

Appendix 1: Experimental Instructions (English Translation)

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Experimental Payoff

Welcome to attend this experiment! You can earn NT dollars which is exchanged by Experimental Standard Currency with different rate in addition to NT\$100 show-up fee after completing of this experiment. The amount you can earn depends on your decisions, others' decisions and is affected by random variables. Everyone who is paid individually might get different payoffs. In addition, you do not owe to tell others how much money you make.

Instructions for Session 1

This experiment is a multi-subject simultaneous game. The first session consists of 2 practice rounds and 50 paid rounds. During this session, every subject will be assigned to group A or B randomly in each round. That is to say that the group you belong may not be the same. **There are 3 subjects in group A and 6 subjects in group B.**

At the beginning of each round, the computer will generate a “**Y-bonus**” for each subject. **Everyone’s Y-bonus is independent.** This Y-bonus is a random integer between 0 and 55 and the probability of generating each number is equal. Then you have to choose X or Y. The computer will calculate your points after everyone has made his decision. Each round, your point will be determined by the sum of two parts.

1. The first part is determined by the number of members choosing X in both groups. If your group has **more** members choosing X than the other group, you will earn **105 points**. If your group has **fewer** members choosing X than the other group, you will earn **5 points**. If both groups have **the same** number of members choosing X, then you will earn **55 points**.
2. The second part depends on your choice. **If you choose Y, you will get a Y-bonus.** If you choose X, you will not earn the Y-bonus.

	You choose “Y”	You choose “X”
Your group has more members choosing X	「 Y-bonus 」 + 105	105
Your group has fewer members choosing X	「 Y-bonus 」 + 5	5
Both groups have the same number of members choosing X	「 Y-bonus 」 + 55	55

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To familiarize you with the calculation of payments, here is an example:

Suppose that you belong to group A and your Y-bonus is 47. You choose Y. The other two members in your group choose X and there are 3 members in group B choosing X.

The first part: Group A has **2** members choosing X and group B has **3** members choosing X. **Because you are in group A, you earn 5 points in this part.**

The second part: Because you choose Y in this round, **you will earn the Y-bonus of 47 points.** Your total payment in this round is **$5+47=52$ points.**

If you choose X instead of Y, the number of members choosing X in group A will become **3**, so you will earn 55 points in the first part (because now the number of members choosing X in each group is equal). However, you will not earn the Y-bonus in the second part. Your total points in this round will be **$55+0=55$ points.**

When you make the choice, the screen will show you your group and your Y-bonus. You have to click on X or Y button to make a choice. Please note that you cannot change your decision after clicking the button. After you and the other participants have all made your choices of X or Y, the computer will start to calculate the points you earned in this round. The bottom of the screen contains a history panel. During the session, this panel will be updated to reflect the history of your past rounds.

At the end of each round, the screen will display the result in current round, including your Y-bonus, your choice of X or Y, the number of members choosing X in each group, the group you belong to and the points you earned. You have 10 second to read all the information. Afterwards, please click on the “OK” button.

Quiz

Now, a quiz has popped up on your screen. Please read each question and answer it carefully. After successfully completing the entire quiz, you will enter the practice rounds. If you have difficulty with quiz or have other questions please raise your hand.

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Practice Rounds

There are 2 practice rounds in this session. The purpose is to allow you to get familiar with the experiment and your computer. Please note that you will not be paid in this session. After the practice rounds, the experimenter will announce “the paid rounds begins!” and the experiment starts. If you have any questions please raise your hand.

Paid Rounds

Now the paid rounds begin. There are 50 paid rounds in this session. Your dollar earnings are determined by multiplying your earnings in points by a conversion rate. In this experiment, the conversion rate is 0.05 meaning that 20 points is worth 1 dollar. Please make your decision carefully.

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Instructions for Session 2

The second session consists of 2 practice rounds and 50 paid rounds. During this session, each round, every subject will be assigned to group A or B randomly. That is to say that the group you belong may not be the same. **There are 3 subjects in group A and 6 subjects in group B.**

The rule of payment in this session is the same as in the previous session but the method of choosing X or Y is different. In this session, you do not know the Y-bonus at the beginning. Instead, you have to enter a “Baseline Value”, which is an integer between 0 and 55. After everyone has entered his Baseline Value, **the computer will show you your Y-bonus and make a choice for you based on your Baseline Value and your Y-bonus.** If your Y-bonus is **smaller or equal to** your Baseline Value, the computer will choose X for you. If your Y-bonus is **bigger** than your Baseline Value, the computer will choose Y for you.

Determining the Baseline Value:

The screen will show you the group you belong to and you have to enter your Baseline Value. After making your decision, please click on the “OK” button. Please note that you cannot change your Baseline Value after clicking the button. The bottom of the screen contains a history panel. During this session, this panel will be updated to reflect the history of your past rounds.

At the end of each round, the screen will display the result in this round, including your Baseline Value, your Y-Bonus, your choice of X or Y, the number of members choosing X in each group, the group you belong to, and the points you earned. You have 10 second to read all the information. Afterwards, please click on the “OK” button.

Quiz

Now, a quiz has popped up on your screen. Please read each question and answer it carefully. After successfully completing the entire quiz, you will enter the practice rounds. If you have difficulty with quiz or have other questions please raise your hand.

Appendix 2: Original Experimental Instruction (in Chinese)

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實驗報酬

本實驗結束後，您將得到定額車馬費新台幣 100 元，以及您在實驗中獲得的「法幣」所兌換成之新台幣。（「法幣」為本實驗的實驗貨幣單位。）您在實驗中能獲得的「法幣」會根據您所做的決策、別人的決策，以及隨機亂數決定，每個人都不同。每個人都會獨自領取報酬，您沒有義務告訴其他人您的報酬多寡。**請注意：本實驗的「法幣」與新台幣兌換匯率為 20:1。**（法幣 20 元=新台幣 1 元）

實驗說明—第一部份

本實驗為一多人一組的共同決策實驗，第一部份的實驗共有兩個練習回合與五十回合的正式實驗。在此部份的實驗中，每回合所有受試者將隨機被分配到甲組或乙組，也就是說每回合您所屬的組別不一定相同。**甲組共有 3 名受試者，乙組共有 6 名受試者。**

每回合的一開始電腦會個別對每位受試者產生一個「選擇 Y 的額外報酬」，每個人的額外報酬不一定相同也不會互相影響。此額外報酬是由介於 0 到 55 的整數中隨機抽出，抽中每一數字的機會均相同。**接著您必須決定要選擇「X」或「Y」**，所有人都完成決策之後，電腦會自動計算報酬。**每回合您的報酬是由兩項報酬加總而得：**

1. 第一項報酬將由甲、乙兩組內選擇「X」的人數決定。若您在選擇「X」的人數較多的那一組，您會獲得法幣 105 元。若您在選擇「X」的人數較少的那一組，您會獲得法幣 5 元。若兩組選擇「X」的人數相等，您會獲得法幣 55 元。
2. 第二項報酬將視您的決策而定。若您決定選擇「Y」，您將獲得與「選擇 Y 的額外報酬」相等之法幣。反之，若您決定選擇「X」，您於此部份將不會獲得任何報酬。

每回合您的報酬是由上述兩項報酬加總而得：

	您選擇「Y」	您選擇「X」
您這一組選擇「X」的人數較多	「選擇 Y 的額外報酬」+105	105
您這一組選擇「X」的人數較少	「選擇 Y 的額外報酬」+5	5
兩組選擇「X」的人數相等	「選擇 Y 的額外報酬」+55	55

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為使您能更了解每回合您的報酬計算方式，接下來將舉例說明。

假設在本實驗的某回合中，您屬於甲組且電腦產生給您的額外報酬是 47，您選擇「Y」。同時其餘兩名甲組成員皆選擇「X」。而乙組中共有三名成員選擇「X」。

第一項報酬：電腦會先統計各組中選擇「X」的人數。在此例中，甲組有 2 名受試者選擇「X」，乙組有 3 名受試者選擇「X」。由於您所屬的甲組選擇「X」的人數較少，您於此項報酬會獲得法幣 5 元。

第二項報酬：由於本回合您選擇「Y」。故您將獲得「選擇Y的額外報酬」，也就是法幣 47 元。總計本回合您的報酬為 $5 + 47 = 52$ 法幣。

若您改為選擇「X」，甲組選擇「X」的人數會變為 3 人。故於第一項報酬您會獲得法幣 55 元（兩組選擇「X」的人數相等），但於第二項報酬您不會獲得任何法幣。總計本回合您的報酬會變為 $55 + 0 = 55$ 法幣。

在您做決策時，電腦會在螢幕上方告知您所屬的組別以及您「選擇Y的額外報酬」，您必須點選畫面中「X」或「Y」的按鈕來做決策。請注意，點選後您將不能再更改您的決策。當所有受試者都點選按鈕後，電腦會開始計算報酬。銀幕最下方的表格會顯示本部份實驗每回合的歷史紀錄。

每回合結束後，螢幕上會顯示這回合的實驗結果，包括本回合您「選擇Y的額外報酬」、您選擇「X」或「Y」、兩組選擇「X」的人數，您所屬的組別以及您所獲得的報酬。您有 10 秒的時間來閱讀所有資訊，閱讀完後請您點選畫面中「確認」的按鈕，當所有受試者都確認後，實驗將提前進入下一回合。

問答階段

在正式實驗開始之前，螢幕上會先顯示一些問題並請您輸入正確答案。這些問題的目的是為了確認您了解此實驗的規則。所有問題都被正確回答後，您將進入練習階段。如果您對這些問題或本實驗有任何疑問，請在此時舉手。實驗者會過來解答。

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練習階段

此階段共有兩回合，目的為幫助您熟悉正式實驗的操作介面及計分方式。請注意，練習階段的得分僅供您熟悉本實驗的進行方式，與您最後的現金報酬無關。練習結束後，實驗者會宣佈「實驗正式開始！」，然後才進入正式實驗。如果您對本實驗有任何疑問，請在此時舉手。實驗者會過來解答。

第一部份實驗正式開始

現在第一部份實驗正式開始，本部份實驗共有五十回合！**在正式實驗中所獲得的「法幣」都會在實驗結束後，按照 20:1 的匯率（法幣 20 元=新台幣 1 元）兌換成新台幣支付給您。**因此請慎重選擇、慎重決定。

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實驗說明—第二部份

第二部份的實驗共有兩個練習回合與五十回合的正式實驗。在此部份的實驗中，每回合所有受試者將隨機被分配到甲組或乙組，也就是說每回合您所屬的組別不一定相同。**甲組共有 3 名受試者，乙組共有 6 名受試者。**

本部份實驗的報酬計算方式與第一部份的實驗相同，但選擇「X」或「Y」的方式不同。在本部份實驗中，一開始您不會知道「選擇 Y 的額外報酬」為多少，您必須輸入一個「基準值」，此基準值必須為一介於 0 到 55 的整數，接著電腦會根據您的基準值以及「選擇 Y 的額外報酬」來替您做出選擇。**若您的「選擇 Y 的額外報酬」小於或等於此基準值，電腦會替您選擇 X，反之若您的「選擇 Y 的額外報酬」大於此基準值，電腦會替您選擇 Y。**所有人都輸入基準值後，電腦才會隨機產生給每個人額外報酬，並依照您的策略替您做出選擇。

基準值的決定方式：電腦會在銀幕上方告知您所屬的組別，您必須在畫面中輸入您的基準值，若您已經做好決定，請點選畫面中「我決定好了」的按鈕，點選之後您將不能再更改您的基準值。當所有受試者都點選此按鈕後，電腦會顯示額外報酬並計算報酬。銀幕最下方的表格會顯示本部份實驗每回合的歷史紀錄。

每回合結束後，螢幕上會顯示這回合的實驗結果，包括本回合您的基準值、您的「選擇 Y 的額外報酬」、您選擇「X」或「Y」、兩組選擇「X」的人數，您所屬的組別以及您所獲得的報酬。您有 10 秒的時間來閱讀所有資訊，閱讀完後請您點選畫面中「確認」的按鈕，當所有受試者都確認後，實驗將提前進入下一回合。

問答階段

在正式實驗開始之前，螢幕上會先顯示一些問題並請您輸入正確答案。這些問題的目的是為了確認您了解此實驗的規則。**所有問題都被正確回答後，您將進入練習階段。**如果您對這些問題或本實驗有任何疑問，請在此時舉手。實驗者會過來解答。

練習階段

此階段共有兩回合，目的為幫助您熟悉正式實驗的操作介面及計分方式。請注意，練習階段的得分僅供您熟悉本實驗的進行方式，與您最後的現金報酬無關。練習結束後，實驗者會宣佈「實驗正式開始！」，然後才進入正式實驗。如果您對本實驗有任何疑問，請在此時舉手。實驗者會過來解答。

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第二部份實驗正式開始

現在第二部份實驗正式開始，本部份實驗共有五十回合！在正式實驗中所獲得的「法幣」都會在實驗結束後，按照 20:1 的匯率 (法幣 20 元=新台幣 1 元) 兌換成新台幣支付給您。因此請慎重選擇、慎重決定。