

This document contains the English language versions of the Public Goods Game (PGG) and Dictator Game (DG) protocols used for the paper “Kinship Structure and the Family: Evidence from the Matrilineal Belt” (Lowes, 2022). I include one version of the protocols for each experiment. There are analogous versions in which the respondent is paired with a stranger of the opposite sex. For the PGG, there is also a version in which the amount contributed to the public good is multiplied by 2 ($\times 2$ Version with Spouse). For additional details on the implementation of the experiments, see the paper and the online appendix.

1. PGG Experimental Protocols: $\times 1.5$ Version with Spouse

Today you and your spouse will be participating in an activity. You will be working with me in this tent. Your spouse is working with my co-worker in the other tent. In this game, you will be given money to divide between two envelopes: a personal envelope and a shared envelope. Your spouse will also be given money to divide between a personal envelope and a shared envelope. The money that you and your spouse will contribute to the shared envelope will be increased by 1.5. This means that we will add half of the total amount contributed to the shared envelope by you and your spouse. For example, if you put 1000 CF in the shared envelope and your spouse puts 0 CF, it will become 1500 CF after the increase. Then the money in the shared envelope will be divided equally between you and your spouse. For example, 1500 CF will be divided in two: each player will receive 750 CF. All the money that you put in the personal envelope will be yours.

Now we will explain the game to you step by step. First we will tell you how much money you have to play this game. The amount of money that we give you at the start of the game will be the amount that you will divide between the two envelopes. You will receive at least 1000 CF, but there is a chance you will get a bonus. You will roll this black and white dice. The dice has 6 sides: three black, and three white. If you roll black, then you will receive a bonus of an additional 500 CF. If you roll white, you will not receive any additional money. Your spouse will also receive at least 1000 CF and have the opportunity to get the bonus as well. Like you, your spouse will roll a dice to determine if he/she receives the bonus. Your spouse will not know if you received the bonus or not. Your spouse will only know how much you contribute to the shared envelope.

The money that you are paid is yours, and you will decide how to allocate it between the two envelopes: the personal envelope and the shared envelope. We will collect the money that you and your spouse have allocated to the personal and the shared envelopes. Someone in our research office will increase the money that you and your spouse put in the shared envelope by 1.5, and then divide it evenly between you two. The amount of money that you put in the personal will not change. In a few days or a week, we will return with your payments from the personal envelope and the shared envelope. You can put as much or as little as you want into the shared envelope. You can contribute any amount from 0 CF to 1000 CF if you did not win the bonus, and any amount from 0 CF to 1500 CF if you did win the bonus. The decision is yours. For each amount that could be in the shared envelope, this poster tells you what will happen to your money.

PICK UP THE MULTIPLICATION SHEET AND SHOW IT TO THE PLAYER. For each amount that could be in the shared envelope, you can see here how much money you'll receive once the amount is increased by 1.5, and then divided equally between you and your spouse. **DISCUSS A FEW EXAMPLES TO DEMONSTRATE HOW TO USE THE MULTIPLICATION SHEET.**

Are there any questions so far? In short: there are two amounts of money you can receive to use in this game. You will be given 1000 CFs, or 1500 CF if you win the bonus. You'll decide how you want to divide that money between a personal envelope and a shared envelope. At the same time, your spouse will be making the same decision. The money that you put in the shared envelope and the money your spouse puts in the shared envelope will be increased by 1.5. It will then be divided evenly between the two of you. But remember, you will get all the money you put in the personal envelope. Now, we are going to run through some examples to show how this game can be played.

TAKE THE MONEY IN YOUR HANDS FOR THESE DEMONSTRATIONS. FOR EACH EXAMPLE, COUNT THE AMOUNTS OF MONEY THAT YOU ARE TALKING ABOUT. BEGIN WITH 1000 CF. ADD 500 CF IF THE EXAMPLE INCLUDES WINNING A BONUS. THEN, PUT THE "PERSONAL MONEY" ON TOP OF THE PERSONAL ENVELOPE, AND THE "SHARED MONEY" ON TOP OF THE SHARED ENVELOPE.

EXAMPLES

1. Here is the first example. Imagine that you do not win the bonus, so you have 1000 CF to divide. Imagine that you decide to put 700 CF in the shared envelope, and to put 300 CF in the personal envelope. Imagine that your spouse decides to put 500 CF in the shared envelope. In total there is $700+500=1200$ CF in the shared envelope. This amount will be increased by 1.5, meaning that it will increase to 1800 CF. Both you and your spouse will receive an equal share of the money in the shared envelope: 900 CF each. At the end of the game, you will receive 900 CF from the shared envelope plus 300 CF from the personal envelope, a total of 1200 CF. Your spouse will not know whether or not you won the bonus; he/she will only know how much money you put in the shared envelope.

2. Here is another example. Imagine that you do not win the bonus, so you have 1000 CF to divide. Imagine that you decide to put 1000 CF in the shared envelope and your spouse also decides to put 1000 CF in the shared envelope. In total there is $1000+1000=2000$ CF in the shared envelope. This amount will be increased by 1.5, meaning that it will increase to 3000 CF. Both you and your spouse will receive an equal share of the money in the shared envelope: 1500 CF each. At the end of the game, you will receive 1500 CF total, since you did not put any money in the personal envelope. Your spouse will not know whether or not you won the bonus; he/she will only know how much money you put in the shared envelope.

3. Now imagine that you win the bonus of 500 CF, so you have a total of 1500 CF divide. Imagine that you decide to put 200 CF in the shared envelope and to put 1300 CF in the personal envelope. Imagine that your spouse decides to put 800 CF in the shared envelope. In total there is $200+800=1000$ CF in the shared envelope. This amount will be multiplied by 1.5, meaning that it will increase to 1500 CF. Both you and your spouse will receive an equal share of the money in the shared envelope: 750 CF each. At the end of the game, you will receive 750 CF from the shared envelope plus 1300 CF from the personal envelope, a total of 2050 CF. Your spouse will not know whether or not you won the bonus; he/she will only know how much money you put in the shared envelope.

4. Now imagine that you win the bonus of 500 CF, so you have a total of 1500 CF divide. Imagine that you decide to put 1200 CF in the shared envelope and to put 300 CF in the personal envelope. Imagine that your spouse decides to put 900 CF in the shared envelope. In total there is $1200+900=2100$ CF in the shared envelope. This amount will be multiplied by 1.5, meaning that it will increase to 3150 CF. Both you and your spouse will receive an equal share of the money in the shared envelope: 1575 CF each. At the end of the game, you will receive 1575 CF from the shared envelope plus 300 CF from the personal envelope, a total of 1875 CF. Your spouse will know that you received the bonus because you contributed over 1000 CF to the shared envelope and that is only possible when you have received the bonus.

TEST QUESTIONS: Now please respond to the following test questions to be sure that you have understood. USE THE FOLLOWING LIST AS TEST QUESTIONS. IF IT IS NECESSARY TO ASK MORE TEST QUESTIONS, START AGAIN WITH THE FIRST EXAMPLE ABOVE AND WRITE "TEST QUESTIONS REPEATED" ON THE ANSWER FORM.

TEST QUESTIONS

1. Imagine that you do not win the bonus, and that you put 500 CF in the shared envelope. How much money did you put in your personal envelope? [500 CF]
2. Now imagine that your spouse puts 1000 CF in the shared envelope. How much money total is there in the shared envelope? [1500 CF]

3. After we multiply this amount by 1.5, how much money will there be in the shared envelope? [2250 CF]
4. When we divide this money in half, how much will you receive? [1125 CF]
5. In total, how much money will you receive? [$1125+500=1625$ CF]
6. Imagine that you do not win the bonus, and that you put 800 CF in the shared envelope. How much money did you put in your personal envelope? [200 CF]
7. Now imagine that your spouse puts 200 CF in the shared envelope. How much money total is there in the shared envelope? [1000 CF]
8. After we multiply this amount by 1.5, how much money will there be in the shared envelope? [1500 CF]
9. When we divide this money in half, how much will you receive? [750 CF]
10. In total, how much money will you receive? [$750+200=950$ CF]
11. Now imagine that you win the bonus of 500 CF. How much money do you have to divide? [1500 CF]
12. Imagine that you put 900 CF in the shared envelope. How much money did you put in your personal envelope? [600 CF]
13. Now imagine that your spouse puts 900 CF in the shared envelope. How much money total is there in the shared envelope? [1800 CF]
14. After we multiply this amount by 1.5, how much money will there be in the shared envelope? [2700 CF]
15. When we divide this money in half, how much will you receive? [1350 CF]
16. In total, how much money will you receive? [$600+1350=1950$ CF]
17. Now imagine that you win the bonus of 500 CF. How much money do you have to divide? [1500 CF]
18. Imagine that you put 1500 CF in the shared envelope. How much money did you put in your personal envelope? [0 CF]
19. Now imagine that your spouse puts 500 CF in the shared envelope. How much money total is there in the shared envelope? [2000 CF]
20. After we multiply this amount by 1.5, how much money will there be in the shared envelope? [3000 CF]
21. When we divide this money in half, how much will you receive? [1500 CF]
22. In total, how much money will you receive? [$0+1500=1500$ CF]
23. Who is the other player in this game? [SPOUSE.]
24. By how much is the money in the shared envelope increased? [1.5.]
25. Will the other player know if you won the bonus? [NO]

Are there any questions? Now we've finished explaining the instructions for the game, so we will ask you to make your decisions. We will collect the money that you have put in the personal and the shared envelopes, and we will take it back to our research office. One of the researchers will record your choices,

augment the money that you and your spouse put to the shared envelope, and divide it in half. I will return in a few days or a week with money you get from this game.

HAND THE PLAYER 1000 CF.

Here is your 1000 CF. Now please roll the die to find out if you will win the bonus.

HAND THE PLAYER THE BLACK AND WHITE DIE. LET THEM ROLL THE DIE, AND RECORD THE RESULT OF THE THROW. IF THEY ROLL BLACK, HAND THEM 500 CF. IF THEY ROLL WHITE, DO NOT GIVE THEM ANY MORE MONEY.

DID HE/SHE WIN THE BONUS (DIE ROLL WAS BLACK)?

Now, I will leave you alone to make your decisions and divide your money. I will come back in a few minutes.

LEAVE THE TENT. AFTER A COUPLE OF MINUTES, KNOCK/CALL OUT TO CHECK IF THE PLAYER IS READY FOR YOU TO RE-ENTER. IF THEY ARE READY, GO BACK INTO THE TENT AND PICK UP BOTH ENVELOPES.

Now I will collect your envelopes and take them back to our office. One of the researchers in the office will combine the money that you contributed to the shared envelope with the money that your spouse contributed to the shared envelope. He will multiply this amount by 1.5, and then divide it equally between you two. The amount of money in your personal envelope will not change. I will come back in a few days or a week with all of your winnings from the game.

COLLECT BOTH THE PERSONAL AND SHARED ENVELOPES FROM THE PLAYER. THE AMOUNT OF MONEY THE PLAYER WILL RECEIVE WILL BE CALCULATED BY THE OFFICE. WHEN HE IS FINISHED, START THE NEXT ACTIVITY.

2. Dictator Game Protocols: Version with Spouse

Now I will explain how to play this game. It is very important to pay attention because only those who understand the rules of the game well will be able to play. Let me remind you that this project is completely voluntary and you are free to leave at any time if you decide that you do not want to participate in this game.

This game is played in pairs: there is a Player 1 and a Player 2. You will play with someone chosen randomly from the population of Kananga, or with your spouse. Neither you nor I will know exactly who you are playing with. Only one person in our research office will know who plays with who, and he will never tell anyone.

I will give 1000 FC to each pair of players. Player 1 must decide how to divide the money between himself and player 2. Player 1 must give between 0 and 1000 FC to player 2. Player 2 takes home what Player 1 gives him, and Player 1 takes home the rest. Now, we are going to run through some examples to show how this game can be played.

TAKE THE MONEY IN YOUR HANDS FOR THESE DEMONSTRATIONS AND PUSH THE OFFER MADE TO PLAYER 2 ACROSS A LINE ON THE MAT.

EXAMPLES

1. Here is the first example. Imagine that Player 1 chooses to allocate 900 CF to Player 2. Then, Player 2 will go home with 900 CF. Player 1 will go home with 100 CF (1000 CF minus 900 CF equals 100 CF).
2. Here is another example. Imagine that Player 1 chooses to allocate 200 CF to Player 2. Then, Player 2 will go home with 200 CF. Player 1 will go home with 800 CF (1000 CF minus 200 CF equals 800 CF).
3. Here is another example. Imagine that Player 1 chooses to allocate 500 CF to Player 2. Then, Player 2 will go home with 500 CF. Player 1 will go home with 500 CF (1000 CF minus 500 CF equals 500 CF).
4. Here is another example. Imagine that Player 1 chooses to allocate 700 CF to Player 2. Then, Player 2 will go home with 700 CF. Player 1 will go home with 300 CF (1000 CF minus 700 CF equals 300 CF).
5. Here is another example. Imagine that Player 1 chooses to allocate 0 CF to Player 2. Then, Player 2 will go home with 0 CF. Player 1 will go home with 1000 CF (1000 CF minus 0 CF equals 1000 CF).

Now please respond to the following test questions to be sure that you have understood. Then, I will tell you if you are a Player 1 or a Player 2 and you will begin to play.

USE THE FOLLOWING LIST AS TEST QUESTIONS. THE TOTAL OF 5 EXAMPLES AND 6 TEST QUESTIONS ENCOMPASSES THE COMPLETE SERIES OF POSSIBLE ALLOCATIONS THAT PLAYER 1 COULD MAKE. IF IT IS NECESSARY TO ASK MORE TEST QUESTIONS, START AGAIN WITH THE FIRST EXAMPLE ABOVE AND WRITE "TEST QUESTIONS REPEATED" ON THE ANSWER FORM.

TEST QUESTIONS

1. Imagine that Player 1 chooses to allocate 1000 CF to Player 2. How much will Player 2 go home with? [1000] And how much will Player 1 go home with? [0]
2. Now imagine that Player 1 chooses to allocate 400 CF to Player 2. How much will Player 2 go home with? [400] How much will player 1 go home with? [600]
3. Now imagine that Player 1 chooses to allocate 600 CF to Player 2. How much will Player 2 go home with? [600] How much will player 1 go home with? [400]
4. Now imagine that Player 1 chooses to allocate 100 CF to Player 2. How much will Player 1 go home with? [900] How much will player 2 go home with? [100]
5. Now imagine that Player 1 chooses to allocate 800 CF to Player 2. How much will Player 1 go home with? [200] How much will player 2 go home with? [800]
6. Now imagine that Player 1 chooses to allocate 300 CF to Player 2. How much will Player 1 go home with? [700] How much will player 2 go home with? [300]

Now that you fully understand the game, do you still want to participate?

IF THE PERSON INDICATES "YES", ADMINISTER THE OF THE GAME IN THE ORDER IN WHICH THEY APPEAR ON YOUR LIST.

For this activity, you are a Player 1. The Player 2 you play with will be your spouse. Your choices in this game will be secret. I will not tell your spouse how you have played. I will also not tell anyone else in the community how you have played. Your choices will be kept secret because your spouse will be paid for a randomly selected game, and they will have no way of knowing which game they were paid for.

Here is the 1000 CF. Now, please go inside the tent. While you are there, divide this money and put the amount you would like to give to Player 2 in the envelope marked "Spouse". Put the rest of the money in the envelope marked "Me". Then, seal both envelopes, keep the one marked "Me," and put the one

marked "Spouse" in the bag in front of the tent.

I will never know how much you have chosen to put in the two envelopes. Only one person in our research office will know, and he will never tell anyone.

CHECK THAT THE PLAYER HAS UNDERSTOOD HOW TO DIVIDE THE MONEY BETWEEN HIMSELF AND THE PLAYER 2 IN THE TWO ENVELOPES. THEN, LEAVE THE PLAYER ALONE IN THE TENT UNTIL HE IS FINISHED. MAKE SURE THAT OTHER PEOPLE DON'T BOTHER OR SPEAK TO THE PLAYER WHILE HE IS IN THE TENT. WHEN HE IS FINISHED, START THE NEXT ACTIVITY.

References

Lowes, Sara, "Kinship Structure and the Family: Evidence from the Matrilineal Belt," 2022.