Appendix B

Supplementary Online Material to

"On the Effects of Group Identity in Strategic Interactions"

LeCoq, Tremewan, Wagner

- Experimental instructions and screenshots for Experiment 1

- Experimental instructions and screenshots for Experiment 2

Instructions Experiment 1

In the following we provide the English translation of the experimental instructions. Participants received instructions regarding the general procedure, the group identity manipulation and the centipede game. Note that the instructions for the group identity manipulation were adapted from Chen and Li (2009). Instructions of each part were shown to participants just prior to the respective part. Instructions in the original language (German) are available upon request.

<u>General instructions</u> [written]

Welcome to this economic experiment! The experiment in which you are about to participate is part of a research project on decision-making.

If you have a question, now or during the experiment, please raise your hand and remain silent and seated. An experimenter will come to you to answer your question in private.

If you read the following instructions carefully, you can earn a considerable amount of money in addition to the **3 Euro**, which you receive just for participating in the experiment. How much money you can earn additionally depends both on your decisions and the decisions of the other participants.

It is therefore very important that you read these instructions, and all later onscreen instructions, very carefully.

During the experiment you are not allowed to communicate with the other participants. Violation of this rule will lead to the exclusion from the experiment and all payments.

We will not speak of Euros during the experiment, but rather of points. Your whole income will be calculated in points. At the end of the experiment, the total amount of points you earned will be converted to Euros at the following rate:

20 Points = 1 Euro.

At the end of the experiment you will be privately and anonymously paid in cash the amount of points you earned during the experiment in addition to the 3 Euro you receive for participation.

In the following we describe to you the general procedure of the experiment: You will be asked to make various decisions in two consecutive parts of the experiment. In each of the 2 parts you can earn points for your decisions. How much points you can earn in each part will be announced before you have to make your decisions. After all decision-making parts of the experiment, a questionnaire concludes the experiment.

All the information you require for making decisions in part 1 of the experiment will be displayed directly on screen. You will receive all the information you require for part 2 of the experiment after completion of part 1 of the experiment.

Instructions for part 1 of the experiment [on-screen]

Welcome to part 1 of the experiment.

In the following you will be shown 5 pairs of paintings by two artists. The paintings were created by two distinct artists. Each pair of paintings consists of one painting being made by each artist. For each pair, you are asked to choose the painting you prefer. Based on the paintings you choose, you (and the other participants) will be classified into one of two groups.

You will then be asked to answer questions on two more paintings. For each correct answer, you will earn additional points. You may get help from other members or help others in your own group while answering the questions.

The composition of the groups remains fixed for the rest of the experiment. That is, you will be a member of the same group for the whole experiment.
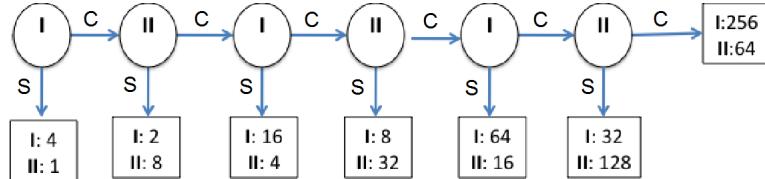
After part 1 has finished, you will be given further instructions about the course of the experiment.

Instructions for part 2 of the experiment [written]

In part 2, you are asked to make decisions. The game depicted below describes a game between two players who make decisions in turn. This picture will be shown to both players, called **player I** and **player II**. It summarizes all possible decisions players can make as well as all the points player I and player II can earn in the game depending on its outcome.

Both players (I and II) have on each of their 3 decision nodes, which are depicted by a circle marked I and II respectively, the possibility to choose either **Continue (C)** or **Stop (S)**. This means player I decides between Continue (C) or Stop (S) on the first circle (read from left) and at all other circles marked with **I**. Similarly, player II decides between Continue (C) or Stop (S) on all circles marked with **II**.

How much points each player earns in the game depends on the decisions of both players. The points player I and player II receive in each of the possible outcomes of the game, are depicted in the respective square box below.

General structure of the decisions: The two players (I and II) decide sequentially and alternately. The game begins at the first circle marked with I (see upper left corner in the picture) There, player I chooses to play either Continue (C) or Stop (S). If player I chooses Stop (S), the game ends and player I receives 4 points and player II receives 1 point. If player I chooses on her first circle marked with I to Continue (C) then play proceeds and it is player II's turn to decide (see first circle II, read from left in the picture). Player II then chooses either Continue (C) or Stop (S). If player II chooses Stop (S), the game ends and player I receives 2 points and player II receives 8 points. If player II chooses Continue (C), then play proceeds to the next circle marked with I where player I chooses again between Continue (C) and Stop (S). And so on.

Your decisions: Before you make decisions in this game at the computer screen, you will be informed about whether you are a player I type or a player II type. Your player type will be drawn randomly and your type will remain fixed for all decisions. You will then be asked, separately for each of your three decision nodes, to choose either Continue (C) or Stop (S). Please bear in mind that, at the time of your decisions you do not yet know the decisions of the other player.

The outcome and your point earning from the game is calculated as follows: As soon as all players made their decisions, each player I is randomly and anonymously matched with a player II. All decisions of these two players are then combined to calculate the outcome of the game and with it the respective point earning of each player. You will be informed about the outcome and your points in the game after all decisions have been made. It is therefore important that you made your decision in the game carefully, since they influence the outcome and the points you earn.

If you have questions regarding the explanation of the game, please raise your hand now. You will receive all further explanations directly on screen.

Instructions for part 2 of the experiment [onscreen]

Thank you very much for your decisions. You will be informed about the outcome (as well as the points you received) in the two previous scenarios at the end of the experiment.

Now, please answer the following questions regarding the **first scenario** [**second scenario**] in which you have participated. In this scenario, you interacted with a participant from the **Klee group** [**Kandinsky group**].

If you correctly answer the next three questions, which will be presented to you on the next 3 screens, then you will receive 100 points. How much points you receive for your answers will be reported to you at the end of the experiment.

Click OK to proceed.

Screenshots Experiment 1
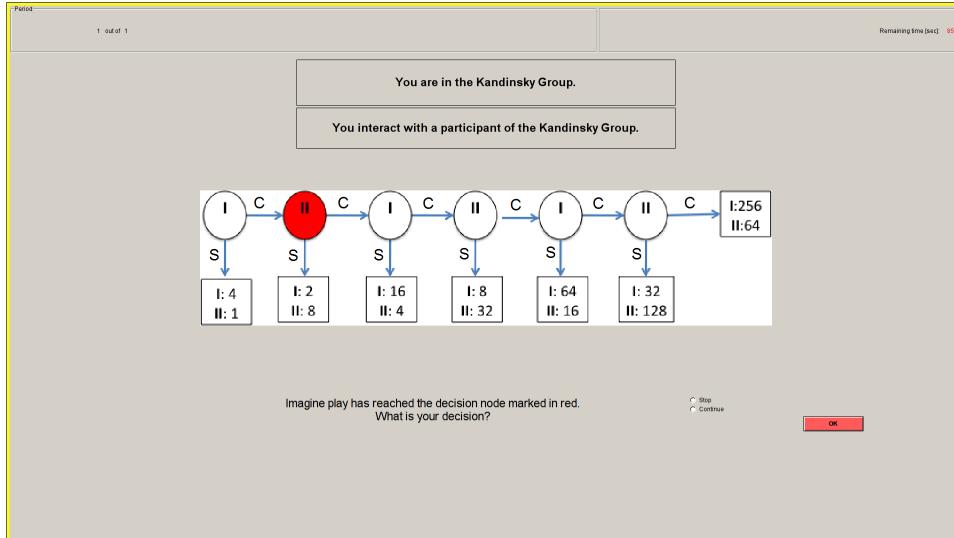
Figure 1: Decision screen (at decision node 2).
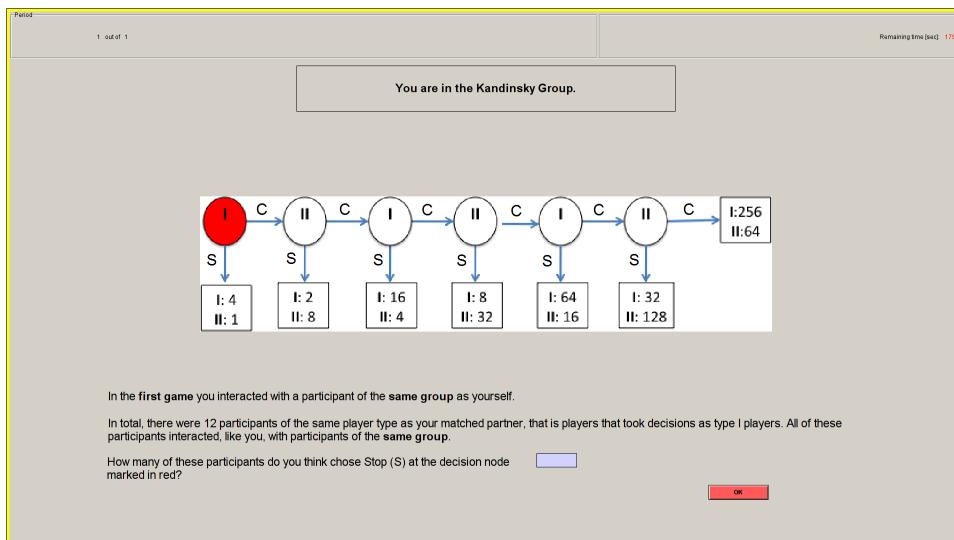
Figure 2: Belief elicitation screen (belief about population behavior at decision node 1).

Instructions Experiment 2

In the following we provide the experimental instructions. Experiment 2 follows the same general procedure and the same general instructions as Experiment 1. The only differences in the general instructions regard the exchange rate, which was 2 points = 1 Euro, and the payoff for the correct answer in the painter identification task, which was 1 point for each correct answer. Note that, in contrast to Experiment 1 which was conducted in German, the language of this experiment was English. Instructions of each part were shown to participants just prior to the respective part on the screen.

[SCREEN 1, explanation of stag hunt games]

<u>Instructions</u>

The table on the right shows an example of the choices you will be making in the experiment. It is only an example. The tables you will see during the experiment will have different numbers from this one.

In the actual experiment, you will be shown tables like this one (but with different numbers), and asked to choose one of your available actions (U(p), M(iddle) or D(own)). The participant with whom you are matched will take one of her/his actions (L(eft), C(entre) or R(ight)). Neither you nor the other person will know what the other has chosen until both actions have already been decided.

There are nine possible outcomes, each corresponding to a cell of the table. The combination of your action and the other person's action determines the cell of the table chosen, which tells you how much you and the other person will earn: The number of Points you receive appears in the lower left corner of each cell of the table (the blue number). The number of Points the other person receives appears in the upper right corner of each cell of the table (the red number).

For example:

- If you choose U and the other person chooses L, you earn 5 Points and the other person earns 5 Points.

- If you choose M and the other person chooses R, you earn 3 Points and the other person earns 1 Points.

- If you choose D and the other person chooses C, you earn 1 Points and the other person earns 3 Points.

Please be sure you understand how to read this table. Raise your hand if you would like further explanation. Otherwise, click OK to continue to the next screen which will test your understanding.

[SCREEN 2]

You will now be asked five questions about a different table to check your understanding. You will not progress to the next question until you have answered the previous one correctly.

Your answers will not affect your payment. Please click OK to continue.

[SCREEN 3, actions in stag hunt games]

Instructions of part 2

You will now be asked to make decisions for 5 different tables.

You are in the Klee group [Kandinsky group]. **For each table**, your decision will be matched with the decision of a **randomly selected participant from the Klee group [Kandinsky group]** to decide the outcome:

You will not see the outcomes until the end of the experiment.

At the end of the experiment **one of the five** games will be randomly chosen and you and the randomly selected participant from the Klee group [Kandinsky group] will be awarded points according to your and their decision. Please click OK to continue.

[SCREEN 4, belief elicitation]

Instructions of part 3

In this part of the experiment you will be shown again the 5 tables you saw in part 2.

For each table: you will be asked to guess how likely it is that the randomly selected participant from the **Klee group** [**Kandinsky group**] you are matched with made each of the possible choices.

At the end of the experiment **one of the five tables** will be randomly chosen and you will be paid according to the accuracy of your guess for that table. Exactly how this is to be done will be explained on the next screen. Please click OK to continue.

[SCREEN 5]

Tutorial

These instructions refer to the left hand side of this screen. When you are making your real guesses, these instructions will be replaced by the tables you saw in the previous part. You can use the first two sliders to indicate the probability with which you think the other person will choose L, C, and R. You will not be able to adjust the slider asking about "R". It will move automatically to ensure that your three guesses add to 100%.

- Click on the first line and a slider will appear where you click (you will be able to adjust it later). - DO THIS NOW

- Now click on the second slider, and a second slider will appear. - DO THIS NOW

As long as the probabilities you have chosen on the first two sliders add to 100% or less, a slider will appear on the third line as well. The probabilities you have selected appear in blue beside the lines if they add to less than 100%, and red otherwise.

- Move the sliders up and down until you understand how they work. - DO THIS NOW

When you have guessed three probabilities that add to 100% and shown on the final line how confident you are of your guess, you will be able to click "OK" to move on to the next game.

- Click somewhere on the last line and an OK button will appear (as long as the probabilities you have selected add to 100%). This button will not work during this tutorial. - DO THIS NOW

You will be paid according to how accurately you predict what the other person does: The amount you will earn for each choice of the other person will be shown on the screen whenever the probabilities you have selected add to 100%.

If you say they will pick an action with 100% probability and you are right, you will earn 10 Points. If you have less than 100% probability on the action they choose, you will earn less than 10 Points. **These payments are made in such a way that you can expect to earn the most by answering honestly.**

Use the sliders to answer the following questions (they are just to check your understanding and will not affect your earnings). When you have answered the questions, please click the OK button on this side of the screen to continue.

- How much will you earn if you guess that the other person will choose L with 100% probability and they choose C?

- How much will you earn if you guess that the other person will choose L with 25% probability, C with 25%, and R with 50% probability and they choose R?

- How much will you earn if you guess that the other person will choose L with 60% probability, C with 30%, and R with 10% probability and they choose C?

Screenshots Experiment 2
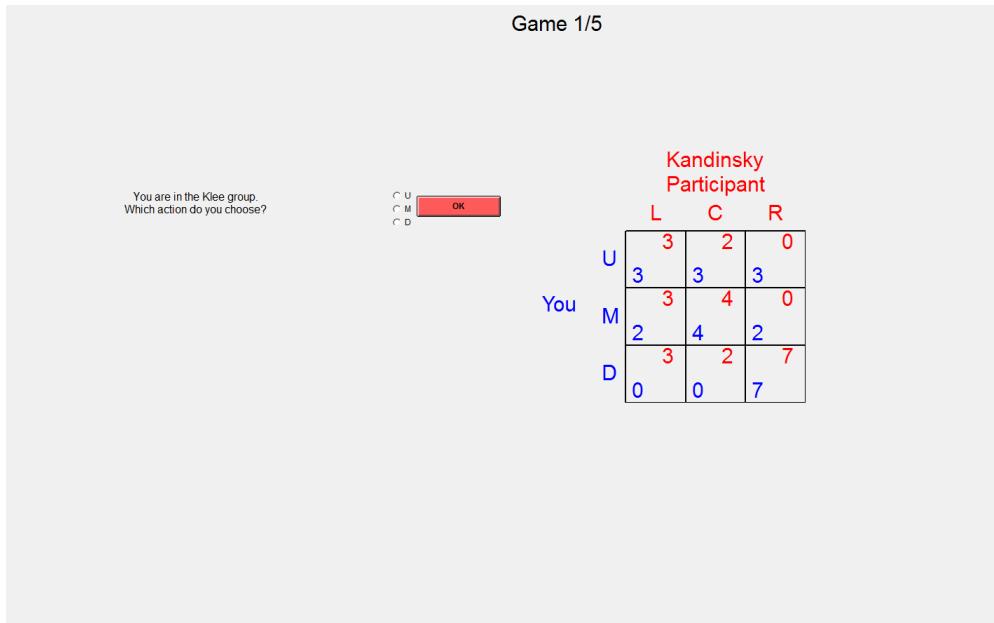
Figure 3: Decision screen.
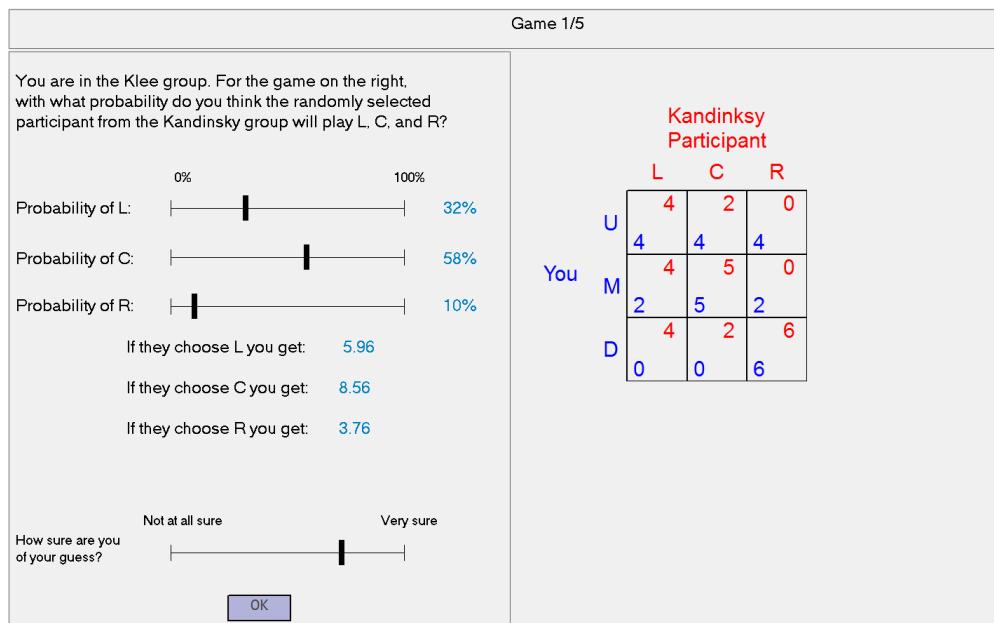
Figure 4: Belief elicitation screen.