Religiosity and Cultural Identity Impact on Individual's Ingroup-bias: An Experiment of Trust Game on Chinese

Sian Wang*

Duke Kunshan University, Kunshan, Jiangsu 215316, China, sw503@duke.edu

ABSTRACT

Religion and culture are both seen to be important elements in group classification. Many previous research showed that trust between individuals decreases transaction costs, encourages collaboration, and is thus vital for economic and social success. and this is known as within-group bias. However, there has yet to be a study that compares the effects of both. This study evaluates the impact of high religiosity and strong cultural identification on an individual's perception of trustworthiness in China by combining an implicit attitude test (IAT) with a trust game with a non-student sample. And the findings are intended to show that religion has a higher influence on ingroup bias-related trust behaviors than culture, because the likelihood of using certain social categories increases with the number of times a person uses them.

Keywords: Religion, Culture, IAT, Trust Game

1.INTRODUCTION

Trust relates to our anticipation of the repercussions of exposing ourselves to later acts and potential exploitation by others [1]. Many studies have shown that trust between individuals lowers transaction costs, promotes collaboration, and is thus critical for economic and social growth [2-4].

A favorable appraisal of the in-group relative to the out-group is known as within-group bias [5]. In general, ingroup members get more trust, collaboration, and positive reciprocation than outgroup members [6]. Attitudinal trust is a measure of trust, and trust games are commonly performed [7]. According to a substantial number of theoretical and empirical studies, religious people have more in-group prejudice than non-religious people [8,9]. And under some circumstances, individualism-collectivism is linked to in-group bias [10].

The principal focus of this research is to compare the influence of religion and culture on ingroup favoritism in China, which will be measured using a non-student sample. And the predicted result is that comparison to culture, religion has a greater impact on unconscious prejudice.

The rest of the paper is written out in the following order. Section 2 explains how our research and experiment were organized, Section 3 presents the predicted results of the IAT test and trust game, Section 4 discusses how the results were interpreted, and Section 5 concludes the study and summarizes it.

2.METHODOLOGY

2.1.Study1

600 Chinese citizens will participate in the experiment in which contain 300 believe Christian and 300 believe in Buddhism. Participants will first attend an implicit attitude test (IAT) for religiosity and half of them with higher religiosity will play the trust game to estimate their ingroup bias after a month.

For the IAT test, all 600 participants are asked to take 4 different tests. For the first round, the participants are asked to press the "E" button on the left as quickly as possible when they see Christen words or pictures, like "Church" and "Bible", while pressing the "O" button on the right immediately when seeing Buddhist words like "Temple" and "Buddha". For the second round, the participants are asked to press "E" quickly when they see positive words like "Joyful". And They are supposed to press "O" when they encounter negative terms. And for the third round, the participants are asked to press "E" when viewing good or Buddhist phrases and press "O" when seeing negative or Christen words. For the last round, the religious words would reverse directions. The participants are asked to press "E" when they saw negative or Christian phrases and "O" when they saw

positive or Buddhist terms. The variations in reaction times would indicate whether these individuals prefer Christians, Buddhists, or indifferent. And participants with higher religiosity will be chosen to play the trust game which is 300 individuals.

For the trust game, Tan and Vogel's method [11] is used as a model. 300 participants will be invited back to the experiment in a month. The game will be divided into 2 stages within have 2 roles: "Sender" and "Receiver". The participants would take on different roles at each stage. That is some participants act as the receiver in the first stage and the sender in the second stage, while others play in the opposite order. It is worth mentioning that there is no interaction between Receiver and Sender, implying that the money sent by Sender would have no bearing on the money sent back by Receiver because one's trust standard may be slightly changed based on the amount of money previously sent.

For the sender stage, participants will be awarded 20 dollars. Every Sender is instructed to utilize Receivers' implicit attitudinal bias scores, which range from 1 to 10 by the IAT test, as a guideline for determining how many dollars to transmit to the Receivers. The amount of money each participant sends to each other would be noted.

For the receiver stage, the participants will be informed that this stage of the study is conducted in a hypothetical situation. They will need to decide how much money to send back to the Sender by tripling the amount. For example, they will be asked how much money you will send back to the Sender if you get 10 dollars. The same as the sender stage, the score of the IAT test of the Sender will be provided. And the number will be recorded.

2.2.Study 2

Similar to Study 1, 600 Chinese individuals will take part in the experiment, with 300 from the north and 300 from the south. After taking an implicit attitude test (IAT) to determine a cultural preference, half of the participants with a greater preference will play a trust game to determine their ingroup bias after a month.

For the IAT test, it will focus on two cultures, individualism and collectivism with the same process in Study 1 by changing the words and pictures used (e.g., words like individual, distinctiveness, and idiosyncrasy for individualism and community, group, and sharing for collectivism) And for the trust game, it will the same process in Study 1.

3.PREDICTED RESULTS

Result 1. The sender's trust grows in proportion to the respondents' religious beliefs in the same religion.

The study compares the degree of passes (trust) by Senders to Responders of each level of religious belief without investment information from others. Religion shows significant impact in life and has a tendency to identify people's action. People with stronger religious belief have more similarity with each other which enhance the trust.

Result 2. Participants who shared a collectivism culture showed higher levels of trust than those who shared an individualism culture, and there was a modest correlation between geography and culture.

Most people's social behavior in individualist cultures is mostly controlled by personal ambitions, attitudes, and collectivities' ideals. Most people's social behavior in collectivist cultures is substantially driven by aims, attitudes, and values that are shared by some collectivity. However, due to China's cultural muddle, there may be minimal variation in culture between regions.

Result 3. Participants who share the same religion are more likely to trust each other than those who share the same culture.

Does religion have a higher impact on ingroup bias than culture? By considering the difficulty of making religious and cultural impact visible, the study estimates the influence of high religiosity and strong cultural identity on an individual's sense of trustworthiness.

According to Bruner, the chance of utilizing particular social categories grows with the number of times a person "visit" them [12]. Because religion is a more significant and prominent notion in their lives, it will be used in making decisions [13]. According to Orbell et al., religious people are considered to be more cooperative, and while cooperativeness increased with church attendance, religious subjects were only more cooperative when matched with others of the same religious affiliation. But culture is less visible to appear in daily life and shows less identical features [14].

4.INTERPRETATIONS

Although the predicted results show that people who have high religiosity seem to trust each other more than people who shared the same cultural identity, this may cause by the cultural fusion in China. There are considerable psychological variations within China [15]. Rice farming has caused the culture to become more interdependent, whilst wheat cultivation has caused it to become more autonomous [16]. According to Bianchi, individualism tends to increase as economies expand [17]. So alone with the economic leap in China, individualism become more and more usual. And the economy development in most of the southern part of China is obviously better than the northern part. This leads to a conflict between the cultural basis and change which results in a confusion in individual's sense of culture identity.

Another possible explanation for the results is intergroup conflict. Most participants tend to trust cooperators from the same region while the trust of partners from different regions is based on the stereotype of how trustworthiness they are [18]. Religious Americans' trust differs by religion [19,20]. Christians have a higher level of trust than Muslims and nonbelievers [21,22]. Assuming the finding can be used to all nations, the differences between Cristian and Buddhism in China need to be considered.

Moreover, the score of the subjects themselves is not considered as an index for trust. Although all participants attend the trust game are comparingly prefer their religion or culture, the variation score in the stage subjects can result significant difference.

5.CONCLUSION

The purpose of this research is to examine the impact of religion and culture on ingroup-bias in China and specifically whether religion has a bigger influence on ingroup-bias. In general, for all the groups, the answer is straightforward: people are generally more positive, friendly, and helpful than outgroup members [23,24]. But the comparison between religion and culture is lack.

The experiment is intended to find some variability in ingroup-bias directionality depending upon the religion and culture. That is people in the same religion show higher ingroup bias than the one in the same culture. Religion (study 1) and Culture (study 2) are expected to show notable differences in the number of trusts.

The IAT is a common social psychology measure for determining the relative strength of association between two ideas [25]. The assumption behind this type of testing is that when closely related objects share the same answer key, producing a response should be easy. IAT was created in response to reports that explicit (selfreport) measurements had low validity because most people are hesitant to reveal their real personal thoughts or feelings in reaction to a stimulus.

Research has demonstrated that IAT is a stronger predictor of later behavior than explicit answers in a variety of circumstances (other than racial bias). Consumer choice, risk-taking behavior, and stress reaction are among the themes covered in this research. However, a measure is considered trustworthy in psychology if it has a test-retest reliability of at least 0.7, while 0.8 is desirable. According to research, racial prejudice IAT studies have a test-retest reliability value of 0.44, whereas the IAT overall has a reliability score of about 0.5. In this sense, an alternative method should be used to establish the validity of the result.

It's worth mentioning, that the study was limited to a single location and a small number of participants, implying that additional research with a bigger sample size would be required to confirm the validity of the findings. And Falk and Zehnder discovered that most participants trusted colleagues from the same region more, and the trust in members from different regions connected to preconceptions about their was trustworthiness [26]. Because of our deviation of culture based on region, there is a risk of confusing region view and culture view. Despite using the Implicit association test to choose participation for trust game, the influence of region is unable to avoid. This makes it impossible to fully determine the impact of culture on the in-group bias. Therefore, it is possible to develop research problematizing the role of the region in ingroup-bias.

REFERENCES

- Johansson-Stenman O, Mahmud M, Martinsson P. Trust, trust games and stated trust: Evidence from rural Bangladesh. J Econ Behav Organ. 2013; 95:286-298. doi:10.1016/j.jebo.2011.06.022
- Knack S, Keefer P. Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. Q J Econ. 1997;112(4):1251-1288. doi:10.1162/003355300555475
- Zak P, Knack S. Trust and Growth. The Economic Journal. 2001;111(470):295-321. doi:10.1111/1468-0297.00609
- [4] Bohnet I, Harmgart H, (Ucl) S, Tyran J. Learning Trust. J Eur Econ Assoc. 2005;3(2-3):322-329. doi:10.1162/jeea.2005.3.2-3.322
- Brewer M. In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. Psychol Bull. 1979;86(2):307-324. doi:10.1037/0033-2909.86.2.307
- [6] Balliet D, Wu J, De Dreu C. Ingroup favoritism in cooperation: A meta-analysis. Psychological bulletin. 2014;140(6): 1556-1581. doi: 10.1037/a0037737
- [7] Wilson, R. K., &Eckel, C. C. Trust and Social Exchange. Cambridge Handbook of Experimental Political Science. 2012; 243–257.
- [8] Johansson-Stenman O, Mahmud M, Martinsson P. Trust, trust games and stated trust: Evidence from rural Bangladesh. J Econ Behav Organ. 2013;95:286-298. doi:10.1016/j.jebo.2011.06.022
- [9] Gupta G, Mahmud M, Maitra P, Mitra S, Neelim A. Religion, minority status, and trust: Evidence from a field experiment. J Econ Behav Organ. 2018;146:180-205. doi:10.1016/j.jebo.2017.11.028

- [10] Fischer R, Derham C. Is in-group bias culturedependent? A meta-analysis across 18 societies. Springerplus. 2016;5(1). doi:10.1186/s40064-015-1663-6
- [11] Tan J, Vogel C. Religion and trust: An experimental study. J Econ Psychol. 2008;29(6):832-848. doi:10.1016/j.joep.2008.03.002
- [12] Bruner J. On perceptual readiness. Psychol Rev. 1957;64(2):123-152. doi:10.1037/h0043805
- [13] Tan J, Vogel C. Religion and trust: An experimental study. J Econ Psychol. 2008;29(6):832-848. doi:10.1016/j.joep.2008.03.002
- [14] Orbell J, Goldman M, Mulford M, Dawes R. Religion, Context, and Constraint toward Strangers. Rationality and Society. 1992;4(3):291-307. doi:10.1177/1043463192004003004
- [15] Amaral L. Faculty Opinions recommendation of Large-scale psychological differences within China explained by rice versus wheat agriculture. Faculty Opinions – Post-Publication Peer Review of the Biomedical Literature. 2014. doi:10.3410/f.718378820.793495374
- [16] Amaral L. Faculty Opinions recommendation of Large-scale psychological differences within China explained by rice versus wheat agriculture. Faculty Opinions – Post-Publication Peer Review of the Biomedical Literature. 2014. doi:10.3410/f.718378820.793495374
- [17] Bianchi E. American individualism rises and falls with the economy: Cross-temporal evidence that individualism declines when the economy falters. J Pers Soc Psychol. 2016;111(4):567-584. doi:10.1037/pspp0000114
- [18] Falk A, Zehnder C. A city-wide experiment on trust discrimination. J Public Econ. 2013;100:15-27. doi:10.1016/j.jpubeco.2013.01.005
- [19] Edgell P, Hartmann D, Stewart E, Gerteis J. Atheists and Other Cultural Outsiders: Moral Boundaries and the Non-Religious in the United States. Social Forces. 2016;95(2):607-638. doi:10.1093/sf/sow063
- [20] Thunström L, Jones Ritten C, Bastian C, Minton E, Zhappassova D. Trust and Trustworthiness of Christians, Muslims and Atheists/Agnostics in the U.S. SSRN Electronic Journal. 2019. doi:10.2139/ssrn.3503001
- [21] Edgell P, Hartmann D, Stewart E, Gerteis J. Atheists and Other Cultural Outsiders: Moral Boundaries and the Non-Religious in the United States. Social Forces. 2016;95(2):607-638. doi:10.1093/sf/sow063

- [22] Thunström L, Jones Ritten C, Bastian C, Minton E, Zhappassova D. Trust and Trustworthiness of Christians, Muslims and Atheists/Agnostics in the U.S. SSRN Electronic Journal. 2019. doi:10.2139/ssrn.3503001
- [23] Brewer M, Silver M. Ingroup bias as a function of task characteristics. Eur J Soc Psychol. 1978;8(3):393-400. doi:10.1002/ejsp.2420080312
- [24] Platow M, McClintock C, Liebrand W. Predicting intergroup fairness and ingroup bias in the minimal group paradigm. Eur J Soc Psychol. 1990;20(3):221-239. doi:10.1002/ejsp.2420200304
- [25] Greenwald A, McGhee D, Schwartz J. Measuring individual differences in implicit cognition: The implicit association test. J Pers Soc Psychol. 1998;74(6):1464-1480. doi:10.1037/0022-3514.74.6.1464
- [26] Falk A, Zehnder C. A city-wide experiment on trust discrimination. J Public Econ. 2013;100:15-27. doi:10.1016/j.jpubeco.2013.01.005