Which Deceptive Practices, If Any, Should be Allowed in Experimental Economics Research? Results from Surveys of Applied Experimental Economists and Students

Abstract

Deceptive experimental practices are banned in some professions but are standard in others. Recently, the journals of the Agricultural and Applied Economics Association introduced guidelines that allow researchers to publish articles that use some forms of deception. However, in their present form, these guidelines leave room for interpretation. This situation is not ideal for researchers, and a clearer definition of which deceptive practices should be banned could be beneficial. Our aim is to help provide greater clarity and potential guidance for journal policies towards deception using the results of two surveys of both researchers and student subjects. Evaluating ten potentially deceptive experimental techniques, we find consistent support for banning certain practices while allowing others.

Key words. Deception, economic experiments, ethics, experimental auctions, institutional review boards

Introduction

Psychologists have used deception in their laboratory experiments for more than 100 years (e.g., Solomons 1897), and the use of deception is widely accepted in that profession. For example, according to recent literature reviews (e.g., Hertwig and Ortman 2008a) more than half of the papers published in top social psychology journals are based on research that involves some form of deception. Other fields including marketing, nutrition, and medicine publish results from
deceptive studies with little fanfare (e.g., Nunes and Boatwright 2004; Wansink, Painter, and North 2005; Wansink and Cheney 2005).

At the same time, the use of deception in economics experiments is highly controversial. For example, the recent publication of two deceptive studies in the *Journal of Wine Economics* (Lewis and Zalan 2014; Mastrobuoni, Peracchi, and Tetenov 2014) was accompanied by an invited paper where the editor of *Experimental Economics*, the flagship journal of the Economic Science Association, explained why he would have summarily rejected both papers (Cooper 2014).¹ *Experimental Economics* is just one excellent journal that refuses to publish papers using deceptive techniques. Among others, the *American Economic Review* and the *Journal of Economic Behavior and Organization* also refuse to publish studies using deception.

The *American Journal of Agricultural Economics (AJAE)* joined this group of journals in 2011, but recently lifted the ban on deception. While instituting the ban, the *AJAE* asked at the time of submission that researchers assure the editor that “the data collection efforts do not involve deception of human subjects even if the protocol was approved by all appropriate Institutional Review Boards (IRB). If authors are uncertain whether their data collection procedure involved deception, please contact one of the editors” (Brian Roe, personal communication 2015). Recently the ban was lifted and revised to state: “If the protocol involves deception of human subjects, please describe the extent and nature of deception involved and the research justification for inclusion of the deception. The handling editor may return manuscripts in which the deception is deemed unwarranted or excessive given the research justification, even

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¹ In the studies by Lewis and Zalan (2014) and Mastrobuoni, Peracchi, and Tetenov (2014), research participants were deceived about the wine used in their respective experiments. In the former, research participants were deceived into believing that identical wines were not actually the same. In the latter, research participants were deceived about the price and origin of the wine considered.
if the protocol was approved by all appropriate Institutional Review Boards” (AJAE Instructions to Authors, 2015).

While we do not take a stand on whether the AJAE’s new, more accommodating stance on deception is ethical or whether the potential benefits of deception outweigh the costs, we do believe that if some forms of deception are to be allowed, the profession is best served if researchers know whether their research design will be considered acceptable before they began collecting data rather than at the time of journal submission. Therefore, the objective of this research is to provide clarity on which deceptive practices, if any, should be allowed in agricultural and applied economics based on perspectives of researchers and student subjects.

Providing clear, unambiguous guidelines is essential given the surprising lack of agreement on which practices are deceptive. Hertwig and Ortmann (2008a:62) note that “a consensus has emerged across disciplinary borders that intentional provision of misinformation is deception and that withholding information about research hypotheses, the range of experimental manipulations, or the like ought not to count as deception.” By this definition, very few economic experiments could be considered deceptive. In contrast to this, Sieber, Iannuzzo, and Rodriguez (1995) (henceforth SIR) describe eight different forms of deception, many of which clearly apply to studies published in well-regarded economics journals. The authors, for instance, consider a study deceptive if subjects are aware they are part of a study but are not aware of how and when they are being observed. Using this definition, Franzen and Pointer’s (2013) use of the “misdirected letter” technique would clearly qualify as deceptive. SIR (1995) consider a study deceptive if subjects do not understand the true purpose of a study. This applies to any study where researchers ask questions designed to distract the subject from the actual focus of the study (e.g., Just and Wansink 2013) and likely applies to most experimental studies.
focusing on lying or cheating (e.g., Schweitzer and Hsee 2002). SIR (1995) consider a study deceptive if there is a “bogus device” that does not function the way it appears to. By this definition, retrieving individually identifiable information from a recycling bin as in Gino, Ayal, and Ariely (2013) could be considered deceptive. SIR (1995) consider a study deceptive if there are confederates who appear to be participants in a study but are actually following the experimenter’s instructions. According to this definition, Corrigan and Rousu’s (2006) use of confederate bidders in a second-price sealed-bid auction is clearly deceptive. Finally, SIR (1995) consider a study deceptive if subjects are unaware that they are participating in a study.

According to this definition, any of the many studies where researchers coordinate with retailers to sell a novel product at a specified price (e.g., Lusk, Pruitt, and Norwood 2006) are arguably deceptive because shoppers are unaware that the sales of a product are being tracked by researchers.

In order to provide clarity on perceptions of which practices should be allowed, we present the results of a survey of 56 agricultural and applied economists who conduct experimental research and 56 potential research subjects (i.e., students enrolled in undergraduate economics courses) at three universities. We presented both groups with ten practices and asked whether each practice should be banned. Both groups favored a ban on deceiving subjects in a way that could cause trauma, failing to make promised payments, and selling mislabeled products. However, both groups generally believed that researchers should be allowed to provide misleading information about a study’s main purpose, to observe participants who are not aware they are part of a study\(^2\), to provide subjects with incomplete information about products for sale

\(^2\) Note that if somebody was just observing behavior and nothing at all was altered, it would not be considered an experiment. But if the store changed something without the consumer even knowing it was changed, this
in experimental auctions, and to use confederates who appear to be research subjects but are actually working for the researcher.

In what follows we present a review of the literature on deception in research experiments, we describe the design of our surveys, and we present the results from these surveys. We close with concluding remarks.

**Literature Review**

In the previous section we presented two contrasting views of deception, but there are many others. For example, Wilson (2014) discusses the difficulties in properly defining deception, stating that situations of asymmetric information between the experimenter and the subjects could be mislabeled as deception by omission. Given such a grey area of research, and in order to properly contextualize whether deception has in fact been used, he encourages what he calls a “negative test of experimenter actions”, which requires a negative response to the question of whether or not “the experimenters mislead the participants by false appearance or statement”. For instance, if the experimenters lied about the properties of a particular good or service, they have deceived.

As another example, Krawczyk (2013) provides an intricate classification of deception based on a series of binary categories.

- Was a potentially deceptive statement made intentionally or unintentionally?
- If intentional, was the statement explicitly false or did the researcher simply omit certain information?

would be considered a field experiment. This has occurred, for example, in some of Gneezy and List (2004) experiments examining discrimination in car dealerships, for example.
In the case of omitted information, were subjects told that the information was being withheld?

Could the potentially deceptive practice, whatever its form, reasonably be expected to change subjects’ behavior in the experiment?

Similarly, could the potentially deceptive practice reasonably be expected to affect subjects’ willingness to take part in the experiment?

Working within this taxonomy, Krawczyk (2013) concludes that a practice is “explicitly deceptive” if the researcher intentionally provides subjects with explicitly false information. A practice is “deceptive by omission” if the researcher (i) intentionally provides subjects with incomplete information, (ii) does not tell subjects that the information is incomplete, and (iii) this omission could be expected to change subjects’ behavior or their willingness to take part in the experiment. Under Krawczyk’s characterization, the entire literature focusing on the impact of information on consumer demand would be considered deceptive by omission (e.g., Fox, Hayes, and Shogren 2002; Colson, Huffman, and Rousu 2011; Corrigan et al. 2009) because the information provided to participants was varied across treatment groups.

In addition to disagreements over what qualifies as deception, there is an ongoing and vigorous debate among economists about the benefits and costs of deception. Opponents of deception argue that deception should be completely avoided, either because it is ethically wrong or because economists’ reputation for not using deception is a valuable public good (e.g., see Barrera and Simpson 2012, Bortolotti and Mameli 2006, Bonetti 1998, Cooper 2014, Davis and Holt 1993, McDaniel and Starmer 1998). Furthermore, as Bardsely (2000) argues, most research questions can be answered without deception by using more sophisticated methods. Deception
advocates think the benefits of deception outweigh the costs in some cases (Bonetti 1998; Weiss 2001; Barrera and Simpson 2012; Fisher and Fyrberg 1994).

Further critical views are raised by those considering the “public good” nature of deception. Several studies have examined whether participants who were deceived in one experiment behaved differently in future experiments. Some find that deception changes participants’ future behavior (e.g., Jamison, Karlan, and Schechter 2008) while others do not (e.g. Barrera and Simpson 2012); and still others find mixed or confounding evidence (Hertwig and Ortmann 2008a, Hertwig and Ortmann 2008b, Geller and Endler 1973).

In psychology, where deception in experiments has been common for decades, studies have also examined subject reaction to being deceived. Gerdes (1979) and Christensen (1988) examined reactions to deception across fifteen experiments and found subjects were not upset about “the withholding of information or to being misled” (p. 106). Christensen’s (1988) review of the deception literature found that subjects enjoyed being part of a study with deception more than a study without deception, and did not mind being deceived. Krupat and Garonzik (1994) showed that students who were deceived were more likely to think that they would be deceived in the future, even though the experience of being deceived did not have a significant impact on other aspects related to the participation in the experiment, such as enjoyment or interest. More recently, Ariely and Norton (2007) have argued that “experimental economics may shift from asking whether deception is good or bad—a moral question—to exploring whether deception helps or harms social scientists’ ability to understand human behavior.”

Two previous studies have looked at economists’ attitudes toward the use of deception in economic experiments (Krawczyk 2013; and Rousu et al., 2015). Krawczyk (2013) surveyed experimental economists and potential research subjects, and found that the two groups largely
agree on the extent to which various specific techniques are deceptive, and in particular regarding those related to explicitly deceptive techniques, which ranked worse than those of deception by omission. Rousu et al. (2015) examined applied economists’ views of deception and found a clear consensus regarding which forms of deception are perceived as most and least severe. In particular, among the deceptive practices analyzed, the three practices that respondents viewed as most severe were deception that might lead to trauma, promising participants a payment that is not fulfilled, and having participants purchase a product that is not as described. These findings corroborate Krawczyk’s (2013), who found that explicitly lying to subjects was the worst kind of deception. Rousu et al. (2015) argued that economists should first define what deception is and what it is not before making decisions about which potentially deceptive processes should be prohibited. The present research extends Rousu et al. (2015) by explicitly including subjects’ views.

Survey Design

The researcher survey was conducted by Rousu et al. (2015) in the fall of 2014. Participants were informed that the study aimed at gaining knowledge on current policies regarding publishing research in economics journals that has used deception in the research process. Furthermore, it was stressed that results would be used to inform editors on views related to deception in economics research. The survey was administered online using Qualtrics. It took about 10 minutes to complete and included questions about awareness of deception rules in applied and agricultural economics, attitudes towards banning deceptive practices, ranking of deceptive practices by severity and opinions towards use of deception as it relates to different samples (e.g., student versus general public surveys). The final part of the survey concluded with general
questions regarding socio-demographics and researcher characteristics (e.g., degree of experience with deception and experiments).

The work of Rousu et al. (2015) focused on respondents’ ranking of the severity of ten potentially deceptive techniques. The authors chose these practices by reviewing the experimental literatures in applied economics and psychology and identifying ten frequently used potentially deceptive practices. In this paper, we use the data of a separate set of questions that asked respondents to indicate whether they believe each of these ten potentially deceptive techniques should be banned in the journals published by the Agricultural and Applied Economics Association. The techniques range from less severe examples such as “Providing subjects with false information about a study’s main purpose” to more severe examples such as “Subjecting participants to physical trauma.” Each technique was accompanied by an example, such as, “For example, participants think they are purchasing an organic product, but the product is actually not organic.” See Table 1 for a list of the ten potentially deceptive techniques included in the survey and examples of each technique provided to researchers and students. Participants rated each technique on a Likert scale from 1=should definitely be banned to 5=should definitely not be banned.³

Table 1 about here

The study was approved by the Institutional Review Board at Arizona State University. Email invitations were sent to 60 researchers who use experimental methods in applied and agricultural economics. The contacted researchers were invited to forward the survey link to interested colleagues. Eighty-six researchers responded to the survey. Of these, 56 completed the

³ Of the ten forms of deception, eight would be considered “explicitly deceptive”. Only the deception by omitting information and deception that occurs when participants don’t know they are part of a study would be considered implicitly deceptive.
questions used in this study. Because the contacted researchers were invited to forward the survey link, we cannot calculate a response rate.

The student survey, which was administered online using Qualtrics in the spring of 2015, was similar to the researcher survey, but provided more information and context about the ten forms of deception. The full survey is available online as a supplemental index on this journal’s website. We initially piloted the researcher survey with 12 students. Feedback from this student focus group indicated that students did not have enough information or context to evaluate the ten forms of deception using the same survey administered to researchers. Based upon the feedback, and working with another student focus group, a new instrument was developed that provided an example of a research study that illustrated the ten forms of deception. The example research study was a two-round auction of organic and non-organic potato chips. See Appendix A for the example given. For each of the ten forms of deception, the type of deception was listed (using the same terminology as the researcher survey), an example of that form of deception relating to the auction experiment was described, and a possible reason why the researcher might use that form of deception was listed. Based upon feedback from a second round of pre-testing with fifteen students, the new survey was clear and conveyed the nature of each form of deception considered.

While the student survey is not perfectly analogous to the researcher survey due to the differences in information presented, the more detailed design yields a window of insight into students’ perceptions of the use of deception by researchers. Further, we included an additional survey question for each of the ten forms of deception asking students whether they would be willing to participate in a study using that form of deception. Thus providing insight, from each
individual student’s perspective, how they personally perceive placing themselves in an experimental situation where they would be deceived.

Another important difference to consider that further prevents directly comparing the researcher and student surveys on a level basis is the different information sets each subject pool had to evaluate the acceptability of different forms of deception. Neither survey provided information on the pros and cons of deception as an experimental methodology to avoid potentially biasing opinions. However, while researchers involved in surveys and experiments are more familiar with the potential harms to the public trust from deception, it is likely that students are not familiar, or did not consider, the potential negative externality from deception. Feedback from students in the focus-group pre-test suggests that most students evaluated the deception on a more personal level and not in terms of the impact on the greater economics profession or society as a whole. The potential absence of consideration by students of the external benefits and consequences of deception highlights why solely considering the opinions of research subjects is inadequate to determine policies regarding deception. However, by the same token, solely considering the opinions of researchers who are more informed of the profession and societal consequences of deception may fail to appropriately judge the individual consequences of deception. Hence, to evaluate the merits of policies towards the use of deception in economic experiments it is critical to consider both sides to gain a complete picture of the costs and benefits of the methodology.

We sent invitation emails to 180 undergraduate students at three American universities (Arizona State University, Kenyon College, and Susquehanna University). Once again, the study was Institutional Review Board approved. One-hundred thirty-two students responded to the survey. Of these, 56 completed the questions used in this study (23 male and 23 female). This
corresponds to a response rate of 73% and a completion rate of 31%. While our pilot-testing indicated we had to provide a significant amount of background information for students to understand enough about deception to provide informed responses, this background reading appears to have required more time than many of our student respondents were willing to devote. This likely explains why our completion rate is lower than our response rate since in every case that a student did not complete the survey, he or she left the survey before answering the first question.

Results

Researcher Survey – Which Practices should be Allowed and Banned?

Table 2 presents summary statistics from the researcher survey for the questions asking whether researchers believed the journals of the Agricultural and Applied Economics Association (AAEA) should ban each of ten potentially deceptive techniques. The techniques are in order of the median score on a 5-point Likert scale where a 1 indicates that a technique should definitely be banned and a 5 indicates that a technique should definitely not be banned. In those cases where medians are equal, we rank techniques by their interquartile range. Where interquartile ranges are also the same, we rank techniques by the percentage of respondents who said that a technique should not be banned or definitely should not be banned.

Table 2 about here.

We find that the potentially deceptive techniques fall into three categories. The median researcher believes that not making promised payments, deceiving subjects in a way that could cause physical harm, and selling subjects mislabeled products should all be banned. The median researcher is ambivalent about a ban on providing subjects with false feedback about their own performance in a study or the performance of other subjects, and about allowing subjects to bid
on (but not buy) mislabeled products. Finally, the median researcher believes that researchers should not be banned from providing false information about a study’s main purpose, observing subjects who are unaware they are part of a study, the use of confederates, and providing subjects with incomplete information about a product for sale in an experiment.

Focusing on these last four techniques, we use nonparametric Wilcoxon signed-rank tests to test if responses are drawn from the same distribution. We can reject the null hypothesis that responses regarding providing false information about a study’s main purpose and observing subjects who are unaware they are part of a study are drawn from the same distribution (p = 0.03). We cannot reject the null hypothesis that responses regarding observing subjects who are unaware they are part of a study and the use of confederates are drawn from the same distribution (p = 0.77). Finally, we can reject the null hypothesis that responses regarding the use of confederates and providing incomplete product information are drawn from the same distribution (p = 0.02). This suggests that among these four techniques, researchers are most ambivalent about providing false information about a study’s purpose. Researchers are more accepting of observing subjects who are unaware they are part of a study and about the use of confederates, while researchers are most accepting of providing subjects with incomplete information about products for sale.4

4 In order to test for a relationship between the extent of researchers’ experience conducting experiments and the likelihood that they believe that a particular practice should be banned, we use ordered logit analysis for each of the ten potentially deceptive practices with the frequency that a researcher conducts experiments as the independent variable. In general, we find no relationship between experience and beliefs about whether a particular practice should be banned, though we do find that more experienced researchers are significantly more likely to approve of allowing subjects to bid on a mislabeled product (p = .02). Table A1 in the supplemental appendix presents detailed results. The researcher survey also asks respondents to rank the ten practices in order of the severity of deception (Rousu et al. 2015). We use ordered logit analysis for each of the ten potentially deceptive practices with Likert scale data on whether a practice should be banned as the dependent variable and the severity ranking as the independent variable. As expected, the correlation is generally negative (i.e., researchers are less likely to approve of a practice that they have ranked as more severe). However, perhaps because of our small sample size, the correlation only rises to the level of statistical significance in the case of bidding on mislabeled products (p < 0.01).
Student Survey – Which Practices should be Allowed and Banned?

Table 3 presents summary statistics from the student survey for the questions asking whether respondents believed researchers should be allowed to use each of the ten potentially deceptive techniques and whether respondents would be willing to take part in a study using the specific technique. As with the researcher survey, we order the techniques first by median score on the 5-point Likert scale, second by interquartile range, and third by percentage of respondents who said that a technique should not or definitely should not be banned.

Table 3 about here.

Again we find that the potentially deceptive techniques fall into three categories. The median student believes that not making promised payments and selling mislabeled products should be banned. The median student is ambivalent about a ban on deceiving subjects in a way that could cause physical harm, allowing subjects to bid on (but not buy) mislabeled products, and providing subjects with false feedback about their own performance in a study. Finally, the median student believes that researchers should not be banned from using confederates, providing subjects with false feedback about other subjects’ performance in a study, providing false information about a study’s main purpose, observing subjects who are unaware they are part of a study, and providing subjects with incomplete information about a product for sale in an experiment.

Focusing on these last five techniques, we use nonparametric Wilcoxon signed-rank tests to test whether responses are drawn from the same distribution as the technique that appears and providing false feedback about other subjects (p = 0.02). Table A2 in the supplemental appendix presents detailed results.
immediately before it in Table 3. In none of the four comparisons can we reject the null hypothesis that responses are drawn from the same distribution (p = 0.98, 0.57, 0.40, and 0.25, respectively). Using the nonparametric Friedman test that extends the Wilcoxon signed-rank test from two paired samples to k related samples, we fail to reject the null hypothesis that responses regarding all five techniques are drawn from the same distribution (p = 0.45). In other words, among the five techniques that the median respondent believes should be allowed, we find no evidence that any one is more or less acceptable than the others.

_Deception Policy - Blanket or Nuanced Ban?_

Although the researcher and student surveys are not analogous due to the differences in design, information presented, and level of knowledge about the potential harms and benefits of deception, a comparison of opinions presents an interesting perspective from different viewpoints on preferences for a blanket vs. more nuanced ban on deception in experiments. Figure 1 shows for how many of the ten deceptive practices considered respondents stated should be or definitely should be banned. The majority of respondents would ban between two and four practices. Approximately 30% of researchers or students stated that five or more practices should be banned and less than 2% of researchers and 0% of students support a complete ban on all forms of deception considered. Combined, these results indicate that support for a complete ban on deception does not align with researcher or student opinions towards deception.

Figure 1 about here.
Conclusions

Currently, the AJAE will publish articles that use deception, but only if the deception is not deemed “unwarranted or excessive given the research justification.” However, the ultimate decision could vary based on the viewpoints of different editors, and reasonable scholars could disagree on what is acceptable deception and what is unwarranted and excessive. Nobody is well-served by this type of ambiguity. If journals do not wish to publish certain types of deceptive research, researchers would benefit from being provided with a clear, unambiguous definition of unacceptable practices before they design their experiments. Providing this feedback only at the time of submission is inefficient and is costly for researchers in terms of financial resources and time dedicated to unpublishable work.

Our study has several limitations. Our sample sizes were relatively small. Future research may consider broader samples and different contexts. Also, focusing on the opinions of both journal editors and association board members could broaden the discussion and provide additional perspectives. We also asked slightly different questions to students and researchers. We changed the wording of the student survey after pretests revealed that student respondents did not understand the questions researchers received. However, these changes could have led to differences in responses. In addition, in mentioning which practices should be banned, we did not attempt to survey researchers on how they consider the “public good” that is created when experiments are non-deceptive. Future research to examine this issue could be beneficial.

However, even with these limitations, our results provide strong support for banning deception that leads to trauma or financial harm. Our results provide more limited support for banning the mislabeling of products and for providing false information about either the subject’s own performance or that of other subjects. Just as importantly, our results do not find
support for a ban on providing false or misleading information about a study’s main purpose, observing subjects who are unaware they are part of a study or are unaware of specifically when observation will begin, the use of confederates, or providing subjects with incomplete product information. Using Krawczyk’s taxonomy, all implicit deception was found to have a level of support, as well as one form of explicit deception (misleading on a purpose). Furthermore, at least 64% of students surveyed said they would be willing to participate in research involving one of these practices. Researchers and students either supported a ban or were ambivalent about a ban on all explicitly deceptive techniques.

We do not take a position in this paper on whether deception in economic experiments is wrong or whether the costs of deception potentially outweigh the benefits. However, the results of our two surveys suggest that when researchers and potential subjects think about practices that should or shouldn’t be banned, their opinions closely track Hey’s (1998:397) belief that “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”.

latter is deception, the former is not”.
References


Table 1. Potentially Deceptive Techniques and Examples Provided to Researchers and Students

<table>
<thead>
<tr>
<th>Deceptive Practice</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjecting participants to physical or physiological trauma.</strong></td>
<td>Researcher: For example, researchers might tell a participant that a relative is in the hospital to test their reaction.</td>
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<tr>
<td></td>
<td>Student: The researcher shows a fabricated video about a farm worker who is made ill by the pesticides used to grow potatoes used in non-organic potato chips.</td>
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<tr>
<td><strong>Promises of payment not fulfilled.</strong></td>
<td>Researcher: The experimenter promises payments during the session, but then does not make the promised payments after the session is over.</td>
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<tr>
<td></td>
<td>Student: The researcher says all students will receive $5 for completing the study, but doesn’t actually pay at the end of the study.</td>
</tr>
<tr>
<td><strong>Having participants purchase a product that is not as it is described.</strong></td>
<td>Researcher: For example, participants think they are purchasing an organic product, but the product is actually not organic.</td>
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<tr>
<td></td>
<td>Student: The organic potato chips are actually non-organic.</td>
</tr>
<tr>
<td><strong>Providing subjects with false feedback about their own performance in the study.</strong></td>
<td>Researcher: For example, subjects participate in a knowledge test and then receive feedback that their score is below or above the score of the other subjects. Afterwards, they participate in another knowledge test to measure the influence of positive and negative feedback.</td>
</tr>
<tr>
<td></td>
<td>Student: The researcher tells you that your WTP was the lowest in the class, when in fact it was not.</td>
</tr>
<tr>
<td><strong>Having participants bid on a product that is mislabeled, while setting up the auction in a way so the participant will not purchase that item.</strong></td>
<td>Researcher: For example, in an auction where some products are correctly labeled and some mislabeled, the researcher uses a non-random device to ensure that only one of the correctly labeled products is selected and sold to the auction winner.</td>
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<tr>
<td></td>
<td>Student: Suppose an “unfair coin” that always comes up tails is used so only the non-organic potato chips are sold.</td>
</tr>
<tr>
<td><strong>Providing subjects with false feedback about other subjects’ performance in the study.</strong></td>
<td>Researcher: For example, subjects participate in a knowledge test and then receive feedback that the other subjects’ score is below or above the score of their own score when it was not.</td>
</tr>
<tr>
<td></td>
<td>Student: The researcher tells you that half the class had a WTP of zero dollars for non-organic potato chips, which is not true.</td>
</tr>
<tr>
<td><strong>Providing subjects with false information about a study’s main purpose.</strong></td>
<td>Researcher: For example, researchers may not want to “prime” participants or get them thinking about a particular topic prior to participating in the experiment.</td>
</tr>
</tbody>
</table>
Student: Suppose false information is provided about why a study is being conducted. In fact the purpose is to see if students’ WTP for organic foods is affected by peer pressure.

Subjects may be unaware they are part of a study, or may be aware they are part of a study but not aware of how and when they are being observed.

Researcher: For example, participants in a field auction experiment conducted at a grocery store may be observed after the auction ends to see how their purchases in the grocery store compare to those of other shoppers.

Student: Suppose that instead of conducting the study described above the researcher goes to the grocery store and records how many people buy organic vs. non-organic potato chips.

The use of confederates.

Researcher: For example, researchers may employ people who appear to be normal participants but are actually following the experimenter’s instructions.

Student: The researcher has three students purposely write down that they are WTP $20 for organic potato chips

Providing participants with some information about a product, but not “complete information”.

Researcher: For example, suppose there are positive and negative perspectives about a product or process, but participants in some treatments receive only the positive perspective, while participants in another treatment receive the negative treatment.

Student: The organic potato chips are imported from Canada while the non-organic potato chips are from the U.S. Participants are not told about country of origin.
Table 2. Researcher responses regarding whether a potentially deceptive practice should be banned (N = 56)

<table>
<thead>
<tr>
<th>Potentially deceptive practice</th>
<th>Should the practice be banned?</th>
<th>Percent of respondents answering 4 or 5 on the 5-point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1 = definitely yes, 5 = definitely no)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25th percentile</td>
<td>Median</td>
</tr>
<tr>
<td>Physical or physiological harm</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not making promised payments</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Buy mislabeled product</td>
<td>1</td>
<td>2***</td>
</tr>
<tr>
<td>False feedback about self</td>
<td>2</td>
<td>3***</td>
</tr>
<tr>
<td>Bid on mislabeled product</td>
<td>2</td>
<td>3*</td>
</tr>
<tr>
<td>False feedback about others</td>
<td>2.75</td>
<td>3</td>
</tr>
<tr>
<td>False information about a study’s purpose</td>
<td>2.75</td>
<td>4</td>
</tr>
<tr>
<td>Subjects unaware they are part of a study</td>
<td>3</td>
<td>4**</td>
</tr>
<tr>
<td>The use of confederates</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Providing incomplete information</td>
<td>4</td>
<td>4**</td>
</tr>
</tbody>
</table>

*, **, *** Reject the null hypothesis that responses are drawn from the same distribution as the responses summarized in the row immediately above at the 0.10, 0.05, 0.01 level, respectively.
Table 3. Student responses regarding whether a potentially deceptive practice should be banned (N = 56)

<table>
<thead>
<tr>
<th>Potentially deceptive practice</th>
<th>Should the practice be banned?</th>
<th>Percent of respondents answering 4 or 5 on the 5-point scale</th>
<th>Percent willing to participate in this kind of study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1 = definitely yes, 5 = definitely no)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25th percentile</td>
<td>Median</td>
<td>75th percentile</td>
</tr>
<tr>
<td>Not making promised payments</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Buy mislabeled product</td>
<td>1.75</td>
<td>2***</td>
<td>3</td>
</tr>
<tr>
<td>Physical or physiological harm</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Bid on mislabeled product</td>
<td>2</td>
<td>3*</td>
<td>4</td>
</tr>
<tr>
<td>False feedback about self</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The use of confederates</td>
<td>2</td>
<td>4**</td>
<td>4.25</td>
</tr>
<tr>
<td>False feedback about others</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>False information about a study’s purpose</td>
<td>3</td>
<td>4</td>
<td>4.25</td>
</tr>
<tr>
<td>Subjects unaware they are part of a study</td>
<td>3</td>
<td>4</td>
<td>4.25</td>
</tr>
<tr>
<td>Providing incomplete information</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*, **, *** Reject the null hypothesis that responses are drawn from the same distribution as the responses summarized in the row immediately above at the 0.10, 0.05, 0.01 level, respectively
Figure 1. Number of Deceptive Practices that Student and Researcher Respondents Thought Should be Banned or Should Definitely be Banned
Appendix – Example Research Study Provided in Student Survey

Introduction

Researchers at universities conduct surveys and experiments with students to explore a wide range of research questions. In studies with students, researchers use a number of different methods in order to identify the answer to their research question. One of these methods is called “deception”. The dictionary defines deception as: An act or statement intended to make people believe something that is not true. How researchers deceive participants takes a number of different forms. We would like to know your opinion about these different forms. Specifically, we would like to know your opinion for ten different forms of deception.

Example Research Study

For us to illustrate examples of the 10 forms of deception used by researchers, here is a sample research study to keep in mind.

Study Step 1 – The researcher explains that the purpose of the study is to measure the maximum amount students are willing to pay (WTP) to purchase organic and non-organic potato chips.

Study Step 2 – Students are shown a bag of organic potato chips and a bag of non-organic potato chips.

Study Step 3 – Each student privately writes down how much they are willing to pay for each bag of potato chips.

Study Step 4 - The researcher collects the WTP from each student and announces the three highest WTP.

Study Step 5 – The researcher shows a video about potato chips.

Study Step 6 – One more time, each student writes down their WTP for potato chips.

Study Step 7 – A coin is flipped. If it is heads, the student with the highest WTP in Step 6 purchases the organic potato chips and takes them home. If it is tails, then the student with the highest WTP in Step 6 purchases the non-organic potato chips.