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Experimental economics' inconsistent ban on deception



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ABSTRACT

According to what I call the 'argument from public bads', if a researcher deceived subjects in the past, there is a chance that subjects will discount the information that a subsequent researcher provides, thus compromising the validity of the subsequent researcher's experiment. While this argument is taken to justify an existing informal ban on explicit deception in experimental economics, it can also apply to implicit deception, yet implicit deception is not banned and is sometimes used in experimental economics. Thus, experimental economists are being inconsistent when they appeal to the argument from public bads to justify banning explicit deception but not implicit deception.

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1. Introduction

There is no formal ban on explicitly telling subjects a falsehood in economic experiments. The closest thing to such a ban is a mention of deception in the guidelines in the editor's preface to the first issue of *Experimental Economics*, the leading journal in the field, according to which "Papers must meet certain high standards in terms of methodology... Also, any deception should be carefully explained" (Holt & Schram, 1998). Nevertheless, journals informally ban explicit deception by almost never publishing papers employing explicit deception and research requiring it almost never gets funded (Cook & Yamagishi, 2008, p. 125).

This informal ban is endorsed by many experimental economists since they "believe that deception is highly undesirable in economics experiments, and for this reason, they argue that the results of experiments using deceptive procedures should not be published" (Davis & Holt, 1993, p. 24). While several arguments are advanced in the literature on the subject, the most common and the most convincing argument is what I call the 'argument from public bads', according to which if a researcher deceived subjects in the past, there is a chance that subjects will discount the information that a subsequent researcher provides, thus compromising the validity of the subsequent researcher's experiment.

Nevertheless, experimental economists can still get their work published even when they tell their subjects things that while not explicitly false are nevertheless misleading. In this paper I discuss the argument from public bads (APB) in favor of banning explicit deception in experimental economics and argue that economists' attitudes are not consistent. If the APB can be taken to justify a ban on explicit deception, it can also be taken to justify a ban on implicitly deceptive experimental methods.

In $\S2$ I present the APB and discuss the negative effects deceptive experimental methods can have on non-deceptive research. In $\S3$ I discuss some purported benefits of using deceptive experimental methods. In $\S4$ I argue that the APB can apply to implicitly deceptive research methods. In $\S5$ I conclude that if the APB is successful, it justifies banning both explicit and implicit deception.

2. The argument from public bads

John Hey (1991, p. 398) succinctly expresses what seems to be a general view among experimental economists regarding deception: "there is a world of difference between not telling subjects things and telling them the wrong things. The latter is deception, the former is not." Thus, deception is taken to only be the deliberate

telling of a falsehood. In this section I spell out the argument that motivates many economists to be in favor of a ban on deception in experimental economics—the argument from public bads. First, I present a highly cited experiment (Forsythe, Horowitz, Savin, & Sefton, 1994) which does *not* use deception, in order to discuss how, according to the APB, deceptive experiments *could* have an adverse effect on non-deceptive experiments. Second, I discuss why many economists take the APB to justify a ban on using deception in experimental economics.

In their paper, Forsythe et al. (1994) test whether a concern with fairness (conceived as an unconditional disposition to give to others) can by itself explain senders' willingness to make nontrivial offers that deviate from the sub-game perfect Nash equilibrium in two simple and widely used bargaining games—the ultimatum and dictator games.³ Forsythe et al. hypothesize that if the discrepancy between the game theoretic predictions and the experimental results can be explained solely by the senders' concern with fairness, then the senders would offer the same amount in both the dictator game and the ultimatum game. However, Forsythe et al. find that senders are more generous in the ultimatum game than in the dictator game. While Forsythe et al.'s results appear to be valid, according to the APB, if other experimental economics researchers deceived their subjects in the past, then Forsythe et al.'s results might not be valid.

The APB starts by assuming that in any given experiment, such as Forsythe et al.'s, subjects' beliefs regarding the experimental setting are partially determined by their beliefs and partially by the information the researcher provides. If current subjects believe that a researcher deceived subjects in the past, it is reasonable for them to believe that Forsythe et al. *might* use deception as well.⁴ Such subjects will, to some degree, discount the information that Forsythe et al. provide. Forsythe et al., who provided their subjects with carefully selected information in their experiment in order to set the subjects beliefs, would not know to what extent the subjects would discount the information provided. Consequently, Forsythe et al. would not know the subjects' beliefs in their experiment.

What are the consequences of the fact that Forsythe et al. would not have known the subjects' beliefs in their experiment? If subjects' behavior in the experiment is understood to be a function of their beliefs, their preferences, and their available actions, then to make inferences regarding the subjects' preferences from their behavior, Forsythe et al. needed to know the subjects' beliefs and their available actions. Forsythe et al. knew the subjects' available actions, which for the senders was to offer a division of \$10 between sender and receiver, because these were designed by them.⁵ Forsythe et al. also knew the subjects' behavior, which was for senders in the dictator game to offer far less than the senders in the ultimatum game, because they observed it.⁶ Yet if Forsythe et al. did not know the subjects' beliefs, they could not have made inferences regarding the subjects' preferences from the subjects' behavior.

Kim and Walker (1984), is a published economics paper that explicitly deceived their subjects by telling them that there are 100 participants in the experiment when there were actually only five participants.⁷ Kim and Walker's experiment was meant to examine free riding behavior in 'large' groups (around 100 individuals) in a public goods scenario. However, since paying 100 subjects was prohibitively expensive for them, Kim and Walker opted instead to use only five subjects, whom they explicitly deceived into believing that they were part of a group of 100 subjects by telling the subjects that "[t]here are exactly 100 people involved in this experiment, including yourself" (p. 16).

Imagine that Forsythe et al.'s subjects were aware of Kim and Walker's deception. First, Forsythe et al.'s experimental design provided ample opportunities to use deception. The fact that the senders and receivers were placed in separate rooms and communication between members of a sender-receiver pair was through written forms that were carried between rooms by the researchers allowed Forsythe et al. to manipulate offers, generate new offers, or not actually have real receivers. Second, Forsythe et al. had a financial motivation to use deception. If Forsythe et al. merely gave the same instructions to the senders without actually carrying out their instructions, Forsythe et al. could have saved nontrivial amounts of money—all the money that went to the receivers. Third, if the senders had suspected that Forsythe et al. were deceiving them about the existence of real human receivers in the other room, it plausible that they would make lower offers than if they wholeheartedly believed Forsythe et al. that real people were receiving the money.⁸ Forsythe et al., however, did not deceive their subjects.

If senders suspected deception and believed that there were no receivers, they would not be guided by any considerations of fairness (or benevolence) to the non-existent receivers, let alone guided *solely* by considerations of fairness. Consequently Forsythe et al. would find that senders are not guided solely by considerations of fairness (just as they actually did).

 $^{^1}$ Although such a definition of deception seems excessively narrow, in the next two sections I follow the standard way economists use it to prevent confusion. In $\S 4$ I expand my definition and distinguish between explicit and implicit deception.

² While I focus on the APB, it is not the only argument in favor of a ban on deception in economics. Some economists think that deception should not be used in an experimental setting because it is morally wrong. Other, for example, McDaniel and Starmer (1998) argue that deception ought to be banned in experimental economics in order to sustain the respectability of experimental economics in the eyes of economists in general. Alternatively, Hey (1991) argues that deception should be banned because it exposes the researcher to litigation.

³ In the dictator game the sender is given a sum of money to divide between herself and the receiver as she pleases. In the ultimatum game the sender is given a sum of money to divide between herself and the receiver, but the receiver can either accept the offer, in which case both the sum is divided accordingly, or reject the offer, in which case neither player receives any money.

⁴ I leave open whether the APB only works if subjects are aware of deception by experiencing it directly as subjects in past experiments or if it is enough that they become aware of deception indirectly (e.g. from friends who participated in such research or reading about deceptive experiments in academic journals). Both opponents (Bonetti, 1998) and advocates (Ortmann & Hertwig, 2002) of a ban on deception do not think there is evidence that learning about deception indirectly affects behavior in subsequent experiments. Since currently researchers very often share subjects and subjects participate in multiple experiments, even if the APB only works when subjects experience deception directly, the APB's consequences are still worrying.

⁵ In the first set of experiments the sum to divide was \$5.

⁶ The actual numbers Forsythe et al. (1994, p. 362) mention are: "[I]n the \$10 dictator game 21% of the players are pure gamesmen and 21% give away an equal share (none give more than an equal share), whereas in the \$10 ultimatum game there are no pure gamesmen and 75% offer at least an equal share."

⁷ The fact that some papers that use deception get published in economic journals makes clear that the ban on deception is not absolute. Since some of these papers are explicit about using deception, one cannot simply write off their getting published as due to an oversight on the part of the journal editors and reviewers. A more complex picture emerges, one which Krawczyk capture through his survey: Of those who have ever reviewed a paper for an economics journal that they considered deceptive (as many as 60% of the sample!), 33% said they would always recommend rejection of such a paper, 52% said they would consider deception a major weakness and 15% said it would have little impact on their judgment. Thus, there is negative attitude towards deception, but there is no universal ban. (Krawczyk, 2013, p. 7).

⁸ For a discussion on whether subjects actually alter their behavior in subsequent experiments after being subjected to deception, see (Hertwig & Ortmann, 2008a; Jamison, Karlan, & Schechter, 2008; Ortmann & Hertwig, 2002) who think that subjects alter their behavior, and (Barrera & Simpson, 2012; Bonetti, 1998) who think they do not. Hey (1991); McDaniel and Starmer (1998) argue that the mere possibility of deleterious effects is a sufficient reason to worry about deception.

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