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Trusting and Trustworthy Behavior between Christians and non-Christians

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To trust or not to trust, that is a question. This paper analyzes it through two interdependent aspects: trust and trustworthiness. Our targets are Christians: which are one of the largest religious populations in Hong Kong, and non-Christians: which are used as comparison. We investigate the difference in degree of trusting and trustworthy behavior between Christians and non-Christians to discover if there is any religious effect on Christians' choices, and evaluate the overall trust and trustworthiness of Hong Kong people. With experiments through trust games and questionnaires, we have observed the indirect and underlying religious effects on Christians, leading to their higher level of trusting behavior. And surprisingly, non-Christians have more or less the same level of trustworthy behavior compared to Christians, in which overall trustworthy behavior is more than trusting behavior.

1. Introduction

Trust is a crucial element in human economic behavior. Religious background imposes influence on people's degree of trust, trustworthiness and thus can potentially affect the productivity of economic activity, as well as strategy in cooperation. Some studies have found that religious beliefs can enhance economic performance. For example, Noland (2003) found that religious belief can provide a set of behavior models to individuals and it does affect economic performance at the aggregate level. However, whether religious people are more trusting and trustworthy still remains to be investigated. The purpose of this paper is to investigate experimentally the effect of religious belief on trusting and trustworthy behavior.

There are some studies attempted to answer this question which individuals are less inclined to trust others with different religions. For example, Johansson-Stenman, Mahmud and Martinsson (2008) investigated the trusting and trustworthy situations from religious aspect in Bangladesh. They tested whether individuals are less inclined to trust others who are different from themselves in terms of the two main religions in

Bangladesh (Islam and Hinduism). In the study, they found no significant evidence that religious allegiance affects the level of trust or trustworthiness in a trust experiment. However, Christianity, one of the largest religions in the world, has not been experimented, which provide us motives to conduct study on it.

Moreover, past studies of religious effect on trusting and trustworthy behaviors usually focused on western countries and southern Asian countries. Researches about religious effect on Hong Kong, which 43% of the population is with religious beliefs, are lacked. Along with emptiness of experiments on Christians' trust and trustworthiness, they provide motivation to us to conduct study about the trust and trustworthiness of Christians in Hong Kong

Up until now, there is no strong evidence or conclusions evaluating the degree of trust and trustworthiness of human beings on economic behavior. Since our study will also consist of half of the participant without religious belief as comparison, we can then discover the trusting and trustworthy behavior of the society as a whole.

As a result, with the support of previous studies, this paper specifically investigates the trusting and trustworthy behaviors of Christians and non-Christians in Hong Kong under the dilemma of self-interest and mutual interest, and compares their decisions to discover the religious effects if any. We assume that Christians make different decision to those without religion beliefs and the major source of behavioral difference of Christian is the doctrine of Christianity. Also, the paper reflects the degree of trust and trustworthiness of human beings as a whole to provide society insights in daily cooperation and economic transactions.

Our experiment is based on the one-round trust game[1] demonstrated by strategic method in the form of tree diagram (see Figure 1 in Appendix). Player 1 will need to choose to keep the endowment or to give it to player 2 while Player 2 will need to

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[1] Trust game, which is called investment game in the paper 'Trust, Reciprocity and Social History', is the game designed by Berg, Dickhaut and McCabe (1995) to study trust and reciprocity. The trust game in the paper is that subject in room A receives $10 show-up fee and decides how much to give to anonymous subject in room B. The show-up fee is tripled by the time reached room B and the subject designs how much of tripled money to return and to keep.
In our experiment, the trust game is edited which will be explained in section 2.

choose to be split the endowment or keep it. Background information and motives of decisions of the participants are required to fill in to help provide explanations of their decisions.

For the following parts, section 2 introduces the experimental design in details. Section 3 shows the game results. Section 4 analyzes the experiment. Section 5 discusses the phenomena from experiment's results and provides insights to the society. Section 6 makes conclusion.

2. Experimental Design

2.1 Design of Trust Game and Questionnaire

The experiment consists of two parts: trust game and questionnaire. Both parts come as form of hardcopy, with two versions (Player 1 version and Player 2 Version) according to the role of participants in the trust game. Both versions are available in figure 2 in Appendix.

At the beginning of the questionnaire, participants are required to write down their information, including gender and age. Afterwards, they needed to answer whether they are Christians or not. This question is based on our first hypothesis: Christian makes different decision to those without religion beliefs. We differentiate participants into Christians and non-Christians at this stage. Our second hypothesis is that major source of behavioral difference of Christian is the doctrine of Christianity but it is used for analysis so is not revealed in questionnaire' questions. As there is difference in doctrine among various Christian faiths, Protestant which shares the largest Christian population in Hong Kong is focused in this experiment in order to minimize complexity and uncertainty. If the participant is Christians, he/she is required to fill in their frequency of churchgoing, which serves as a quantified indicator of religious devoutness. If the participant is non-Christians, his/her religious belief is required to be specified if any.

After providing background information, the trust game, which is by strategic method in the form of tree diagram (see Figure 1 in Appendix), starts. In this game, decision making by player 1 is testing for trust, while that by player 2 is for trustworthiness. In the beginning, player 1 is endowed with $30 (in Hong Kong dollars). He/she is

required to choose to take the endowment or to give the whole endowment to player 2. If player 1 gives the endowment to player 2, by the time it reached player 2, it is doubled. Player 2 is then required to choose to get the endowment ($60) or to split the endowment into half (each gets $30).

The largest difference of our trust game to the traditional one is that the maximum return of player 1 is the same no matter he/she gets or gives the endowment. Therefore, the endowment is doubled, and is fixed to be split by half if player 2 decides to split it. This is to avoid player 1 from speculating so that we can analyze the trust and trustworthiness with less external variables.

Player 1 and player 2 participate in the trust game independently. They do not have any information of each other. Player 2 is assumed to be given endowment so that he/she can make decision.[2] As a result, players cannot know the game results right after they finished the game and questionnaire. After collecting all responses, we conducted random drawings to match player 1 and player 2 to produce match results. After the trust game, participants need to explain their reason of choices. The two versions of questionnaires provide different reasons under different decisions. They are all in form of multiple choices, in which participants choose the option that suits them best or write down their own reasons (option: other).

If player 1 chooses to take the endowment, he/she will face four options as their reason of choice. 'I do not trust that Participant 2 would share the endowment with me' represents that player 1 does not believe that player 2 is trustworthy and as a result exerting no trust. 'This is the only way I can ensure my return' represents that at certain extent player 1 considers the return and trustworthiness of player 2 but he/she chooses to avoid uncertainty. 'I only concern my self-interest' represents that his/her monetary return is the only concern. The last option is 'other'.

If player 1 chooses to give the endowment to player 2, he/she will face five options. 'I tend to trust people' represents that he/she is a trusting person. 'I tend to give than receive' represents that trustworthiness is not his/her concern, giving is the preference.

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[2] Limitations that we cannot conduct the trust game simultaneously will be explained in section 4.

'My religious belief leads me to the decision' represents the choice is under the influence of religious doctrine. 'I do not care the return' represents that the monetary returns have no attractiveness or influences on player 1 and he/she does not concern the trustworthiness of player 2. The last option is 'other'.

If player 2 chooses to take the doubled endowment, he/she will face three options. 'Maximize profit' represents that he/she rates the monetary return more than to return the trust of player 1. 'I only concern my self-interest' represents that he/she does not concern on return the trust of player 1. The last option is 'other'.

If player 2 chooses to split the doubled endowment into half, he/she will face six options. 'I return for the trust of Participant 1' represents that he/she returns for player 1 believing him/her to be trustworthy. 'I tend to share with others' represents trustworthiness is not his/her concern, sharing is the preference. 'My religious belief leads me to the decision' represents that the choice is under the influence of religious doctrine. 'I do not care the return' represents that the monetary retursn have no attractiveness or influences on player 1 and he/she does not concern the trustworthiness of player 2. 'Other may think I am selfish if I chose to take all' represents the main concern is his/her image and as a result pressured to split. The last option is 'other'.

2.2 Predictions

In the Christian's faith, willingness to give is always emphasized because of the belief of their God. Jesus sacrificed himself on the cross to practice the redemption for the mortals. His willingness to give acts as a demonstration for Christians to follow. "*It is more blessed to give than receive*" (Acts 20:35) built up the basic doctrine of "giving is appreciated" to Christians. So, in this experiment, we expect the Christians would be more willing to give and share compared to non-Christians. We predicted that most Christian player 1 will choose to give the endowment and most Christian player 2 will choose to split the endowment. Also, we believe there will be a proportion of Christians choosing 'My religious belief leads me to the decision' as their reason of trusting or trustworthy behavior in order to show their decision-making is following doctrine of Christianity. Also, frequency of churchgoing will show positive relationship with degree of trusting and trustworthy behavior under our expectation.

For non-Christians, lower degree of trusting and trustworthy behavior is expected. We think that non-Christians concern more on their self-interest.

3. Main Results

3.1 Forming of Participants

Convenient sampling is used in the experiment, with 80 participants in total, having 40 player 1 and 40 player 2. Numbers of Christians and non-Christians are also equal in the two categories of players. All of the non-Christians participants are without religious beliefs. Mean age of participant is 22.

3.2 Results of Player 1

For the **20** Christians player 1, **4** of them go to church once or twice a month. **6** of them go to church once a week. **10** of them go to church more than once a week. Majority are frequent churchgoers.

In the game, **9** of them chose to get the $30 monetary endowment. For reasons of decision among them, **4** of them chose the option "I do not trust that participant 2 would share the endowment with me" while remaining of them chose the option "This is the only way I can ensure my return".

11 of them chose to give it to player 2. For the reasons, **4** of them chose the option "I tend to trust people", **1** of them chose the option "I tend to give than receive", **4** of them chose the option "I do not care the return",**2** of them chose the option "Other" (double-win situation) (the questions priming the participant to share).

For the **20** non-Christians, **18** of them chose to get the $30 monetary endowment. For the reasons, **3** of them chose the option "I do not trust that participant 2 would share the endowment with me", **10** of them chose the option "This is the only way i can ensure my return", **3** of them chose the option "I only concern my self-interest", **2** of them chose the option "Other" (do not know the other person)

Only **2** of them chose to give it to participant 2. **Both** of them chose the option "I tend to trust people" as reason of choices.

By looking at the result above, for player 1 who chose to give it to player 2, 46.2% of them chose the option "I tend to trust people". Some of them chose the option "I do not care the return" which accounted for 30.8%. But none of the participants chose the option "my religious belief leads me to the decision" which is out of our expectation. For those participants who chose to get the $30 monetary endowment, a great proportion of them chose the option "This is the only way i can ensure my return" which accounted for 55.6%. Christians' degree of trusting behavior is much higher than non-Christians.

3.3 Results of Player 2

For the **20** Christians, **4** of them are not habitual churchgoers. **8** of them go to church once a week. **8** of them go to church more than once a week. Just like those in player 1, majority are frequent churchgoers.

In the game, **4** of them chose to get the $60 monetary endowment, which all chose "Maximize profit" as reasons of choice.

16 of them chose to split it into half and give it to participant 1. For reasons of choices, **5** of them chose the option "I return for the trust of participant 1", **7** of them chose the option "I tend to share with others", **3** of them chose the option "I do not care the return", **1** of them chose the option "Other" (too few money).

For the **20** non-Christians, **5** of them chose to get the $60 monetary endowment. For reason of choices, **2** of them chose the option "Maximize profit", **1** of them chose the option "I only concern my self-interest", **2** of them chose the option "Other" (do not know the other person)

15 of them chose to split it into half and give it to participant 1. For the reason of decisions, **10** of them chose the option "I return for the trust of participant 1", **2** of them chose the option "I tend to share with others", **2** of them chose the option "I do not care the return", **1** of them chose the option "Other may think I am selfish if I chose to take all"

Participants who chose to split it into half and give it to participant 1, 48.4% of them chose the option "I return for the trust of participant 1" while 29% of them chose the option "I tend to share with others". Again, none of them chose the option "my religious belief leads me to the decision". For those who chose to get the $60 monetary endowment, 66.7% of them chose the option "maximize profit" which is a two-third of them. Level of trustworthy behavior is more or less the same for Christians and non-Christians.

4. Experimental Analysis

4.1 Statistical Analysis

For the analysis, we are trying to find significant results among the following factors: 1) the relationship between player 1 as Christians and the trusting option in period 1, 2) the relationship between player 2 as Christians and the trustworthy option in period 2, 3) the relationship between player 1 as Christian and the probability of choosing the trusting option,4) the relationship between player 2 as Christian and the probability of choosing the trustworthy option and 5) the relationship between frequency of going to church against the options of Christian they choose. The five tests are available in Appendix's figure 3-7 according to the above order.

For the first test, the two sample test of proportions: Christians as Player 1, it shows a significant result with p-value less than 0.05. Therefore, we can tell that there is relationship between choosing the trust option and the religious belief of Player1 as a Christian.

For the second test, the two sample test of proportions: Christians as Player2, it does not shows a significant result with a very large p-value (0.705). Therefore, although most of the Player2's Christians choosing the trustworthy option, we cannot tell the relationship between their religious belief and their decisions.

For the third test, probability of trusting others, Christians as Player1, we belief that the result will be significant as it is similar to the first test. In our result, it shows a significant p-value for the relationship between Christians as Player1 and choosing the trust option with a p-value of 0.004, smaller than 0.05. Therefore, we can tell that

when Player1 is a Christian, he is 44% more likely to choose the trust option among other people who are not Christians.

For the forth test, probability of trusting others, Christians as Player2, again we believe that the result will be similar to the second test. The result shows a p-value of 0.55, much larger than 0.55, and we can tell it is not significant at all.

For the final test, the relationship between the frequency of going to church and choosing the trust or trustworthy option, the results for both Player1 as Christians and Player2 as Christians are not significant as well.

From the analysis, we can tell that it is quite different from our predictions. In the study, we can only show a significant difference between Christians and non-Christian as player 1. It is also very surprising that the frequency of going to church does not affect the decision making for Christians as we believe that the frequency of going to church will lead to Christians learn more and have a better understanding about the norms and lessons of Christianity. However, that leads us to think that the effect of religion can be underlying, which will be discussed in section 5.

4.2 Limitations
In our study, there are several limitations due to the experimental design, limitation on resources and time limit.

First, the sample size is small. In our study, we can only recruit 80 participants and there are only 20 people in each category. Also, most of our samples are from the age range 20-29, which is unable to compare the effect between trust, trustworthiness and Christianity for people in different generations. However, it can avoid participants from affecting by social experience. Social experience is an important factor affecting one to or not to trust another. If he/she has experienced some unfavorable issues about betrayals of trust by others, it may become a factor overriding his/her religious beliefs.

Second, the priming effect may also affect result. Priming is the implicit memory effect in which exposure to a stimulus influences response to a later stimulus.[3] As we asked the religious belief of the participants before the trust game, participants may be affected by the demographic questions. In the study, one participant showed feedbacks that the questionnaire empathize the religious belief of people which implies Christians should choose to share the money with others. This affect the result of the study as this may not represent the real life situations.

Third, the monetary reward may not be attractive enough. Since the maximum returns for player 1 and player 2 are $30 and $60 respectively, some participants may not take the questionnaire very seriously as the value of award is not huge enough. However, the minimum value for people not exerting trust and trustworthiness is hard to determine as it differs among people.

Last, the experimental design may also affect the result. Since we were not holding the experiment in real time as player 1 and player 2 did not make the decision simultaneously, we cannot observe the real time reactions between two players.

4.3 Further Studies

To tackle the limitations mentioned, the study in the future may select participants which follow the population distribution in order to follow the real life situations and see the relationship between age range and decision made.

Also, we can hold the study which allows player 1 and player 2 participating simultaneously without knowing each other's identities, just like the traditional trust game. This design can help us to measure the real time reactions of both players and they can make the decision simultaneously.

Last but not least, we can also make hypothesis with different religious belief. Since there are many different religious beliefs in the world, it is interesting to know how they will make the decisions.

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[3] Explorable.com (Mar 10, 2011). Priming. Retrieved Apr 27, 2016 from Explorable.com: https://explorable.com/priming

5. Discussion

Our experiment is testing on two interdependent concepts: trust and trustworthiness. Experiment on player 1 is testing for trust while experiment on player 2 is testing for trustworthiness.

From the results shown in above sections, two phenomena exist. First, trustworthy behavior is significantly more than trusting behavior. Second, for trusting test (to give or to get the endowment), Christians show significantly higher degree of trust compared to non-Christians. To explain the phenomena, we have discovered two different mindsets between Christians and non-Christians in decision-making. Dealing with trusting and trustworthy situation, Christians' decisions are based on moral value, while non-Christians' are based on the typical framework of trust and trustworthiness, which they focus on evaluating the degree as well as return of trust or trustworthiness of and from his/her partners.

To start with, trustworthiness begets trust. 'I trust you' and 'I believe you are trustworthy' is equivalent.[4] In other words, trust depends on trustworthiness, which forms the basic framework of trusting and trustworthy behavior.

Back to the trust game, for player 1, the information is imperfect. He/she has no information of player 2, as a result he/she cannot evaluate the trustworthiness of player 2. In this situation, return of believing player 2 to be trustworthy is uncertain. The only certain return is getting the endowment ($30). Self-return is the only certain consideration. Moreover, the trust game is played once only. No continuation of relationship is needed to consider, leading to the less trust offered by player 1, especially for non-Christians.

However, for the decision-making faced by (non-Christian) player 2, he/she is assumed that the trust from player 1 has already been received so that they can determine the use of endowment. Player 2 in fact is under perfect information, knowing that he/she is trustworthy in player 1's perspective. No matter to act on maximizing his/her self-interest or mutual interest between player 1 and player 2, the returns are certain. Therefore player 2 has fully control. For non-Christians, 75% of

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[4] Hardin, Russell. Trust and trustworthiness. Russell Sage Foundation, 2002, 10, 28

them share the endowment because they want to return the trust of player 1. This demonstrates their decision is under the evaluation of their partners' trust. If their partners exert trust on them, they would in return exert trustworthiness on their partners.

The number of trustworthy behavior of Christians and non-Christians are more or less the same, but responses in questionnaire revealed that Christians' trustworthy decision are made under a different mindset. Most Christians claim that they split the endowment because they tend to share with others, which is different from the answers (return for the trust of participant 1) of most non-Christians. This shows that Christians' behavior depends on their moral and ethical values.

In fact, the mindset difference between Christians and non-Christians makes large impact on the level of trusting behavior (experiment on player 1). Without availability to determine player 2's trustworthiness, surprisingly, many of Christian player 1 still chose 'I tend to trust people'. The only explanation is about their moral value. They may think that most people should be trustworthy. When trustworthiness is uncertain, trusting behavior relied on moral value. Moral value is influential to trust. But reciprocally, obtaining trust can compensate for the difference in moral value between Christians and non-Christians in trustworthy behavior, leading to similar level of trustworthy behavior between them.

So, moral value is significantly related to Christians' behavior. Then, the question is that can we establish relationship between Christians' decisions and doctrine of Christianity. Surprisingly, no Christians chose the option 'My religious belief leads me to the decision' in the questionnaire. Religious belief seems to have no direct effect to their decision-making. But for reason 'I tend to share with others', the moral value behind is sharing, which fulfills the word in bible: to give than to receive. Moreover, Christianity always encourages people to discover the beauty of the world, which make Christians to be more inclined to aware of the bright sides of human beings to believe that people tend to be trustworthy. This can be the possible source of Christians' higher degree of trust. Also, most of our Christian participants are frequent churchgoers (at least once a week), showing high devoutness to their religion. We strongly believe that religious belief subconsciously affects their decision. Doctrine of

Christianity has been deep in their mind and developed into their moral values. As a result, when facing decision-making, they are influenced by moral value without noticing that their moral value is formed by Christianity or, that their moral value required for the specific decision is related to their religious doctrine. However, it is also possible that people who prefer giving to receiving self-selected to be Christians. But whether people have similar ideology with Christianity as a result to be self-selected to be Christians, or developing the idea of sharing after becoming Christians, the two situations both show relationships between moral values of Christians and ideology of Christianity. Therefore, the ambiguity of the order or priority would not overthrow the relationship between Christians' decisions and doctrine of Christianity. To be more precise, we can sure that there is relationship between the identity of Christians and their behavior. The effect of religion is underlying.

Priming in our questionnaire is also the support of the underlying effect. Participants are required to write down their background information including religious beliefs before the trust game. Their decisions are more likely to act on the basis of religious doctrine (Christianity in our experiment) as they subconsciously aware of their religious identity, leading to more trusting results for those with religious beliefs than those without. Indeed, in western countries, such kind of 'religious priming' is very common. People talk about religion in daily or even business conversation. With these conversations, people would aware and notice their religious beliefs and they are then stimulated to act on the basis of values in their religions. But the culture in Hong Kong is completely different. People seldom talk about religion although 43% of the population is with religion beliefs. 'Religious priming' can be tried, e.g. in job interview, trade, to work out for more trusting outcomes.

External factors e.g. moral value influencing trusting behavior is not that surprising. What really inspires us is that either for people with or without belief in Christianity, their degree of trustworthy behavior is nearly identical, and majority of people are trustworthy. Exerting trust on people always get trustworthiness in return. The power of trust does appear in humanity. More trust should be established in our society to accomplish win-win situation.

6. Conclusion

Through trust games and questionnaires, we have observed the difference in trusting and trustworthy behavior between Christians and Non-Christians, and the degree of trust and trustworthiness of Hong Kong people. Overall, people's trustworthy behavior is significantly more than trusting behavior. Also, Christians exert higher degree of trust than non-Christians. The difference in mindsets dealing with trust and trustworthiness between Christians and non-Christians leads to their difference in behavior. Non-Christians analyze the degree and return of trust and trustworthiness of their partners in decision-making so they rely heavily on their partners' information for evaluation. Christians tend to make decision based on moral value, in which it is closely related to their identity of Christian with the underlying religious effect.

We are amazed that trust can successfully encourage trustworthiness, making people to return for trust, or we can call it as "cooperation". This can increase the outcome and productivity of the society.

Although in situation consisting of trust and trustworthiness, the latter is the leading factor. In fact, we have no idea of other's trustworthiness most of the time in reality. This paper provides insight that there are certain bright sides in human beings, no matter in Christians or non-Christians. If we have facing trusting dilemma, why don't we believe in the power of trust? To trust or not to trust, that is somehow not a question anymore.

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Appendix

Figure 1: Trust Game

Participant 1 參與者1

($30,$0)

Particpant 2　參與者2

($0,$60)

($30,$30)
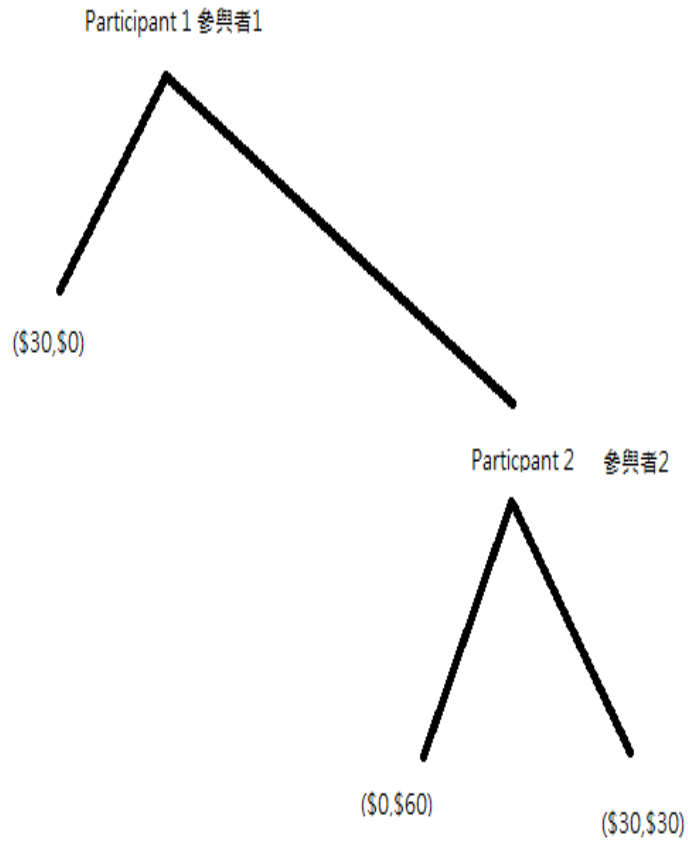
Figure 2 : Questionnaire (Version of Player 1 and Player 2)

1

RESPONDENT DETAILS	
Name 姓名	:
HKID (First 4 digit) 身分證頭 4 位數	:
Date & Times 日期及時間	:
Group 組別	:

1. Your Gender
   閣下的性別是？

Male 男性	
Female 女性	

2. How old are you?
   閣下的年齡是？

   _____

3. Are you Christian?
   閣下是否基督教徒？

Yes 是	
No (Please specify if you have other religious beliefs) (Please skip question 4 if you have no religious beliefs) 否 (如有其他宗教信仰，請注明) (如沒有任何宗教信仰請跳過第 4 題)	

4. How often do you go to church?
   閣下參與教會聚會的頻率是？

Not a habitual churchgoer 隨意，沒有定期參與教會聚會的習慣	
Once or twice a month averagely 平均一個月一至兩次	
Once a week averagely 平均一星期一次	
More than once a week averagely 平均一星期多於一次	

5. In this game, you are endowed with $30. You can take the sum of money or give it to Participant 2. If you chooses to take it, Participant 2 will get $0. If you choose to give it to Participant 2, the endowment will be doubled. Then, participant 2 can choose to take it all ($60) or split it into half and give it to you, which means both you and participant 2 can receive $30.

在是次測試中，閣下獲贈予$30。閣下有權選擇取得$30 的贈予；或把它轉移給參與者 2。轉移後贈予的金額會倍大(乘 2)，參與者 2 有權取得全部$60 的贈予，又或與閣下平分贈予(每人$30)。

閣下 (參與者1)
You (Particpant 1)

($30,$0)

Particpant 2 參與者2

($0,$60)

($30,$30)
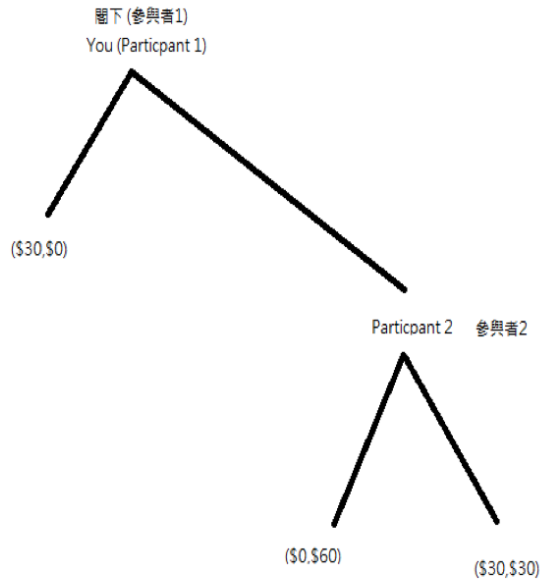
What is your choice?
閣下的選擇是？

Take the monetary endowment 取得贈予	
Give it to Participant 2 轉移贈予給參與者 2	

If you choose **Take the monetary endowment**, why did you make such decision? (Choose the one that best describe you)
若閣下選擇取得贈予，為何會有如此決定？ (選擇最能形容你的選項)

I do not trust that participant 2 would share the endowment with me 我不相信參與者 2 會與我平分贈予	
This is the only way I can ensure my return 這是唯一確保可以賺取回報的選擇	
I only concern my self-interest 我只在意自己的回報而非他人的	
Other (Please specify): 其他（請注明）：	

If you choose **Give it to Participant 2**, why did you make such decision? (Choose the one that best describe you)
若閣下選擇轉移贈予給參與者 2，為何會有如此決定？ (選擇最能形容你的選項)

I tend to trust people 我傾向信任別人	
I tend to give than receive. 比起接收，我更喜歡給予	
My religious belief leads me to the decision 我的宗教信仰驅使我的選擇	
I do not care the return 我不在意回報	
Other (Please specify): 其他（請注明）：	

我，(姓名)_____ (身份證頭 4 位數)_____ 收到港幣 $_____

作為是次研究的參與回報。

簽署：_____

RESPONDENT DETAILS	
Name 姓名	:
HKID (First 4 digit) 身分證頭 4 位數	:
Date & Times 日期及時間	:
Group 組別	:

1   Your Gender
      閣下的性別是？

Male 男性	
Female 女性	

2   How old are you?
      閣下的年齡是？

_____

3   Are you Christian?
      閣下是否基督教徒？

Yes 是	
No (Please specify if you have other religious beliefs) (Please skip question 4) 否 (如有其他宗教信仰，請注明) (請跳過第 4 題)	

4   How often do you go to church?
      閣下參與教會聚會的頻率是？

Not a habitual churchgoer 隨意，沒有定期參與教會聚會的習慣	
Once or twice a month averagely 平均一個月一至兩次	
Once a week averagely 平均一星期一次	
More than once a week averagely 平均一星期多於一次	

5. In this game, Participant 1 is endowed with $30, he or she can take it or give it to you. If Participant 1 chooses to take it, you will get $0. If Participant1 choose to give it to you, the endowment will be doubled, you can choose to take it all ($60) or split it into half and give it to Participant 1, which means both you and participant1 will receive $30.

在是次測試中，參與者 1 獲贈予$30。參與者 1 有權選擇取得$30 的贈予；或把它轉移給閣下。轉移後贈予的金額會倍大(乘 2)，閣下有權取得全部$60 的贈予，又或與參與者 1 平分贈予(每人$30)。

參與者1
Participant 1

($30,$0)

You (Participant 2)   閣下 (參與者2)

($0,$60)   ($30,$30)
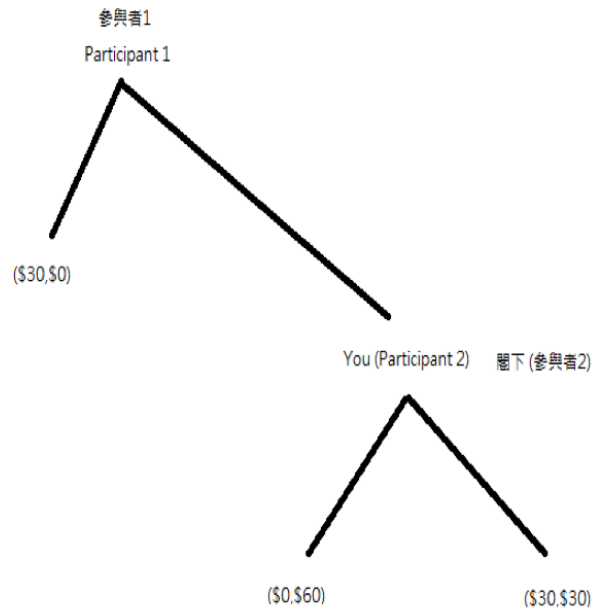
If participant 1 give the endowment to you, what is your choice?
若參加者 1 把贈予轉移給你，閣下的選擇是？

Take the $60 endowment 取得全數$60 的贈予	
Split it into half and give it to Participant 1 與參與者 1 平分	

If you choose **Take the $60 endowment**, why did you make such decision? (Choose the one that best describe you)
若閣下選擇取得全數**$60** 的贈予，為何會有如此決定？(選擇最能形容你的選項)

Maximize profit 利益最大化	
I only concern my self-interest 我只在意自己的回報而非他人的	
Other (Please specify): 其他（請填寫）：	

If you choose **Split it into half and give it to Participant 1,** Why did you make such decision? (Choose the one that best describe you)
若閣下選擇**與參與者 1 平分**，為何會有如此決定？(選擇最能形容你的選項)

I return for the trust of Participant 1 我回報參與者 1 對我的信任	
I tend to share with others 我傾向與人分享	
My religious belief leads me to the decision 我的宗教信仰驅使我的選擇	
I do not care the return 我不在意回報	
Other may think I am selfish if I chose to take all 如果我獨吞，別人會認為我是自私的	
Other (Please specify): 其他（請填寫）：	

我，(姓名)_____(身份證頭 4 位數)_____收到港幣 $ _____

作為是次研究的參與回報。

簽署：_____

```
7 . prtest trust if player==1 ,by( chrsitian)

    Two-sample test of proportions                      0: Number of obs =        20
                                                        1: Number of obs =        20
    ────────────┬──────────────────────────────────────────────────────────────────
       Variable │     Mean    Std. Err.      z    P>|z|     [95% Conf. Interval]
    ────────────┼──────────────────────────────────────────────────────────────────
              0 │       .1    .067082                       -.0314784    .2314784
              1 │      .55    .111243                        .3319678    .7680322
    ────────────┼──────────────────────────────────────────────────────────────────
           diff │     -.45    .1299038                       -.7046068   -.1953932
                │  under Ho:  .1481131    -3.04   0.002
    ────────────┴──────────────────────────────────────────────────────────────────
            diff = prop( 0) - prop( 1)                              z =   -3.0382
          Ho: diff = 0



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       Ha: diff < 0                 Ha: diff != 0                  Ha: diff > 0
    Pr(Z < z) = 0.0012        Pr(|Z| < |z|) = 0.0024         Pr(Z > z) = 0.9988
```

Figure 3: The relationship between Trusting and Player1 as Christians

```
8 . prtest trust if player==2 ,by( chrsitian)

    Two-sample test of proportions                      0: Number of obs =        20
                                                        1: Number of obs =        20
    ───────────┬──────────────────────────────────────────────────────────────────
      Variable │     Mean    Std. Err.      z    P>|z|     [95% Conf. Interval]
    ───────────┼──────────────────────────────────────────────────────────────────
             0 │      .75    .0968246                       .5602273    .9397727
             1 │       .8    .0894427                       .6246955    .9753045
    ───────────┼──────────────────────────────────────────────────────────────────
          diff │     -.05    .1318143                      -.3083512    .2083512
               │  under Ho:  .1320511    -0.38   0.705
    ───────────┴──────────────────────────────────────────────────────────────────
           diff = prop( 0) - prop( 1)                              z =   -0.3786
         Ho: diff = 0

       Ha: diff < 0                 Ha: diff != 0                  Ha: diff > 0
    Pr(Z < z) = 0.3525        Pr(|Z| < |z|) = 0.7050         Pr(Z > z) = 0.6475
```

Figure 4: The relationship between Trusting and Player2 as Christians

```
9 . probit trust chrsitian female age if player==1

    Iteration 0:   log likelihood =   -25.223241
    Iteration 1:   log likelihood =   -20.116316
    Iteration 2:   log likelihood =   -20.042468
    Iteration 3:   log likelihood =   -20.042402
    Iteration 4:   log likelihood =   -20.042402

    Probit regression                          Number of obs   =        40
                                               LR chi2( 3)     =     10.36
                                               Prob > chi2     =    0.0157
    Log likelihood = -20.042402                Pseudo R2       =    0.2054

    ───────────┬──────────────────────────────────────────────────────────────────
        trust  │    Coef.    Std. Err.      z    P>|z|     [95% Conf. Interval]
    ───────────┼──────────────────────────────────────────────────────────────────
      chrsitian│  1.388681   .4823017     2.88   0.004     .4433872    2.333975
        female │  -.299161   .4635126    -0.65   0.519    -1.207629    .6093069
           age │  .0131607   .0651934     0.20   0.840    -.1146159    .1409374
         _cons │ -1.429835   1.495775    -0.96   0.339    -4.361501    1.50183
    ───────────┴──────────────────────────────────────────────────────────────────
```

Figure 5:The relationship between probability of choosing Trust against Player1 as Christians

```
11 . probit trust chrsitian female age if player==2

Iteration 0:    log likelihood =   -21.326554
Iteration 1:    log likelihood =   -20.394318
Iteration 2:    log likelihood =   -20.063446
Iteration 3:    log likelihood =   -20.050876
Iteration 4:    log likelihood =    -20.05087
Iteration 5:    log likelihood =    -20.05087

Probit regression                          Number of obs   =         40
                                           LR chi2(   3)    =        2.55
                                           Prob > chi2     =      0.4651
Log likelihood =    -20.05087               Pseudo R2       =      0.0598

      trust |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
   chrsitian |   .3166043   .4791064    0.66   0.509    -.622427    1.255636
      female |   .4424446    .655444    0.68   0.500    -.842202    1.727091
         age |   .1569644   .1340665    1.17   0.242   -.1058012     .41973
       _cons |  -2.813583   2.927565   -0.96   0.337   -8.551505    2.92434

Note: 0 failures and 1 success completely determined.
```

Figure 6: The relationship between probability of choosing Trustworthy against Player2 as Christians

```
21 . probit trust  female age frequency_dummy if player==1&chrsitian==1

Iteration 0:    log likelihood =   -6.7301167
Iteration 1:    log likelihood =   -6.5221904
Iteration 2:    log likelihood =   -6.5220397
Iteration 3:    log likelihood =   -6.5220397

Probit regression                          Number of obs   =         10
                                           LR chi2(   3)    =        0.42
                                           Prob > chi2     =      0.9369
Log likelihood =   -6.5220397               Pseudo R2       =      0.0309

           trust |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
          female |  -.2521188   1.120409   -0.23   0.822    -2.44808    1.943842
             age |   .0195534   .1002331    0.20   0.845      -.1769    .2160067
 frequency_dummy |   .1459882   .6659331    0.22   0.826   -1.159217    1.451193
           _cons |  -.4257393   2.395429   -0.18   0.859   -5.120694    4.269216
```

Figure 7: The relationship between choosing the Share option against the frequency of going to church