. If the answer was essentially "giving him one of the five with qualification" (e.g., I will ask if he would like to have one), it was scored as 3. If the answer was essentially "giving him the best of the five vases with no condition" (e.g., I will let him choose one), it was scored as 4.

Scenario 2 (Apple Juice, see Appendix A). If the answer was essentially "do nothing or say nothing"

with no conditions or qualifications, it was scored as 1. For example, the answer "I'll let it pass and say nothing" fits into this category. If the answer was essentially "do nothing or say nothing with 'but' or 'if' (qualifications)," it was scored as 2 (e.g., I will say nothing this time, but if it happens again, I will talk it over with Dave). If the answer was essentially "do something or say something with 'but' or 'if' (qualifications)," it was scored as 3 (e.g., I will ask Dave if he drank my apple juice by mistake. If it is by mistake, this matter will be dropped). If the answer was essentially "to do something or say something to Dave with no qualifications," it was scored as 4 (e.g., I'll put a label with my name on it to avoid future problems or I will drink his apple juice).

Scenario 3 (Lending Money, see Appendix A).

If the answer was essentially "lending with no qualifications," it was scored as 1. If the answer was "lending with qualifications" (e.g., I will lend her the money if she pays me back), it was scored as 2. If the answer was essentially "not lending with qualifications" (e.g., she may forget to pay me back), it was scored as 3. If the answer was essentially "not lending with no 'if' or 'but'," it was scored as 4.

Scenario 4 (Talking with Friends, see Appendix A). If the answer was essentially "talking to friends with no qualifications," it was scored as 1. If the answer was essentially "talking to friends with qualifications" (e.g., I'll call my friends if they have time to talk), it was scored as 2. If the answer was essentially "not talking to friends with qualifications or reasons" (e.g., I don't feel like talking to them because they may not be interested), it was scored as 3. If the answer was essentially "not talking to friends with no qualifications or reasons" (e.g., I prefer keeping things to myself), it was scored as 4.

Scenario 5 (Roommate's Outfit, see Appendix A).

If the answer was essentially "looking bad with no qualifications" (e.g., That outfit doesn't match, change into something else), it was scored as 1. If the answer was essentially "looking bad with qualifications" (e.g., Well, it's not great. Are you going to an important meeting?), it was scored as 2. If the answer was essentially "looking fine with qualifications" (e.g., It looks good, but your red sweater might match the skirt better), it was scored as 3. If the answer was essentially "looking fine with no qualifications" (e.g., That looks fine), it was scored as 4.

Translation and inter-scorer reliability

The questions in the questionnaire were composed in

TABLE 1
Means for frequencies of self–other boundary by culture and gender

Culture/gender	n	Apple juice		Lend money		Phone friend		Roommate's outfit		Gift vase	
		M	SD	M	SD	M	SD	M	SD	M	SD
Canadian Male	49	3.37	0.91	1.57	0.87	1.63	1.01	1.53	0.82	2.43	0.76
Female	115	3.10	0.83	1.81	0.89	1.36	0.68	1.83	0.82	2.23	0.69
Chinese Male	77	2.14	1.19	1.23	0.67	2.10	1.40	2.60	1.02	2.99	0.83
Female	116	2.28	1.05	1.10	0.33	2.16	1.39	2.24	1.01	2.84	0.85

English, with the equivalent Chinese translation in mind. Therefore, translation and back-translation posed no difficulty.

Before scoring the data, scorers received a training session with the following instructions: (1) read the criteria at least twice, and (2) explain the scoring standards to your co-scorers with examples from the data.

Following the training session, three persons independently scored the answers and the inter-scorer reliability was between .89 and .91 (Pearson correlation). The two scorers who had no knowledge regarding the nature of the hypotheses achieved as high a reliability score between themselves as with the primary researcher. The main reason for the high reliability was that the scoring standards were appropriate to the answers. Originally, this scoring system was developed for the pilot data. It proved to be a sensitive measure for the answers given by the

pilot participants. Therefore, adjustments for the present data were not required.

RESULTS

Means of frequencies of all five dependent variables were summed by cultural groups (Table 1). In each cultural group, means of frequencies for males and females were presented separately.

To test for culture (Canadian vs. Chinese) main effects, gender main effects (male vs. female), and culture by gender interactions, 2×2 ANOVAs were conducted on all five dependent variables. Results are reported in the form of testing Hypotheses 1 and 2.

Culture and self–other boundary: Testing Hypothesis 1

Hypothesis 1 stated that Anglo-Canadians were more

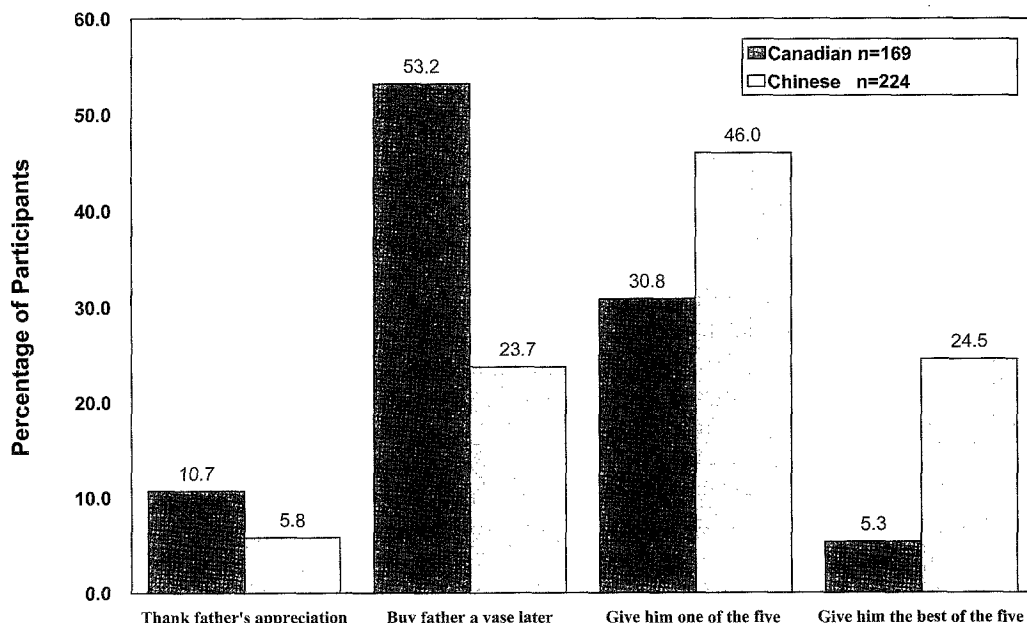


Figure 1. To give or not to give father a vase by cultural group.

independent than Mainland Chinese in defining their personal boundaries with close others, and Chinese were more interdependent than Canadians in construing the same relationships.

Culture main effect. ANOVA indicated statistically significant cultural differences for all five variables.

1. In answering the question “If you were Arthur, what would you do?” when Arthur’s father admired the five cloisonné vases in his house, the mean for the Canadian group was significantly lower than for the Chinese group, $F(1, 387) = 43.14, p < .0001, \eta^2 = .10$, indicating that Canadians were less likely than Chinese to give one of the five vases to a relative. To elaborate on the means in Table 1, Figure 1 presents the percentage of participants in each category by cultural groups.

2. In answering the question “What would you do if you were Bill?” knowing that your roommate Dave has drunk your apple juice, the mean for the Canadian group was significantly higher than the Chinese group, $F(1, 387) = 99.34, p < .0001, \eta^2 = .20$, indicating that the Canadians were more likely than Chinese to take action in this situation.

3. In answering the question “If you were me, what would you do?” knowing that Joan, my trusted friend, needed money and that I happened to have the amount in the bank, the mean for the Canadian group was significantly higher than for the Chinese group, $F(1, 387) = 57.02, p < .0001, \eta^2 = .13$, showing that Canadians were less likely than Chinese to lend money to a trusted friend.

4. In answering the question “If you were Alan, what would you do?” knowing that Alan just broke up with his girlfriend after a 2-year steady relationship and Alan had two good friends in town, the mean for the Canadian group was significantly lower than for the Chinese group, $F(1, 387) = 24.78, p < .0001, \eta^2 = .06$, indicating that Canadians were more likely than Chinese to talk to their friends about a personal matter.

5. Finally, in answering the question “If you were Patricia’s roommate, what would you say?” when you see Patricia wearing a mismatched outfit, the mean for the Canadian group was significantly lower than for the Chinese group, $F(1, 387) = 42.76, p < .0001, \eta^2 = .10$, showing that Canadians were more likely than Chinese to point out the embarrassing truth to a roommate.

Thus Hypothesis 1 was supported by variables 1, 2, and 3, but not by variables 4 and 5.

Gender and self–other boundary: Testing Hypothesis 2

Hypothesis 2 stated that males were more independent

than females in defining their personal boundaries with close-others, and females were more interdependent than males in construing the same relationships in both Canadian and Chinese samples.

Gender main effect. ANOVA indicated that no main effect for gender existed in any of the five dependent variables, but a gender by culture interaction was found in two of the five variables.

1. In answering the question “If you were me, what would you do?” knowing that Joan, my trusted friend, needed money and I happened to have the amount in the bank, Canadian females had a higher mean score than Canadian males, whereas Chinese males and females had similar mean scores, $F(1, 387) = 5.43, p < .05, \eta^2 = .01$, showing that Canadian females were less likely than Canadian males to lend money to a trusted friend, whereas Chinese females and males were equally likely to do so.

2. In answering the question “If you were Patricia’s roommate, what would you say” when you see Patricia wearing a mismatched outfit, Canadian females had a higher mean score than Canadian males, whereas Chinese males had a higher mean score than Chinese females, $F(1, 387) = 5.67, p < .05, \eta^2 = .02$, indicating that Canadian males were more likely than Canadian females to tell the embarrassing truth to a roommate, and Chinese females were more likely to do so than Chinese males.

Thus Hypothesis 2 was also partially supported.

Reasons for doing what they would or would not do

There were similarities as well as differences in the reasons offered by Canadian and Chinese participants for what they would or would not do in a specific situation. Examples are offered in Table 2. Note that in some categories, the numerators were very small. This was due to the small number of participants making that particular choice in answering that particular question. For example, only 11 out of 170 Canadian participants chose not to raise the apple juice issue with Dave after he mistakenly drank his roommate’s apple juice. Therefore, the number of Canadian participants who offered reasons “for not raising the apple juice issue with roommate” would be equal to or smaller than 11 because not every participant offered a reason. To compare the proportions of the two cultural groups in each category, Z-tests were performed for expected values greater than 5 and Fisher’s Exact Tests were used for expected values smaller than 5.

TABLE 2
Types of reasons by Canadians and Chinese

Reasons	Chinese		Canadians		p
	N	%	N	%	
1. Reasons for not raising the apple juice issue with roommate					
It is not worthwhile to raise the issue because inter-personal harmony is more important than a little apple juice.	85/99	85	3/12	25	.00
Apple juice gets stale fast or apple juice is cheap.	10/99	10	7/12	58	.00
2. Reasons for giving one of the five vases to one's father					
He is a nice guy or I like him	5/156	3	30/61	49	.00
He is my father.	80/156	51	21/61	34	.01
It is only right to be filial to my father.	65/156	41	0/170	0	.00
3. Reasons for not giving one of the five vases to one's father					
It is mine. Why should I give it to him?	5/13	38	15/18	83	.02
I don't want to embarrass him.	10/53	18	60/90	66	.19
These vases are old. I will buy him a new one next time.	40/53	75	20/90	22	.00
4. Reasons for not sharing inner thoughts with a good friend					
I prefer keeping my thoughts to myself.	10/65	15	5/11	45	.02
Real pains can not be shared; one has to suffer alone.	15/65	23	3/11	27	.51
Words spread fast and I don't want others to laugh at me.	25/65	38	2/11	18	.31
5. Reasons for not telling the truth about roommate's outfit					
Tastes differ from person to person.	3/20	15	5/7	71	.01
I don't want to embarrass her.	80/105	76	18/21	85	.31
I don't tell others what I really think about them.	14/20	70	1/7	14	.02

The values of the numerators were based on the number of participants giving that particular reason. The values of the denominators were based on the number of participants making that particular choice.

DISCUSSION

The data generated three findings. Each is intriguing and important, whether it be a support or a negation of the hypotheses. Each will be discussed below.

Sharing material vs. opinions/thoughts

In comparison with Canadians, Chinese were more likely to share material belongings with close-others and less likely to share their opinions/thoughts. This finding is in part (i.e., sharing material belongings) in agreement with the theories of self-construal (Markus & Kitayama, 1991, 1994) and I-C (Hofstede, 1980; Triandis et al., 1986), and in part (i.e., sharing opinions/thoughts) in disagreement with the assumptions of these theories. According to self-construal and I-C, Chinese should be more likely than Canadians to share both material belongings and opinions/thoughts with close-others since they are more inclined to take care of others' "preferences, feelings, and interests" (Markus & Kitayama, 1994, p. 459) when choosing their route of behaviour.

This finding seems to indicate that both Canadians and Chinese are true to their own "internal structures of

preferences, rights, convictions, and goals" (Markus & Kitayama, 1994, p. 459), but in different ways. Canadians are more true to their material belongings than Chinese and Chinese are more true to their opinions/thoughts than Canadians. These two types of self-construals reflect different interpersonal strategies, explicable by their respective mode of existence. Behind the frequent exchanges of services and material belongings lie the reclusive Chinese minds (Elvin, 1985; Hsu, 1985). Similarly, beneath the frequent phone calls and e-mail exchanges hides a stingy Canadian who would present a small gift with a huge and beautiful wrapping. In a materialistic society, a person is defined by what he or she owns. In a culture with heavy Confucian influence, a person's thoughts are his or her most valuable property. Another social factor for the Chinese not wanting to share their thoughts is the lack of privacy—words spread fast in collectivistic societies. A person can't be too careful about disclosing his or her thoughts. Furthermore, instances of people who were severely persecuted for their "wrongful thoughts" during the Cultural Revolution (1966–1976) are still remembered among the Chinese.

The above finding seems to indicate that human beings, regardless of cultural backgrounds, are willing

to share their less important belongings with others and keep the most important belongings to themselves. The most inaccessible region is his or her material belongings for a Canadian and opinions/thoughts for a Chinese.

Reasons and insights

In this study, both Canadians and Chinese were willing to share their material belongings and opinions/thoughts with close-others; the difference lies in the proportion of participants in each category. It can be argued that it is simplistic to put a cultural group in one category or another, i.e., all Canadians are individualistic and all Chinese are collectivistic.

Another significant difference is embedded in the reasons Canadians and Chinese offered for what they would or would not do in a specific situation. Again, in each category of the proposed behaviour, the reasons given by Canadians and Chinese are both similar and different. The similarity can be explained by the overlapping part of their common human nature, and the differences arise from their respective cultural upbringings. For Chinese, the reason for not raising the apple juice issue with a roommate is to maintain interpersonal harmony. Whereas for Canadians, the reason is that apple juice is cheap and therefore not worth mentioning. For a Canadian not to give a vase to his father, the reason was "it is mine. Why should I give it to him?" For a Chinese to give a vase to his father, the reason was: It is only right for a son to be filial to his father. Apparently, this answer reflects the Confucian idea of fulfilling one's responsibility to one's parents (Tu, 1985; Wu, 1984). The reasons for not telling the truth about a roommate's nonmatching outfit were also different for a Canadian (e.g., tastes differ from person to person) and a Chinese (e.g., I don't tell others what I think of them.). The Canadians clearly show respect for the other's personal preference and the Chinese were thinking "what can I benefit from telling her the truth?" Underneath the giving and generous Chinese lies a shrewd mind. Underneath the frank Canadian lies a materialistic mind. In both cultures, people choose their course of action according to their culture's dictations. In doing so, they display their cultural footprints.

Gender differences

This study found no consistent pattern in gender similarities and differences in the Canadian and Chinese samples. However, some gender differences were found in two situations. The Canadian females were more likely than Canadian males to lend money to a trusted friend. Canadian males were more likely than Canadian females

to tell their roommate the embarrassing truth of the nonmatching outfit. The pattern in the Chinese sample was the opposite: Chinese females were more likely than Chinese males to tell a roommate the embarrassing truth of the nonmatching outfit.

This inconsistent pattern in gender differences in the Canadian sample indicates that further research is needed to test Cross and Madson's assertion (1997) that male-female differences in Western societies may synchronize with the differences between persons of individualistic and collectivistic cultures.

Results on gender comparisons in the present study seem to be in line with previous findings. Wang (2001) reported inconsistent gender differences in American and Chinese samples. Other researchers (e.g., Bond & Cheung, 1983; Ip & Bond, 1995) also found no gender differences when comparing individualistic and collectivistic tendencies between American and Chinese.

Given the varied findings regarding self-construal between males and females in individualistic and collectivistic cultures, more research is needed to establish a coherent theory. Do males and females in individualistic and collectivistic cultures construe themselves differently? If so, is there a consistent direction of the differences?

Finally, the author would like to remind the reader to use caution in generalizing the results of the present study. University students may or may not represent other age groups, and self-concepts may change over the life span (Berzonsky, 1990; Pipp, Shaver, Jennings, Lamborn, & Fischer, 1985). The second limitation of this study is the limited number of scenarios used to measure thought sharing and material sharing. To confirm the results of this study, more diverse scenarios are needed to test the hypotheses in the general population as opposed to university students.

This article contributes to the field in that it reports pioneering research, via both qualitative and quantitative means, on sharing material belongings and opinions/thoughts in samples from an individualistic and a collectivistic culture. The findings of this study illustrate, specify, and challenge the universal utility of the theories of self-construal (Markus & Kitayama, 1991, 1994) and I-C (Hofstede, 1980; Triandis et al., 1986). In comparison with Canadians, Chinese were more likely to share material belongings with close-others and less likely to share their intimate thoughts. The first part of this finding provides unequivocal support for the theories of self-construal (Markus & Kitayama, 1991, 1994) and I-C (Hofstede, 1980; Triandis et al., 1986) whereas the latter part challenges an important assumption of these theories, which contends that collectivists (e.g., Chinese) should be more likely than

individualists (e.g., Canadians) to share everything they own (including opinions) with close others. This unconventional finding proposes the division of material belongings and thoughts/opinions sharing of the self–other boundary in future cross-cultural self-construal research.

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APPENDIX 1

Scenarios and questions

Scenario 2

Bill is a graduate student at UVic, and he has a new roommate called Dave. This morning when he opened the refrigerator, he found that half of his apple juice was gone. Right beside his apple juice was Dave's apple juice. He knew that Dave must have drunk his apple juice by mistake.

Question: If you were Bill, what would you do and why?

Scenario 3

Joan and I have been good friends for 2 years. Yesterday Joan told me that she would like to visit her sister in Toronto whom she had not seen for 3 years. She did not have enough money to buy a plane ticket because her term deposit at the bank (\$3000) would not be available until next month. Joan asked me if I could lend her some money, and I happened to have some savings available. Joan has been a trustworthy friend, and I value her friendship.

Question: If you were me, what would you do and why?

Scenario 4

Recently Alan broke up with his girlfriend after a 2-year steady relationship. He feels very sad about it. Although he has been talking to a counsellor, he still feels like talking to someone else sometimes. He has two good friends in town.

Question: If you were Alan, what would you do and why?

Scenario 5

My roommate Patricia is a lovely girl of 24, and we are good friends. Yesterday morning she put on her favourite sweater and her favourite shirt, but they don't look good together at all! She asked me what I thought of it.

Question: If you were Patricia's roommate, what would you say and why?

