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Some differences in revealed behaviour under different inquiry methods

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ABSTRACT

The paper is devoted to the assessment of the relevance of the *they-come-to-play effect* (CTPE, defined in the text). It employs both a real-effort setting and a questionnaire. The effect proves to be significant, albeit the results cannot be generalized straightforwardly. From the comparison between the real-effort setting and the questionnaire it turns out that subjects are influenced by their political preferences only in the latter.

1. Introduction

The experiment presented in this paper aims at checking for the role of what we may call (after Carpenter et al., 2006) the *they-come-to-play effect* (from now on, CTPE). In previous experiments[1] it proved likely to produce seriously misleading results, if not adequately considered.

For reasons discussed below, its influence may arguably be different whether the strategy method is adopted in the experiment or not; hence we replicated our experiments with and without the strategy method. As we will see, CTPE proved again to be robust.

We also replicated the real-effort experiment in a hypothetical setting, through a questionnaire. In addition to the CTPE, the lab approach may be affected by a "lab bias" – few cases observed, small payoffs, unrealistic setting. The questionnaire allows realistic settings and high stakes, but at the price of the "hypothetical bias": the setting is more *realistic*, but less *real*, to use Read's (2005) wording.[2] If the two settings provide the same results, this would strengthen not only the results themselves, but also support he validity of both methods. In our case, we obtained an ancillary result that confirms the experimental approach, while disclaiming the questionnaire-based one. In particular, we found out that subjects follow their political preferences only in the hypothetical scenario.

The design of the experiment is summarized in Section 2. The relevant literature is surveyed in Section 3. The results are illustrated and discussed in Section 4. Section 5 is entirely devoted to the discussion of the unexpected ancillary result.

2. The experimental design and the procedure

2.1. The task

In the experiment participants had to perform a secretarial task: to copy blocs of 6 names, surnames, enrolment numbers and final marks of fictitious students. Participants knew that the data were about invented students. They were also informed that the computer would signal mistakes and would wait for corrections.

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[1] Ottone and Ponzano (2007), Ortona et al. (2008).

[2] See Laury and Holt (2008), for an introductory discussion.

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2.2. The contracts

Two different contracts were submitted to subjects – contract SN (State of Nature) and contract WS (Welfare State).[3] In each contract, each bloc of 6 names was paid 1 euro. However, in the SN after having carried out her/his job, each participant was asked to toss two dice. If the sum was 2 (1/36 probability) all the earned income was lost. If the sum was 7 (1/6 probability) half of it was lost.[4] In contract WS, the wage and the risk were the same as in the NS, but the wage was burdened by a 50% tax rate. The tax revenue was used firstly to refund the unlucky ones – those who tossed either 2 or 7 – and the remainder was equally redistributed among all the participants working under the WS contract.

2.3. The treatments

We implemented 4 treatments: a real-effort experiment with strategy method (LAB_SM), a real-effort experiment without strategy method (LAB), a questionnaire with strategy method (QUEST_SM) and a questionnaire without strategy method (QUEST). In the LAB_SM, both contracts were submitted. Participants had to choose the number of blocs they wanted to copy under each contract and then they were randomly assigned to one of them (1/3 of the players to contract SN, 2/3 to contract WS). In the LAB, either contract SN or contract WS was submitted, and the participants were asked to indicate the number of blocs they wanted to copy under the assigned contract. A fine of 50% of the payoff was assigned to those who performed less tasks than they had chosen. All the previous information was common knowledge.

In the QUEST_SM and in the QUEST, the real-effort experiment design is replicated in a hypothetical context. In particular, the QUEST_SM is the hypothetical version of the LAB_SM, while the QUEST corresponds to the LAB. Both in the QUEST_SM and in the QUEST, people knew that they had not to really perform the task. They received the description of the job and they had to choose the number of blocs they would copy if they had to work for 12 weeks.

2.4. The procedure

Overall, 241 undergraduate students of the University of Milano-Bicocca participated in the experiment—31 in the LAB_SM, 92 in the QUEST_SM, 26 and 29 in the LAB (respectively under contract SN and contract WS), and again 31 and 32 in the QUEST (respectively under contract SN and contract WS). All the sessions were ran at the Laboratory EELAB of the University of Milano-Bicocca.[5] No student took part in more than one session.

In the real-effort experiment – LAB_SM and LAB treatments – the following procedure was adopted:

(a) the task stage: subjects were instructed about the task they had to carry out and they were asked to perform an unpaid session to be familiar with their task;
(b) the contract stage: the characteristics of the working contract/s were described[6] and a set of control questions was submitted to check whether the rules of the experiment were clear enough;
(c) the decision stage: in the LAB treatment, each subject had to declare the number of tasks s/he wanted to perform. In the LAB_SM, participants were requested to state the number of tasks they wanted to carry out under each contract, and informed that the assignment to one of the two contracts was to be decided, randomly, only after their decision. At the time of the choice it was common knowledge that two-thirds of the participants would have worked under Welfare the WS contract and one third under SN one.
(d) the motivation stage: after choosing the number of tasks, but before the assignment to one of the contracts, participants were requested to declare what influenced their labour supply (see Appendix B). We identified CTP subjects as those who stated that they decided what to do in the lab "only on the basis of the time they had previously decided to devote to the experiment".
(e) the work stage: subjects copied the number of tasks chosen in the decision stage
(f) the European Value Survey stage: participants were requested to answer some questions – drawn from the European Value Survey – about their social and political orientation.
(g) the dice stage: when a participant finished her/his work, s/he left the lab and entered the payment room where s/he threw the dice.

There was no time constraint and the end of each session corresponded to the end of the experiment for the last participant in the laboratory. Our experimental procedure preserved anonymity among participants.

In the QUEST_SM and in the QUEST treatments the procedure was less complex. Subjects took a seat in front of a computer and they read the instructions concerning the hypothetical task and the nature of the contract/s. Then, they had to declare the number of task they would have performed if they had to work for 12 weeks. Finally, they participated in the European Value Survey stage. Payment was 10 euro for each subject.

3. They-come-to-play, strategy method and questionnaire: where we stand

Carpenter et al. (2006) have been the first (and to our knowledge, the ones so far) to pay explicit attention to CTPE. In a double-blind dictator game, they convincingly interpret the results obtained as due to the willingness of the participants simply to play, largely irrespectively of the payoff. To our opinion, this nonchalance towards the features of the experiment may easily be due to other characteristics as well, like the willingness to gain as much as possible, the pre-committed decision about the time to be spent in the lab, a reference expected payment and so on. It ensues that the effect of CTPE *may* be different with and without the strategy method (SM). The subjects may be induced to try to choose the "optimal" choice according to what they think the experimenter would appreciate, the theory suggests, or whatever. For instance, Sutter and Weck-Hannemann (2002) and Swenson (1988) find, with the SM, that the labour supply is reduced if the tax rate on the wage is increased. Possibly, subjects actually would not reduce it, or reduce it in a different way, because of the CTPE; but they may find it "irrational" not to reduce the labour supply in presence of an increase in the tax rate. Therefore, their results may be biased towards an unduly differentiated behaviour. It may be added that the experimental literature on possible pitfalls of the strategy method is remarkably slim, and the theoretical one is substantially lacking. Kagel and Roth (1995, pp. 322–323) suggests that the SM has two basic inconveniences. First of all, "it removes from experimental observation the possible effects of the timing

[3] The terms *welfare state* and *state of nature* were not employed in the instructions; the wording was neutral.
[4] This "experimental risk" is a metaphor for the risks necessarily connected to any economic activity, be it bankruptcy, theft, illness, disappointment or whatever.
[5] All the protocols of the experiment are available upon request. The experiment was programmed and conducted with Java. The program was written by Dr. Marie-Edith Bissey, the programmer of the Laboratorio di Economia Sperimentale e Simulativa (ALEX) of the Università del Piemonte Orientale, Alessandria, Italy.
[6] Both contracts were described in the LAB_SM, while in the LAB either the SN contract or the WS one was presented.