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ABSTRACT

Four studies are reported to investigate the impact of cultural orientation of individualism vs. collectivism and independent vs. interdependent self-construal on trust. A cross-country comparison of trust tendency across 42 countries from the World Value Surveys (study 1) indicated that an individualism orientation is associated with greater trust tendency than a collectivism orientation. An individual level survey confirmed this country-level relationship. One additional experiment that manipulated self-construal provided causal evidence for this relationship. A fourth study using the trust game (Berg, Dickhaut, and Cable 1995) indicated the role of stranger vs. friend in moderating this relationship. Divergent operationalization of cultural orientation and measurement of trust indicates the relationship is robust.

Keywords: Cultural orientation; self-construal; consumer trust

JEL: A30, B20, C90

IMPORTANCE OF TRUST

Trust is essential to many types of modern social interactions (Bagozzi 1975; Righetti & Catrin, 2011) from buying a used car, purchasing on-line, deciding on a relationship partner, to choosing among different careers. The benefits gained from these interactions depend on trust, i.e., the willingness of people to take risks by placing their confidence in others to behave in benign and non-exploitative ways. Accordingly, trust has received increasing attention from scholars across different disciplines such as psychology, sociology, economics, and marketing. As such, the antecedents and consequences of trust have been of special interest (Russell Sage Foundation News, 2000). Regarding the consequences of trust, it has been found that trust can lead to satisfaction and higher perceived values and accordingly, can induce customer loyalty in relational exchanges (Shankar, 1994; Sirdeshmukh, Singh, & Sabol, 2002). In the context of advice seeking, White (2005) found that trust was the precondition for people to accept experts' recommendations. Further, trust of a country has been found to influence that country's economic performance. For example, Knack and Keefer (1997) ran an econometric analysis on the relationship between a country's trust score across 29 market economies (based on the World Values Study Group 1994) and that country's economic development. After controlling for a host of alternative explanatory variables such as education level, income level, climate etc., they found a positive relationship between the two (see also Zak & Knack, 2001). They proposed that if a country wanted to become economically developed, it had to first develop trust within its society. These results clearly indicate that trust is very important for a society's economic growth.

Given the importance of trust, social psychologists are increasingly interested in understanding the antecedents for peoples' trust decisions. Most of the literature has focused on identifying the dispositional traits that determine individuals' level of trust (See Righetti & Catrin 2011 for a related review). Additionally, an increasing number of studies suggest that trust decisions are a constructive and dynamic process, and determinants for trust decisions might be culturally conditioned (See Camerer 2003 for a discussion). What is the role of cultural orientation in trust? As we know, people in social interactions come with divergent cultural backgrounds. Will their cultural heritage affect how they form trust evaluations? If yes, how?

A careful reading of the literature indicates two conclusions: first, even though trust is essential to social interactions, studies on trust have been relatively sparse in the social psychology literature; second, existing literature regarding the effect of cultural orientation on trust provides conflicting predictions and inconsistent findings. For example, based on the generalized exchange theory, Yamagishi and Yamagishi (1994) proposed and also found that Japanese, a typical collectivistic culture, tend to display less trust than their American counterparts, a typical individualistic culture (See also Buchan, Croson, & Dawes, 2002; Huff & Kelley, 2003). But Doney, Cannon, and Mullen (1998) proposed that cultural orientation of individualism versus collectivism will only affect the mechanism of trust building, in the sense that trust building in the individualistic cultures tends to be more calculation-based rather than prediction-based, but there should be no difference on the level of trust across cultural groups. When comparing Canadian and Japanese individuals, Cadsby et al (2007) found that the Japanese participants in their studies tended to show higher levels of general trust than the Canadian participants.

One limitation of these early studies is that they used country as a proxy for the cultural orientation, but no measurement of cultural orientation of individualism or collectivism has been explicitly implemented. Additionally, no study has ever tried to manipulate the construct of cultural orientation and investigate its effect on trust. Further, no study has ever provided analysis at the country level by measuring individualism versus collectivism (see Cohen, 2001; Henry, 2009; Oyserman, Coon, & Kemmelmeier 2002 for related discussions) and at the individual level by measuring the independent versus interdependent self-construal (Oyserman & Lee 2008; Trafimow, Triandis, & Goto 1991). Accordingly, the conclusion between cultural orientation and trust is very tentative; the current research aims to address these concerns.

THE CONSTRUCT OF TRUST

One of the most commonly agreed-upon definitions of trust is that it is an expectation of good will and benign intent under social uncertainty (Rotter, 1967, 1980; Rousseau et al., 1998; Russell Sage Foundation News 2000; Yamagishi & Yamagishi, 1994). Both the belief and behavioral intentions of the trusting exchange partner on the trusted partner's reliability and integrity have been conceptualized as important components of the construct of trust (Righetti & Catrin, 2011; Wieselquist, Rusbult, Forster, & Agnew, 1999).

Trust has been well distinguished from related constructs such as trustworthiness, reciprocity, assurance, and deterrence (Buchan et al., 2002; Colquitt, Scott, & Lepine, 2007; Rousseau et al., 1998). Compared to these constructs, the key feature of trust is the tendency to believe that the other interaction partner has good will and the competence to make the exchange beneficial when the exchange outcome is uncertain. That is, trust is to put the trusting agent in a

vulnerable situation by casting confidence on the other side (Righetti & Catrin, 2011; Wieselquist et al., 1999).

In line with this conceptualization, scholars have developed different ways of measuring this construct such as the interpersonal trust scale (Rotter, 1980), general trust scale, and civic norm scale (World Values Study Group, 1994). Within behavioral game studies, the following games have been used to assess the trust tendency: the trust game, the public goods game, and the ultimatum game (See Camerer 2003 for a discussion), but no research, according to our knowledge, has used these different measures in the same study to see whether they provide convergent results. We hope to fill the gap in this research.

A variety of factors have been proposed as the determinants of trusting tendency. Below, we highlight the key determinants, which lay out the foundation for our thesis. For example, Moorman et al. (1993) demonstrated that individual, interpersonal, organizational, and project factors were important antecedents for trust. In an extensive review, Colquitt, Scott, and Lepine (2007) found that the ability, benevolence, and integrity of the trusted side were the important determinants for the propensity to trust in the organizational context. Structural factors such as network strength (Buchan et al. 2002), and economic factors such as opportunity cost (Berg, Dickhaut, & McCabe, 1995) have also been demonstrated as important antecedents of trust.

CULTURAL ORIENTATION, SELF-CONSTRUAL AND TRUST

Cultural Orientation and Self-Construal

Cultural orientation has received increasing attention in economics and social psychology research (e.g., Camerer, 2003; Nisbett, 2003). The construct of individualism versus collectivism has been most prominent (Hofstede, 2005; Triandis 1989). Based on Hofstede (2005), individualism stands for the cultural values for individuality and everyone in that society should look after himself or herself and his or her immediate family only. And collectivism stands for the cultural values of connectivity and people in a society from birth onwards are integrated into strong cohesive ingroups, which throughout people's lifetime continue to protect them in exchange for loyalty. Conventional cross-cultural research tends to compare different countries by inferring the role of cultural orientation of individualism vs. collectivism in affecting the interested variables; both conceptual and methodological concerns have been raised for this approach (See Oyserman & Lee 2008 for a review). Building upon the pioneering work of Trafimow, Triandis, and Goto (1991) and by manipulating cultural orientation of individualism and collectivism experimentally (See Oyserman & Lee 2008 for a review), researchers interested in the causal role of cultural orientation tend to investigate the effect of individualism vs. collectivism via self-construal.

Self-construal is defined by how people perceive themselves to be linked (or not) with their social contacts (Markus & Kitayama, 1991). People with an *independent* self-construal see themselves as autonomous, view themselves as distinct from the group, and tend to place high value on uniqueness, individual accomplishments, and achievement. People with an *interdependent* self-construal see themselves as part of a larger group, value connectedness, conformity, and group harmony, and place a high value on safety and security.

A growing number of studies have shown that between-country differences in individualism and collectivism lead to differences in self-construal. It is also well documented

that individuals actually hold both types of self-construals simultaneously, and perceptions, judgments, and behaviors are influenced by the self-construal that happens to be activated at any given time (Gardner, Gabriel, & Lee, 1999; Trafimow et al., 1991; Oyserman & Lee, 2008). Thus, people in individualistic (collectivistic) societies have both self-construals, but the independent (interdependent) self-construal is the one that tends to be chronically accessible, activated the most, and most likely to guide behavior (Singelis, 1994). Moreover, self-construals can be temporarily primed such that those with generally independent or interdependent self-construals can be induced to take the opposite perspective. That is, by activating the self-construal of individuals within a culture through priming, researchers have obtained many cross-cultural differences that had previously been witnessed only in between-country comparisons (Gardner et al., 1999; Hong et al., 2000; Oyserman & Lee, 2008).

Cultural Orientation, Self-Construal and Trust: Prediction

What is the relationship between cultural orientation and trust? At first sight, one would expect that there is a positive (negative) relationship between collectivism (individualism) and trust. This is because a collectivistic cultural orientation tends to emphasize the importance of social relationships in one's life, and this would increase the accessibility of trust construct, as trust is an important part of social relationships. In contrast, an individualistic cultural orientation tends to emphasize individuality and focusing on the self, then trust should be lower in this kind of society as focusing on the self implies less cooperation and more competitiveness with others, which are not compatible with trusting others. But a careful reading the literature suggests otherwise.

First, at the individual level, the self-construal literature suggests that independents would show higher levels of trust than interdependents. This prediction is consistent with the conceptualization of self-construal. For example, those with an interdependent self-construal tend to value social cohesion with their close social contacts, as these social contacts are part of their self-concept (Markus & Kitayama, 1991). Accordingly, they tend to rely on the ongoing relationships with their close social contacts to cope with their social uncertainty, as these ongoing relationships seem to be available and natural for them to draw upon when dealing with their uncertain social interactions. As a result, they tend to rely less on people not in their ongoing relationships and also have a relatively low level of general trust toward people who are not close social contacts. In contrast, those with an independent self-construal are more concerned with expressing individuality and freedom. They would rather interact with someone who shares some common interests even though socially distant than someone who is socially close but share no common interests. Accordingly, they seem to be less likely to rely on the ongoing relationship with their close social contacts, but rather rely on the generalized rules and social institutions to deal with their social uncertainty. As such, they tend to have relatively high levels of general trust toward people in general. If this reasoning holds, people with an independent self-construal would be more likely to experience higher levels of general trust than those with an interdependent self-construal.

At the country level, we would expect the similar prediction based on the literature of individualism vs. collectivism. More specifically, based on Schwartz (1988; 1992), an individualistic society endorse the values of autonomy and egalitarianism, including the values of responsibility, helpfulness, and equality. In other words, these values would encourage social members to take responsible actions and to rely on general trust to engage in their social

interactions. Accordingly, there should be a positive relationship between individualism and general trust. On the other hand, it is well documented that in collectivistic societies people tend to treat their in-group and out-group members very differently, and this social practice calls for more suspicion towards people who are not part of one's immediate social group. Accordingly, people in collectivistic societies tend to show less trust than those in individualistic cultures.

Additionally, it has been found that individualism is positively correlated with economic development (Hofstede, 2005). And researchers have proposed that trust can lead to economic development. For example, Knack and Keefer (1997) found that a country's trust score is positively correlated to that country's economic development as indicated by per capita income level. Based on these empirical relationships, one would also expect that a country's individualism score should be positively correlated with that country's trust level.

Further, Fukuyama (1995) argued that individualistic cultures such as the U.S. tend to emphasize non-kinship generalized trust and collectivistic cultures such as Japan and China tend to emphasize close-knit kinship and family-related connections for trust. For example, companies in the U.S. can grow to a large scale and it is common to gauge high levels of trust among business managers in these companies without any family connections. In contrast, individuals in private companies from the Chinese culture cannot grow to a large scale based solely on trust in one's family members, but from non-outsider professionals as well. Based on this, one would expect that individualistic countries tend to show higher levels of generalized trust than collectivistic countries.

Lastly, this prediction is also consistent with Yamagishi and Yamagishi's (1994) thesis that collectivistic cultures, such as Japanese society, tend to rely on mutual monitoring to prevent free-riding during social uncertainty. This type of cultural orientation tends to encourage

commitment to small scale, closely knitted social networks while also discourages social reliance on outsiders. For members outside their close social networks, they tend to display low trust in general. We expect that members from individualistic cultures will tend to display higher levels of trust than those from collectivistic cultures.

To test the relationship between cultural orientation and trust, we first ran correlations by measuring a country's trusting score and their related individualism score (see Henry, 2009; Vandello & Cohen 1999 for a similar approach). The main effect of cultural orientation on the trust hypothesis will be tested with secondary data.

STUDY 1

Method

The percentage of people who expressed a propensity to generally trust in other people in 42 countries from the year 2000 were obtained from the World Values Survey (World Values Survey, 2003) served as the criterion variable, because these are the most updated data available. The World Values Survey is a global research project that explores how people's values and beliefs change over time. It is carried out by a worldwide network of social scientists who, since 1981, have conducted representative national surveys in almost 100 countries. We use The World Values Survey trust measure because it is the only source of empirical data on trust covering a majority of the world's population. More specifically, the question used to assess the level of general trust in a country is: "Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?" trust is measured with the percentage of respondents in each country who answer, "Most people can be trusted", because

this is the only available measure provided in this survey (Knack & Keefer, 1997). For example, 58.8% of people trust others in Denmark vs. 5% of people trust others in Brazil.

Data for the primary predictor variable, country-level individualism vs. collectivism, were obtained from the Geert Hofstede Cultural Dimensions website because The World Values Survey does not have such a measure of individualism (Hofstede, 2011). Individualism and collectivism are considered to be cultural-level representations of independent and interdependent self-construals, respectively. That is, the chronically accessible self-concepts of individuals from individualistic cultures tend to be independent, whereas the chronically accessible self-concepts of individuals from collectivistic cultures tend to be interdependent (Markus & Kitayama, 1991; Oyserman & Lee, 2008; Trafimow et al. 1991). Because Hofstede conceives individualism and collectivism as opposite poles along a continuum, a country that is more individualistic is then less collectivistic, and vice versa (Hofstede, 2001, 2005). The World Values Survey provides 58 countries with trust scores, but 13 of them do not have the measured individualism scores, 3 of them do not have the GDP per capita scores; both were excluded from the analyses. Conclusions were about the same when different missing value techniques were used on these 15 countries.

We also collected data that might be related to either individualism or general trust, and might make the individualism-general trust relation spurious. To account for this possibility, we included the power distance belief, which has been found to be consistently and significantly correlated with individualism, as a statistical control.

Knack and Keefer (1997) have shown that economic development might be the consequence of general trust so it is problematic to list that as a statistical control. To test the relationship between trust and economic development, we included data on a country's per capita

income in year 2000 (the same year of the trust score), obtained from the United Nations website (United Nations Statistics Division 2006), detailed data can be found in table 1.

---Table 1 about here---

Results and Discussions

We expected that the level of a country's individualism would be positively correlated with its level of trust. Correlational analyses confirmed this hypothesis. A country's level of individualism is positively correlated with the trust measure (r (40) =.52, p <.05).

To confirm that these relationships are robust, after controlling for alternatives such as the power distance belief which has been consistently found to be significantly correlated with individualism (r (40) =-.61, p <.05), we ran further partial correlational analyses. The correlation between the individualism and trust measure was marginally significant after controlling for the power-distance belief, (r (39) =.30, p <.06). Thus, our hypothesis was confirmed through this cross-country comparison.

Study 1 demonstrated a relationship between individualism and trust at the country level. This provides real-world data that supports our hypothesized relationship, but the data are quite limiting as are most secondary data. Will the relationship hold at the individual level with a different measure of general trust? The next study will test this possibility with primary data at the individual level.

STUDY 2

Design and Sample Description

Participants, Design, and Procedure. Study 2 employs a survey of adult individuals in which self-reported general trust and chronic self-construal were measured. We used a snowball sampling approach to obtain participants. Thirty-two students from a marketing research class in a major southwestern university each asked five adults to complete the survey. In total, 146 usable surveys were completed and no participants were correct in guessing the research purpose. The participants in this study are a broad cross section of the population. Their ages range from 18 to 56 years, 52% are female, 30% are married, and 16% have an annual income above 50,000 dollars. Regarding ethnicity, 45% Hispanic, 40% white, 10% African American, and 5% Asian. These Hispanics are born in U.S.

Measures

Independent variable. We used a 6-item (Halmiton & Biehal, 2005; Zhang & Shrum, 2009) scale to measure self-construal. In this scale, three items measured independent self-construal ("This survey task encouraged me to think of myself", "I am focused on myself," and "A sense of 'I' is at the top of my mind") ($\alpha_{\text{Independent}} = .80$), and the other three items measured interdependent self-construal ("This survey task encouraged me to think of others I care about", "I am focused on others I care about," and "A sense of 'We' is at the top of my mind") ($\alpha_{\text{Interdependent}} = .78$). The difference formed the self-construal composite score; a higher number indicates more independence. ($M_{\text{Independent}} = 5.89$, $SD = 1.16$; $M_{\text{Interdependent}} = 5.54$, $SD = 1.00$; $M_{\text{Difference}} = 0.37$, $SD = 1.45$)

Dependent variable. Respondents were asked to "indicate how likely people around you will do the following: Claiming government benefits which one is not entitled to; Avoiding a fare on public transport; Cheating on taxes if one has the chance; Keeping money that one has found; Failing to report damage one has done accidentally to a parked vehicle" (1--extremely unlikely, 7--extremely likely). These items were highly correlated (α =.88) and the average was used to measure general trust. By reverse-coding these items, a higher value indicates more trust. Knack and Keefer (1997) have shown that this is a more reliable measure of general trust compared to the single item scale in study 1.

Results and Discussions

We expected that the level of a person's independent self-construal would be positively correlated with its level of trust. Consistent with this reasoning, there was a significant correlation between respondents' degree of independent self-construal and the general trust measure (r (144) = .28, $p < .05$) (M_{Trust} = 4.59, SD = 1.60).

Studies 1 and 2 provide real-world data that support our hypothesized relationships, but these data are limiting as the cultural orientation of individualism was measured rather than manipulated. Although we directly measured individualism rather than used the country as a proxy for individualism (this rules out many alternative explanations; see Oyserman et al. 2002), it is still hard to draw any causal inference based on the correlation between the measured individualism and general trust, as this correlation is subject to alternative explanations. The next study further investigates the cultural orientation (self-construal)—trust relation by experimentally manipulating self-construal.

STUDY 3

Method

Participants, Design, and Procedure. Participants were 72 undergraduate students (37 women, 35 men) from a major southwestern university who participated in return for partial course credit. These participants' age ranged from 19 to 51. All participants provided informed consent. The design was a one-factor experiment in which self-construal was manipulated via a priming procedure to determine its effect on trust. Participants were told they were taking part in two unrelated tasks. As part of the first task, they completed a writing task that was intended to prime either an independent or interdependent self-construal. In the second task, which was billed as a study of students' views of Target, participants indicated their trust toward Target. Finally, participants were asked their thoughts on the purpose of the study. No one correctly guessed the research purpose. Participants were then debriefed and dismissed.

Priming Procedures and Pretest. In the priming procedure, which was used successfully in prior studies (Gardner et al., 1999; Trafimow et al., 1991; Zhang & Mittal, 2007; Zhang & Shrum, 2009), participants were asked to take five minutes to write down all of the thoughts they had after being told either "Remember, enjoying your life is what it is really all about" (independent) or "Remember, enjoying relationships with your family or friends is what it is really all about" (interdependent). Assignment to groups was random.

Thirty-six participants (20 men, 16 women) from the same participant pool who did not participate in the main study took the pretest to assure that the self-construal priming procedure

worked as intended. Half of the participants were randomly assigned to the interdependent prime, and the other half to the independent prime condition. Participants first completed the priming task described in the previous section, and then completed the 6-item scale mentioned above. An analysis of variance (ANOVA) indicated that the groups differed significantly, as expected, on the manipulation check measure ($M_{\text{Interdependent prime}}$ = -1.83, SD = 1.16 vs. $M_{\text{Independent prime}}$ = .33, SD = 1.54; F (1, 34) = 14.29, $p < .05$).

Measure. Trust was measured by asking participants to indicate their feelings toward the discount retailer Target (which is a large U.S. retail chain store like Wal-mart but with relatively higher quality merchandise), at that moment, on a 7-point scale. These items were: "It is reliable; It is trustworthy; It honors its promises; It is honest; I admire Target and its business practices" (1--strongly disagree, 7--strongly agree). These items were highly correlated (α = .91) and were averaged to form a composite score: a higher value indicates a higher level of trust. We use this task to measure trust towards Target because all participants know this object, thereby not requiring a description.

Results and Discussions

We expected that those in the independent self-construal condition would have a higher level of trust toward Target than those in the interdependent self-construal condition. A one-way ANOVA confirmed this expectation. Independent-primed participants (M = 5.28, SD = .94, n = 36) had more trust toward Target than did interdependent primed participants (M = 4.80, SD = .93 , n = 36; F(1, 70) = 4.75, $p < .05$).

The results of this study show that self-construal affects general trust, as indicated by the trust scale toward Target. Moreover, our ability to manipulate self-construal via a priming methodology helps eliminate some possible alternative explanations to which the previous correlational findings were vulnerable. Further, there is no obvious link between the concept of trust and the content of what participants were asked to think about, and this rules out the possibility that demand effect is driving our results.

Why thinking independently is going to make participants trust Target more? We believe that the independent thinking tends to activate the value of expressing individuality and knowledge on how to interact with social contacts. As we argued earlier, the independent thinking would encourage people to interact with someone who shares some common interests even though socially distant than someone who is socially close but share no common interests. Accordingly, they like to rely on the generalized rules and social institutions to deal with their social uncertainty. As such, they tend to show relatively high levels of general trust toward a social institution like Target.

In this study, we obtained the effect on trusting tendency by priming participants with subtle self-construal orientation. The participants did not see the link between the self-construal prime and their evaluations on the trusting scales. One could argue that this test was not subtle enough, and what we obtained was a demand effect. Would the effect hold true for some more rigorous measure of consumer trust? In other words, were people just saying that they were more trusting, but would not actually behave in a more trusting way?

A trust game, developed by Berg, Dickhaut, and McCabe (1995; described shortly), has been established as a rigorous test of trusting tendency (Camerer, 2003). Next, we used the trust game to test the effect of cultural orientation on consumer trust.

We are also interested in understanding the boundary condition for the self-construal effect on trust. Based on Fukuyama (1995), individualistic cultures such as the U.S. tend to emphasize the non-kinship generalized trust while collectivistic cultures such as Japan and China tend to emphasize the close-knit kinship and family-related connections of trust. A large line of literature shows that family members serve as the strongest social ties for both individualistic and collectivistic members; friends follow closely behind while colleagues and co-workers are stronger than strangers in terms of social ties (see Buchan et al., 2002 for a discussion). Based on Fukuyama (1995), there might not be any difference between independent and interdependent self-construals for family members; however, when dealing with close friends, people with independent self-construals tend to be more likely to trust these social contacts than those with interdependent self-construals. For complete strangers, previous results suggest that it is difficult for both independents and interdependents to find reasons to trust them (Buchan et al., 2002; Rempel, Holmes, & Zanna, 1985; Wieselquist et al., 1999). In other words, we propose that the self-construal effect on trust will be more pronounced for trusting a close friend than for a complete stranger. This hypothesis will be tested in the next study.

STUDY 4

Method

Participants, Design, and Procedure. Participants were 239 undergraduate students from a major southwestern university who participated in return for partial course credit. All participants provided informed consent. The design was a two factorial experiment (Self-

construal: Independent vs. Interdependent) X (Friend vs. Stranger) to determine the effects on trust. Participants were randomly assigned to the four between-subjects conditions. They were told they were taking part in several unrelated tasks. As part of the first task, they completed a writing task and pronoun check that was intended to prime either an independent or interdependent self-construal. In the next task, participants took part in a trust game billed as an investment game, described shortly. Finally, participants were asked their thoughts on the purpose of the study. No one correctly guessed the research purpose. Participants were then debriefed and dismissed.

Priming Procedures. Previous studies indicate that the investment game needs a strong manipulation to get a testable effect (Buchan et al., 2002). In this study, we used the same prime as Study 3 and incorporated the pronouns check task (Gardner et al., 1999). The pronouns check task has been shown to induce systematic effect on self-construal. In the independent condition, participants were asked to circle pronouns such as 'I", "my" and "me"; in the interdependent condition, participants were asked to circle pronouns such as "we", "our" and "us". This combination of self-construal primes has been commonly used in the literature (Gardner et al., 1999).

Friend versus Stranger. In the friend condition, participants were told to "Imagine you are doing this investment game with the responders who are your close friends." In the complete stranger condition, they were told to "Imagine you are doing this investment game with the responders who are students from another university." This manipulation was taken from Buchan and Croson (2004).

Measure. In this study, we used the trust game to measure the trusting tendency. Compared to the direct trusting scale, this game has been credited as being able to reduce demand effect (Cramer, 2003). Participants were told to imagine that they have 20 dollars for participating in the study, and that they have the option to keep some of the money or invest some of the money in an investment game. The investment partner would be unknown, and the investment money would be tripled (see Appendix for detailed instruction).

They were specifically told that, "if you invest 2 dollars, you take away 18 dollars; the 2 dollars reach to the other person will become 6 dollars, the other person will decide how much money to return to you, but you should know that the other person can return as much or as little as she wants." The economic equilibrium predicts that no investment and no reciprocity will take place in this game, but empirical studies have repeatedly shown that people do invest substantial amounts of money and the trusted partners do return the investment (See Camerer 2003 for a related review). In this game, the amount of money invested served as the direct measure of the trusting tendency. The amount of money returned served as the direct measure of the reciprocity tendency. Previous studies have shown that the imagined investment game was able to tap into the trust decisions just as a real investment (Buchan et al., 2002; Buchan & Croson, 2004). For this measure, it had a lot of variations (M = 6.64, SD = 4.60), consistent with the previous findings.

Results and Discussions

We expected that those in the independent self-construal condition would show higher trusting tendency than those in the interdependent self-construal condition; this effect is significant only for the friend condition, not for the stranger condition, as both independents and interdependent tend to not trust strangers. In other words, we expect that those in the independent

self-construal prime will send more money to trusted others than those in the interdependent self-construal prime, but this effect will be significant only under the friend condition.

A two-way ANOVA of self-construal priming and friend versus stranger confirmed this expectation. The main effect of self-construal prime was not significant ($F(1, 235) = .05$), the main effect of friend vs. stranger was not significant ($F(1, 235) = 1.02$, $p = .31$), but the two-way interaction was significant ($F(1, 235) = 3.98$, $p < .05$). Specific contrasts confirmed our expectation. As predicted for the friend condition, those with the independent prime ($M = 7.51$ $SD = 5.23$, n = 60) were more trusting than those with the interdependent prime (n = 60) ($M = 6.36$, $SD = 3.09$, $F = 4.12$, $p < .05$). However, for the stranger condition, no effect of self-construal on trust was observed ($M = 5.73$, $SD = 6.09$, n = 58), ($M = 5.73$, $SD = 3.03$, n = 61, $F = .67$, $p = .40$).

Using a different measure of trust, we replicated and also extended the results of Study 3. We found that participants with the independent self-construal prime showed a higher trusting tendency than those with the interdependent self-construal prime if the trusted side is a friend but not a complete stranger.

Compared to Study 3, this study was a more conservative demonstration of the effect of self-construal on trust; people not only stated that they were more likely to trust others, but also actually showed their level of trust in the trust game decisions.

In this study, we used the dollar amount in the investment game to measure the trusting tendency. The average of amount of trust is about 6 dollars, very above zero, indicating that participants are willing to trust for both friends and strangers, and this is consistent with study 1's finding where most Americans tend to think other people can be trusted. But further, we

found that this trusting tendency is even stronger for their friends than strangers. So this study provides results consistent with study 1 but offers a contingency for study 1.

GENERAL DISCUSSION

Across four different studies, we found that cultural orientation has a systematic impact on trust such that those with an independent self-construal are more likely to trust others than those with an interdependent self-construal. We provide robust support for the effect of cultural orientation on trust as we tested the effect at the country level, at the individual level, and through experimental manipulation. We obtained convergent results by using both externally and internally valid methods and by measuring trust with established scales and subtle games. We not only provide direct support for this effect by offering a mediation test of trust in economic development, but also provide indirect support by testing the role of friend vs. stranger in moderating the impact of self-construal on trust decisions. Together, these results provide a strong case for the role of cultural orientation in trust decisions.

To our knowledge, the present work is the first effort to use a multi-method approach to systematically examine the role of cultural orientation in affecting people's trust decisions. Given the complexity of the construct of trust, Colquitt et al. (2007) pointed out that the most rigorous test of trust would involve various scales in a single study to see how their zero-order and unique relationships differ from one another. Unfortunately, such research remains extremely rare in the trust literature. The present research employed multiple operationalizations of trust (single-item direct measure of general trust in Study 1, multi-item indirect measures of general trust in Study 2, and multi-item indirect measures toward a certain organization, Target,

in Study 3). Divergent operationalization leading to convergent results indicates the robustness of our results.

Implications and Future Research

Our results can help to reconcile the inconsistent results in the literature regarding the effect of cultural orientation on trust. Empirical findings on the relationship between cultural orientation and trust are very inconsistent in the existing literature. For example, through surveys, Yamagishi and Yamagishi (1994) found that U.S. participants showed higher levels of trust than their Japanese counterparts. Through a 20-year analysis of economic development, Putnam (1993) found a similar pattern of results indicating that U.S. participants showed higher levels of trusting tendency than those from Asia, specifically Korea, China and Japan. More recently, comparing seven-nations (China, HK, Japan, Korea, Malaysia, Taiwan and in the U.S. Hawaii and Illinois), Huff and Kelley (2003) found extremely strong evidence indicating that individualistic Americans show much higher trusting tendencies than collectivistic Asians. In contrast, using an investment game, Buchan and her colleagues (Buchan et al. 2002; Buchan & Croson, 2004) found that collectivistic Chinese showed a higher trusting tendency than individualistic Americans. Other researchers have obtained a similar pattern of results. For example, in the World Values Survey, Inglehart, Basanez, and Moreno (1998) found that participants from Asian countries such as China, Japan, and South Korea showed higher levels of trusting tendency than those from the U.S. (See Buchan et al. 2002 for a detailed review).

As Oyserman, Coon, and Kemmelmeier (2002) have noted, countries differ on many cultural dimensions other than individualism. Because many studies have divided countries into

groups based on only one variable (individualism) and assumed that any differences in the criterion variable were caused by individualism, researchers have no way of knowing whether it was that predictor variable or perhaps some other cultural variables that influenced the correlation between individualism and trust. As discussed by Camerer (2003, page 68), cross-cultural comparisons are interesting but need to address the potential confounds such as income differences. Additionally, most of the studies reviewed above have not measured the construct of individualism. This further compounds the problem in the cross-country comparison.

As Oyserman, Coon, and Kemmelmeier (2002) have noted, countries differ on many cultural dimensions other than individualism. Because many studies have divided countries into groups based only on individualism and assumed that differences in the dependent variable were caused by individualism, researchers have no way of knowing whether it is that predictor variable, or perhaps some other cultural variables, that influenced the correlation between individualism and trust. As noted by Camerer (2003, page 68), cross-cultural comparisons on trust decisions are interesting but need to address the potential confounds such as income differences, language differences, and other alternatives. Most of the studies in the literature have not measured the construct of individualism for cross-country comparisons. To address these concerns, we not only measured the cultural construct of individualism at country level, and self-construal at individual level, but also controlled the possible confounds such as the power distance belief. More importantly, we used a priming approach to directly manipulate the independent variable, self-construal. In this way, we hope the confidence in the effect of cultural orientation on trust will be greatly enhanced.

Our results have important implications for understanding the theoretical explanations for people’s trust decisions. Some theorists maintain that trust is a social virtue that cannot be

reduced to strategic self-interest; others claim that trusting another person is ultimately a rational calculation based on information about that person and their incentives and motivations (See Buchan et al. 2002 for a related discussion). Hardin (2000) argued that we place our trust in people whom we believe to have strong reasons to act in our best interest. Our results are consistent with the view by Yamagishi andYamagishi (1994), which argues that levels of cooperation among Asian members will be low when monitoring or sanctioning mechanisms are not present to provide assurance of others' cooperative behavior. In other words, members in collectivistic societies tend to display lower levels of general trust than those in individualistic societies.

Trust is a decision influenced by people' motives, dispositions, and their relationship norms. Existing literature on trust has focused primarily on the dispositional traits of the trustors that make them trust or not trust others (See Righetti & Catrin 2011 for a review). Less attention has been paid to the cultural background of the trustors that make people trust or not. Our findings indicated that trust decisions are not only based on individual dispositions and their social relationships, but also on the cultural backgrounds they come from. Future research should investigate the interplay of individual, relational, and cultural factors that affect people's trust decisions, and examine whether one factor might be a stronger predictor of trust depending on the characteristics of the other factors.

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Table 1

Country	Trust	IDV	PDI	GDP per capita (US$)
Argentina	20.2	46	49	3 988
Australia	39.6	90	36	31 690
Austria	31.8	55	11	35 766
Belgium	31.3	75	65	33 807
Brazil	5	38	69	3 284
Canada	45.5	80	39	30 586
Chile	22.4	23	63	5 836
Colombia	10.8	13	67	2 176
Costa Rica	40	15	35	4 349
Denmark	58.8	74	18	44 673
El Salvador	14.6	19	66	2 340
Finland	55.3	63	33	35 562
France	22.8	71	68	33 896
Germany	34.3	67	35	33 212
Greece	23.7	35	60	18 560
India	37.9	48	77	640
Indonesia	51.6	14	78	1 184
Iran	65.3	41	58	2 439
Ireland	41.5	70	28	44 644
Israel	23.5	54	13	17 194
Italy	32.2	76	50	29 143
Japan	42.2	46	54	36182
Mexico	29	30	81	6 518
Netherlands	52.6	80	38	35 560
New Zealand	49.1	79	22	24 364
Norway	63.9	69	31	54 465
Pakistan	27.4	14	55	632
Peru	8.2	16	64	2 490
Philippines	7.1	32	94	1 036
Portugal	17.4	27	63	15 970
Singapore	14.7	20	74	25 191
South Africa	19	65	49	4 675
South Korea	32.1	18	60	14 136
Spain	34.4	51	57	24 360
Sweden	62.3	71	31	38 525
Switzerland	39.4	68	34	48 385
Turkey	12.5	37	66	4 221
United Kingdom	37.2	89	35	35 485
United States	41.5	91	40	39 883

Uruguay	21.6	36	61	13
Venezuela	14.8	12	81	4 214

IDV: individualism PDI: power-distance index

Appendix

Imagine you are playing an investment game. And you have been assigned as proposer (explained shortly) in this room (referred as Room A).

In this game, each of you will be paired with a person in the next session (referred as Room B), you will not know their identity. You will notice that some other people in this room (Room A) like you are doing this study and you will not be paired with them.

Further, imagine that everyone in this session will get 20 dollars for participating in this game. People in room A (called proposer) will have a chance to send some, all or none of their participating money in an envelope (to assure that no one will know how much you propose) to those in Room B, those money will be tripled to Room B.

For example, if you put 2 dollars into the envelope, this envelope will reach Room B, and 6 dollars will be in it. If you put 9 dollars in the envelope, then it will reach Room B with 27 dollars. Those in Room B (called responder) will decide how much money to return to those in Room A. Keep in mind that they can return some, all, or none of the tripled money.

This study was designed to make sure no one knows how people in Room A and Room B play this investment game. To assure this, please don't discuss your decisions with anyone afterwards.

Imagine you are doing this investment game with the responders who are your close friends. Please state how much you would send to the responders (out of the 20 dollars participating money).

I would like to send ____dollars ____cents.