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ABSTRACT

An experiment which varied indications about the possibility of psychological risk and deception in consent information provided to subjects prior to participation in Asch's (1952) line-judgment task is presented. The number of erroneous line-judgments (conformity) made by subjects across five consent treatments and a no-consent control group were measured. Also, post-task measures assessed subjects' reactions to the experiment. Results revealed that informing subjects that they would not be at risk or would be at risk because they would be deceived increased the frequency of conforming line-judgments, while other consent statements did not influence conformity. Also, deception aroused subjects emotionally, but subjects did not indicate that they believed the deception placed them at risk, nor did it adversely affect their impressions of the quality of the research. Implications of these results for future research on deception are considered. (Author/PN)

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Research and the IRB: When Consent Information
Refers to Risk and to Deception

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Abstract

This experiment varied indications about the possibility of psychological risk and deception in consent information provided to subjects prior to participation in Asch's (1952) line-judgment task. The number of erroneous line-judgments (conformity) made by subjects across five consent treatments and a no consent control group were measured. Also, post-task measures assessed subjects' reactions to the experiment. Results revealed that informing subjects that they would not be at risk or would be at risk because they would be deceived increased the frequency of conforming line-judgments, while other consent statements did not influence conformity. Also, deception aroused subjects emotionally, but subjects did not indicate that they believed the deception placed them at risk, nor did it adversely affect their impressions of the quality of the research. Implications of these results for future research which involves deception are considered.

Research and the IRB: When Consent Information

Refers to Risk and to Deception

The use of deception in social research historically has been accepted with little reservation, and by the middle of the 1960's approximately 40% of social-personality research involved some level of deception (Seeman, 1969). Severe criticism of the practice of deception emerged in the 1960's (e.g., Baumrind, 1964; Kelman, 1967) and has continued (e.g., Baumrind, 1979). Kelman, for example, argued that deception involves invasion of privacy and creates an unethical, inequitable power relationship between subject and experimenter. Gergen (1973) answered these criticisms by suggesting that the ethicality of deception remains an empirical issue, and empirical investigations have shown that deception normally does not have an adverse effect upon subjects, nor do subjects commonly look at it with disfavor (e.g., Leak, Slane, & Watson, Note 1; Gerdes, 1979; Holmes & Bennett, 1974; Ring, Wallston & Corey, 1970; Sullivan & Deiker, 1973).

At the same time that social scientists began to question the use of deception in research, ethical codes were developed to regulate the general treatment of human subjects in research. Organizations such as the American Psychological Association (1973) developed codes for research within specific fields. Also, the Department of Health, Education and Welfare (now the Department of Health and Human Services--DHHS) detailed necessary components of informed consent and of review of research to be employed at institutions which receive funds from it (1975; 1981). These guidelines specify when informed consent must be obtained from research participants and what information must be provided to them in consent procedures. In addition, these regulations give a local Institutional

Review Board (IRB) the latitude to order consent information beyond DHHS requirements when it judges that the information would meaningfully contribute to the subject's protection (1981, 56.109).

A major purpose of DHHS regulations is to ensure that research subjects are fully aware of potential physical or psychological risks involved in research participation. Individuals who are at risk in research must be informed of this fact before they consent to participate as subjects. Some deception strategies produce moderate stress (e.g., Asch, 1952) or overt psychological risk (e.g., Milgram, 1974), and researchers who employ such strategies are usually obligated to inform subjects of these potential hazards. Still, DHHS regulations are not so specific as to indicate how much information about a deception procedure must be revealed to subjects when it places subjects at some level of psychological or physical risk; decisions about this information are left to the local IRB's discretion. For example, the IRB may determine that the risk is not so severe as to merit any attention in consent information, or the IRB may require that the subject be informed that risk may or will occur without noting that it is produced by a deception, or the IRB may require that the subject be informed that risk may or will occur because of the use of deception.

Just as social scientists have become keenly aware that subtle facets of experimental procedures (e.g., demand characteristics and experimenter effects) may influence subjects' behavior, so must they also be wary of influences that consent information may have on data. The possibility exists that different standards and requirements that local IRB's may have about consent information which must be provided when risk is produced by deception might influence data gathered from subjects at various

institutions differently, thereby affecting the interpretation, generalization and comparison of data. For example, subjects who have been informed that they will or will not be deceived (or at risk) may respond differently to experimental procedures than subjects who are not provided with such information.

Only a small amount of research has concerned the effect that information about deception may have on data produced in a deception methodology (e.g., Holmes & Bennett, 1974; Horowitz & Rothschild, 1970; Resnick & Schwartz, 1973).¹ None of this research has systematically measured the effect that variations of this information may have on subjects' behavior. Also, no research has explored the effect that information about risk may have on data.

If local variations in consent information provided about the possibility of risk or deception have an effect on data collected in deception research, the consequence for research which employs such methodologies may be far-reaching. The purpose of the present research was to initiate investigation of the possibility. Particularly, this experiment, which involved deception and a low to moderate level of psychological risk, varied the amount of information provided to subjects about the probability both of psychological risk and of deception so that the effect of this information on the subjects' experimental performances and attitudes about the experience could be measured. Five forms of consent information were provided to different groups of subjects. These consent conditions were selected to cover a wide range of references to risk and to deception which normally could be found in consent procedures. Different consent forms indicated that subjects: would be at no psychological risk, may be at psychological risk, may be at psychological risk by being

deceived, will be at psychological risk, or will be at psychological risk by being deceived. Each of these consent conditions gave subjects a different indication that something which had not been explained to them would occur in the experiment without explicitly stating what the occurrence was. A sixth control group was provided with no consent information, and data from this group was compared to data from each consent group. Finally, non-deceived, control subjects also were exposed to each consent form so that the effect of deception on task performances and attitudes of subjects for each variation in consent information could be evaluated fully.

To accomplish the purpose of this research a widely-accepted, frequently-employed deception methodology which involved some stress to subjects was required. Asch's (1952) line-judgment conformity paradigm, wherein subjects are exposed to distorted line-length judgments of a group of confederates, met these requirements and was employed in this research. The number of erroneous line-length judgments made by subjects, their arousal level (anxiety, hostility and depression) and their perceptions of the experiment were measured and analyzed.

Method

Design

This research employed a 2 X 6 (Condition X Consent) factorial design. Deceived subjects and Non-deceived subjects (the Condition variable) were each given one consent treatment (the Consent variable) before responding to the Asch (1952) line-judgment stimuli and indicating their reaction to this experience.

Subjects

One hundred-twenty introductory psychology students participated in this research; approximately an equal number of males and females were randomly assigned to treatment combinations ($N = 10$ per cell). Subjects were given a title for the experiment (Perceptual Processes) without explanation of its purpose or procedure when they volunteered participation. They received course credit for their participation.

Apparatus

Line-judgment task. Essential components of Asch's (1952) line-judgment task were replicated in this experiment. Twelve sets of stimulus lines were prepared according to Asch's specifications. Asch's instructions to subjects were used. Also, four confederates (two male and two female, who made the same responses as were made by Asch's confederates, participated in Deceived sessions). Subjects were seated for this task in five chairs at a table 10 ft (3.05m) from stimulus material.

Consent forms. Five different consent forms were created for this research. All forms contained information required by the Department of Health and Human Services and identically described that: (1) the project involved research; (2) the procedure to be employed was appropriate for the research topic; (3) data were confidential; (4) bonus course credit was offered for participation; (5) subjects were free to leave the experiment at any time without punishment or penalty; (6) grievances could be taken to the chairperson of the Psychology Department's Research and Grants Committee; (7) all questions would be answered; and (8) signing the consent document would not relinquish any of the subject's rights. The consent forms differed only in their descriptions of the psychological risk and of the likelihood of deception in the research.

Various consent forms stated that: (1) the participant is "at no physical or psychological risk" (No Risk condition); (2) the participant "may be at some psychological risk" (May Be Risk condition); (3) the participant "may be at some psychological risk because (you) may be deceived" (May Be Deceived condition); (4) the participant "will be at some psychological risk" (Will Be Risk condition); and (5) the participant "will be at some psychological risk because (you) will be deceived" (Will Be Deceived condition). A sixth group of subjects received no consent information (No Consent condition).

MAACL. The Multiple Affect Adjective Check List (Zuckerman & Lubin, 1965), which measures an individual's anxiety, hostility and depression levels, was included in the post-task measures.

Post-experimental Questionnaire. A post-experimental questionnaire was constructed for the experiment. The first item in the questionnaire asked subjects to indicate confidence in their line-judgments on an 11-point (0% - 100%) rating scale. Then, on subsequent 7-point scales subjects were asked to assess their: (1) self-reported tension during the experiment ("Very Tense" to "Very Calm"); (2) boredom during the experiment ("Very Bored" to "Very Interested"); (3) belief in the scientific value of the research ("Little Value" to "Much Value"); and (4) likelihood of volunteering for future psychological research ("Very Unlikely" to "Very Likely"). The survey instrument also provided space for subjects to describe suspicions they had about the research and to indicate whether or not they previously had heard anything about this type of experiment.

Procedure

Five subjects (Non-deceived subjects) or one subject and four confederates (Deceived subjects) were greeted in a waiting room by the

experimenter. Non-deceived subjects were seated randomly in the experimental room; each Deceived subject was the fourth person to be seated and sat in the fourth of five seats. The seating arrangement of Deceived subjects was achieved by seating the subject and confederates sequentially as their names were read by the experimenter from a "session roster". The subject's name was always the fourth to be read.

All subjects were given an overview of the line-judgment task. Then, subjects in the No Consent condition were administered Asch's (1952) line-judgment instructions. Subjects in the various consent conditions were given a consent form, which the experimenter read aloud to them as they followed along. After questions were answered, the consent forms were signed and gathered. (No subject refused consent.) Next, these subjects were given Asch's line-judgment instructions, and the line-judgment task was administered. Judgments for stimuli in all sessions were announced aloud in the same sequential seating order. The Deceived subject was always the fourth person to report line-judgments. Responses of confederates and subjects were recorded by the experimenter.

Upon completion of the line-judgment task, the MAACL was administered to subjects, who were instructed to respond to the instrument as they felt during the line-judgment task. After the MAACL was completed and gathered, subjects were administered the Post-Experimental Questionnaire.

When all surveys were completed, subjects' suspicions regarding the experiment were assessed. (No subject reported prior awareness of the Asch methodology or of the purpose of the present research.) Then, they were debriefed fully.

Results

All dependent variables were analyzed in 2 X 6 (Condition X Consent) analyses of variance. Simple effect tests then were used to break down significant interactions. When significant differences occurred across Consent levels, Dunnett's test was used to compare data from each of the five groups which received consent forms to the No Consent control group.

Errors. A frequency count of the number of incorrect line-judgments made by each subject was recorded. The ANOVA for these erroneous line-judgments revealed significant effects for Condition, $F(1,108) = 95.99$, $p < .01$, Consent, $F(5,108) = 2.28$, $p < .05$, and the Condition X Consent interaction, $F(5,108) = 2.98$, $p < .05$. The Condition effect revealed that the confederates elicited more erroneous judgments from Deceived subjects ($M = 2.72$) than were made spontaneously by Non-deceived subjects ($M = 0.10$). Thus, a substantial amount of conformity was elicited in Deceived subjects across Consent levels.

To assess the effect of Consent information on errors made by Deceived subjects, the Condition X Consent interaction was broken into simple effects. The simple main effect for Deceived subjects across Consent was significant, $F(5,108) = 22.47$, $p < .001$, but this effect was not significant for Non-deceived subjects. Dunnett's test of the means for Deceived subjects found that those who were informed that they were at No Risk ($M = 3.30$) or Will Be Deceived ($M = 4.10$) made significantly more erroneous, conforming judgments than made by subjects in the No Consent control group ($M = 1.90$, $d' = 1.39$, $p < .05$). Means for the May Be at Risk ($M = 3.20$), May Be Deceived ($M = 2.30$) and Will Be at Risk ($M = 1.50$) groups were not significantly different from the mean for the No Consent control group.

MAACL. ANOVA's on the MAACL variables revealed that Deceived subjects felt more anxious, $F(1,108) = 6.55, p < .01$, more depressed, $F(1,108) = 6.39, p < .05$, and more hostile, $F(1,108) = 6.34, p < .05$, than Non-deceived subjects. The Consent effect and Condition X Consent interaction were not significant in these analyses.

Post-Experimental Questionnaire. ANOVA's on post-experimental questionnaire variables revealed several significant effects. The Condition effect was significant on subjects' reports of confidence in their line-judgments, $F(1,108) = 50.77, p < .001$, boredom with the task, $F(1,108) = 16.74, p < .001$, belief in the scientific value of the experiment, $F(1,108) = 10.28, p < .01$, and self-reports of tension, $F(1,108) = 11.32, p < .01$. Deceived subjects, compared to Non-deceived subjects, reported less confidence in their judgments, less boredom with the experiment, more belief in the scientific value of the research, and more tension during the experiment.

Significant differences in tension also were reported across Consent conditions, $F(5,108) = 4.14, p < .01$. Dunnett's test ($d' = 1.13, p < .05$) revealed that subjects who were told that they May Be Deceived ($M = 2.70$) or Will Be Deceived ($M = 2.75$) felt significantly less tense than did subjects who were provided with No Consent information ($M = 3.90$). Comparisons between the No Consent group and the No Risk ($M = 3.30$), May Be Risk ($M = 4.05$) and Will Be Risk ($M = 4.10$) groups were not significant.

Finally, no effects were significant in the analysis of the likelihood of participation in future psychology experiments. Subjects in all treatments reported a strong likelihood of participation in future psychology research.

Discussion

Methodological Implications

This experiment varied descriptions of risk and deception given to subjects in consent information prior to a test of conformity in the Asch (1952) line-judgment task. The results revealed that conformity was elicited in deceived subjects for each consent treatment, but the level of conformity increased when subjects were told that they were not at risk or that they were at risk because they would be deceived.² Several implications of these data for social research methodology will be discussed.

First, the data suggest that minimizing potential risks to subjects by informing them that they are not at risk can alter their responses to experimental treatments. In the present research this information made the subjects more susceptible to conformity pressure. What effect this information may have in other research strategies is unknown. Still, most social research, whether or not it involves deception, involves no risk for subjects, and frequently subjects are so informed in consent procedures. The implication that such information may influence subjects' performance would seem important enough to interpretation of research data as to merit future attention.

Informing subjects that they would be at risk because they would be deceived, which transformed suspicious into awareness that some facet of the experiment had not been explained fully, also substantially increased conformity. It is noteworthy that these data are consistent with other information about volunteer subjects. Orne (1962) found that volunteers (as were present subjects) normally cooperate with an experimenter and provide data that they believe will support the experimenter's hypotheses.

Subjects who were told they would be deceived were aware that they were being misdirected; it probably did not require a strong inference to use this consent information to determine that the deception concerned the confederates' behavior. Indeed, during debriefing several subjects, who were told in consent information that they would be deceived and who were confronted by the erroneous judgments of the confederates, reported that they had made this connection. Understanding that conformity was being studied, subjects who were told they would be deceived apparently submitted to their perceptions of the experimenter's intent and exhibited considerable conformity.

Still other implications of these data may be gained by comparing them to Holmes and Bennett (1974). Holmes and Bennett told subjects that they might be deceived and found that this information did not influence their task performance. Also, subjects in the present research who were informed that they were at risk because they might be deceived responded similarly as did subjects provided with no consent information. Although strong conclusions from these data are premature, the consistency between results from Holmes and Bennett (1974) and the present experiment suggests that consent information which indicates to subjects in deception research that they might be deceived minimizes the potential biasing effect of consent procedures. One might speculate that this information merely reaffirms subjects' prior belief that deception may occur in an experiment and, therefore, causes no change in their anticipation. Should future research confirm these data, it may be appropriate to inform all potential research participants that they may be deceived in experiments. Campbell (1969) previously has argued that all individuals should be given this information within a signed consent form when they enter a

subject pool. This would then relieve individual experimenters from the responsibility of providing such information. Not only may this procedure least influence subjects' subsequent behavior, but it also would provide the methodological consistency across studies necessary for meaningful comparison and interpretation of data.

Post-Task Measures

Subjects who were deceived by confederates in the line-judgment task were more depressed, hostile and anxious than were non-deceived control subjects. Elevated scores on these measures suggest a general increase in the arousal level of deceived subjects. Since the deception involving confederates' judgments was the only difference between the treatment of deceived and non-deceived subjects, this arousal must be attributed to a response to that deception. Other indications of arousal in deceived subjects include their comparatively lower confidence in their line-judgments and by their high interest in the task. It would appear from these data that this deception did cause deceived subjects some psychological stress and that these subjects were, in fact, at some psychological risk. Still, the level of risk produced by the deception was not so great that it caused deceived subjects to desire to avoid future psychological research nor did it undermine subjects' perceptions of the value of the research.

The deceived subjects' self-reports of tension they believed they experienced during the experiment add interesting insight into their responses to the risk produced by this deception. Deceived and non-deceived subjects reported the least amount of tension when informed that they may or will be at psychological risk because they may or will be deceived. Such data indicate that this deception, although psychologically arousing,

gave subjects little concern as a source of psychological risk. It might be added anecdotally that deceived subjects typically were quite amused during debriefing when the experimental deception and its purpose was revealed. Often animated, cordial conversations with the experimenter followed the disclosure. On the other hand, non-deceived subjects typically reported regret that they had not been deceived by confederates. Their debriefing sessions were often short and subdued. Interestingly, Thompson, Cowan and Rosenhan (1980) reported similar responses from their control subjects. Such experiences during debriefing are consistent with data which suggested that subjects actually prefer participation in deception research (Leak, Slane & Watson, Note 1).

Conclusions

The deception in the Asch (1952) line-judgment task produced a moderate amount of stress in subjects. Still, the present data suggest that subjects did not believe that this stress produced unreasonable risk, nor did it offend them. These data should not be interpreted as cause for researchers to employ indiscriminate use of deception, but they add to evidence (e.g., Leak, Slane & Watson, Note 1; Gerdes, 1979) which suggested that deception not be rejected as a research strategy, but that its judicious use provides an acceptable methodological tool.

The data also reveal an important concern for the scientist who would employ deception in research. That is, consent forms provided to subjects may influence their performance in research and their attitudes about the experience. Apparently, careful consideration must be given by social scientists to the possible effect that any information about risk or deception may have in deception research. This is especially important in view of the fact that local IRB's are allowed discretion

about the control and use of deception. As long as local IRB's may require unique information in consent procedures, it may be advisable for researchers to report the contents of consent information in the methodology sections of published articles. Such information would assist both the author and the reader draw meaningful generalizations and conclusions from data. The alternative to such careful attention to consent information may be a field of inconsistent and sometimes contradictory data, produced not by poor theories or methodologies, but rather by hidden variations in consent information provided to subjects.

Finally, generalization of data is always a concern in social research. Certainly, the present results are applicable to other research which may employ the Asch (1952) methodology; probably these results are appropriate for most conformity research. Whether or not these data would be replicated in other deception strategies is unknown. However, the importance of these data seems to be less in their generalization and more in the warning they provide about the possible effect that consent information may have on data collected in deception research and in their implication of the necessity for further empirical attention to the matter.

Reference Note

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Footnotes

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¹As an indication of the extent to which consent procedures are described in published articles, the author searched published reports in the January-June, 1980, Journal of Personality and Social Psychology for references to consent procedures administered to subjects. Of 84 articles in which human subjects were used in these six months, 69 (82%) made no reference to the provision of consent information to subjects, 11 (13%) implied that at least some information normally included in informed consent procedures was provided to subjects (e.g., that subjects are free to leave the experiment at any time), and 4 (5%) indicated specifically that subjects signed consent forms. It is not clear how many authors who made no reference to informed consent procedures simply did not provide the information to subjects, or how many authors did not include descriptions of consent information actually administered to subjects. In either case, the few articles which specify the contents of consent information given to subjects or note that consent forms were signed indicate considerable inattention to the possible effect of this information on research results.

²A subsequent replication of this research reproduced these trends in data.