

Resentment or empathy?
How past experiences in the lab affect generosity
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Motivation

We propose a series of experiments in order to study the potential effect of a subject's past experience, bad or good, as a recipient, when he has to act as a dictator in a dictator game. In order to investigate this question, we designed a protocol based on a sequential dictator game in which the recipient in a first dictator game becomes the dictator in a second game. Precisely, the game of the first step is a double dictator game, a dictator A decides how to share a fixed amount X in two separate pairs with two different recipients B and C. He decides on a single amount to keep $X - Y$, that is applied to each pair. Therefore, his payoff is $2x(X - Y)$ while each recipient B and C receives the payoff Y . The game in the second step is a regular dictator game, player B becomes a dictator for the C recipient.

We want to investigate the different ways a first interaction can have an effect on a subject's decision as a dictator. In particular, we conjectured that empathy towards somebody who shared the same past experience could increase generosity. In our experiment the first dictator game involves three subjects, one dictator and two recipients. When one of the two recipients becomes a dictator, he knows that he has to take a decision for somebody who was in the same situation in the previous step and got the same amount as a result of the first dictator's decision. The question is to understand whether this dictator takes into account his previous experience as a recipient when he decides about how to share the amount and if he does, in which direction. Is it the case that the new dictator feels some empathy towards the recipient who shared the same experience? Or can we observe some general reciprocity? In order to analyze this decision precisely, at the end of each session, we asked the subjects to answer a psychological questionnaire to understand whether differences in individual empathy and personality could explain differences in generosity and reaction. There is a growing literature on empathy in economics and, in particular, in the experimental literature (see for example a recent paper by Artinger et al. 2014). However, the idea, in general, is that empathy is triggered by pictures of somebody in need. Here we want to investigate whether empathy could be triggered by a more cognitive process like the memory of a past experience shared with somebody.

Sequential dictator games have already been used in the experimental literature (see Ben-Ner et al. 2004, Diekmann 2004, Herne 2013 among others) to study reciprocity. In most of the cases studied in this literature, the recipient of the first stage is the dictator of the second stage. When the second dictator's decision is close to the first dictator's decision, this behavior is interpreted as a consequence of a direct reciprocity. However, in some of these experiments on reciprocity, three subjects are involved: the first dictator, the first recipient who becomes a dictator in the second stage and the recipient of the second stage who is a third party who has not been engaged in the first interaction. In that case, the literature speaks about general reciprocity when the dictator of the second stage seems to take a decision close to the first dictator's decision. However, while the direct reciprocity is a quite convincing

interpretation of the results obtained when there are only two subjects involved, general reciprocity is more controversial (see Ben-Ner et al. 2004 and Herne 2013).

Design of the experiment

We ran a first series of experiments in October 2014. We organized three sessions that took place simultaneously at the LEEM in Montpellier and the LEEP in Paris, with 36 subjects participating in each session, 18 in Montpellier and 18 in Paris. We organized this double location in order to increase anonymity among subjects. Subjects were given a type at the beginning of the experiment, A or B. They knew that they had to keep this type for the whole duration of the experiment. They were randomly matched in groups of three people, one A and two B. In fact, the program matched each A with two types of subjects designated by B and C in what follows. The subjects knew that the group was fixed for the whole duration of the experiment.

First stage

The first stage was a simultaneous double dictator game. Subject A was a dictator and subjects B and C were two recipients. Subject A had to decide how to share 12€ with each recipient B and C (two B in the instructions) but she had to take only one decision. When she decided to keep $(12-Y)$ €, her payoff was $(24-2Y)$ € and each recipient's payoff was Y €. Subject B did not have anything to do but we asked subjects C to forecast the dictator's decision. We did not try to elicit subject B's beliefs because we did not want this answer to interfere with subject B's decision in the second stage.

Second stage

In a second stage, each subject B was now a dictator and player C her recipient. We told them that the role was chosen at random and this is indeed what we did at the beginning of the session. B had to decide how to share 12€ with C. When she decided to keep $(12-Y)$ €, her payoff for this stage was $(12-Y)$ € and player C's payoff was Y €. Again, we asked subjects C to predict the dictator's decision.

Questionnaires

At the end of each session, we asked the subjects to answer a questionnaire. This questionnaire constituted of three psychological tests: the Toronto empathy questionnaire which gives a measure of empathy (Spreng et al. 2009), the BIS/BAS scales which measures affective responses to reward and punishment (Carver and White 1994) and the Dark triad (Jones and Paulhus 2014) which is a personality questionnaire. These three tests rely on the assumption that there exist individual differences in empathy and sensitivities to reward and punishment.

Hypothesis and first results

First, we have to analyze the dictator A's decision in the double dictator game of the first step to understand whether his behavior is different from a regular dictator's behavior. Does the

dictator's decision depend on the fact that there are one or two recipients? However, we do not have observations of a treatment in which the first step is a regular dictator game with only one recipient. Nevertheless, we could compare the A dictator's behavior in the first step of our experiment with the stylized facts of dictator games we can find in the literature. Our first conclusion is that the dictator behaves differently in the double dictator game. In particular, the average decision is, for the dictator of the double dictator game, to keep 66% of the amount in each pair against 80% in average for a regular dictator. Furthermore, the fifty/fifty decision occurs here with an apparently larger frequency. In order to confirm this difference, we plan to run additional sessions based on a new treatment with a regular dictator game.

The main objective is to understand whether B subjects' past experience as a recipient has an influence on his decision as a dictator and to determine what is the nature of this influence. We want to test the following assumption:

Hypothesis 1: A past experience as a recipient has no impact on the B dictator's decision.

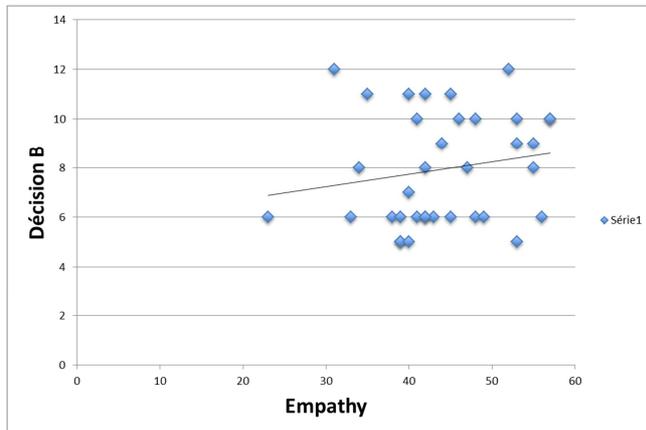
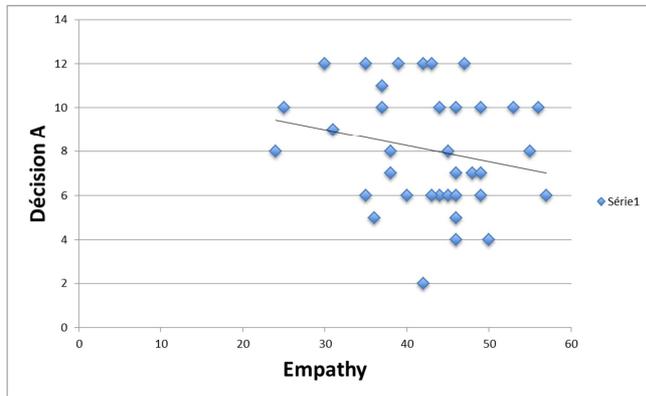
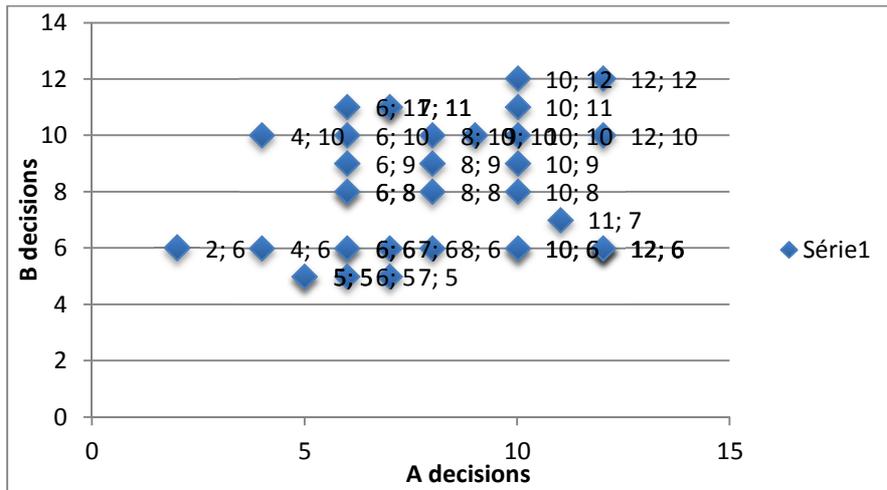
Strangely enough, a plot of B's decisions on their A dictator's decisions does not show any clear relationship. Hypothesis 1 cannot be rejected. This means that, at this stage of the analysis, neither reciprocity, mimicry nor any other behavior that takes into account the past experience, is revealed.

However, a first analysis of the answers to the questionnaire shows that a deeper investigation is necessary. First, we plotted the A dictator's decision with his degree of empathy measured by the Toronto test. We did the same thing for B dictators. We observed no difference in the distribution of degrees of empathy between the A and B dictators. Our conclusion is that the degree of empathy is robust and does not depend on the subjects' recent past experience. We did the same thing for the two other psychological tests. We observed the same robustness for the other traits of personality. This does not mean that these psychological traits are perfectly stable but just that they do not change radically with the recent past. Nevertheless, and this is more interesting, we observed a clear difference between the A dictators' decisions as a function of the degree of empathy and the B dictators' decisions as a function of the same variable. Now we have to study the B dictators' decisions as a function both of the A dictators' decisions, and the degree of empathy. Indeed, we want to test the following hypothesis:

Hypothesis 2: A past experience as a recipient has no impact on the B dictator's decision, whatever the B dictator's degree of empathy is.

Our first analysis suggests that we can reject the hypothesis. We have now to do the same analysis for the other psychological tests.

Tables



References

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