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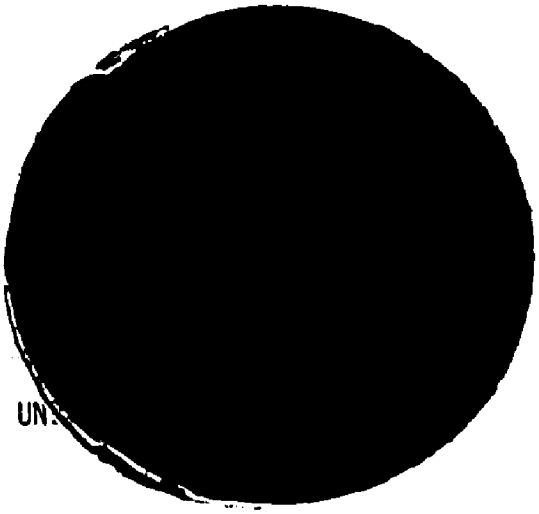
POTENTIAL SUBJECTS VIEW PSYCHOLOGY EXPERIMENTS: AN ETHICAL INQUIRY

by

ELINOR G. MANNUCCI

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1977



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Abstract

POTENTIAL SUBJECTS VIEW PSYCHOLOGY EXPERIMENTS:

AN ETHICAL INQUIRY

by

Elinor G. Mannucci

Adviser: Professor Stanley Milgram

Until fairly recently controversy over ethical issues in psychology experiments has not been anchored in systematic empirical studies. Much of what has been said about the presumed reactions of subjects or their attitudes toward psychological procedures, has been based on pure conjecture or on anecdotal reports. After a theoretical discussion of ethical issues, such as deception, stress, the risk of harmful aftereffects, informed consent, and the possible social value of psychological research, an empirical study of potential subjects reactions to psychology experiments is described.

The procedure of this study was designed with two purposes in mind: 1) to explore reactions of potential subjects to various ethical issues that concerned psychologists and others; and 2) to develop a procedure for pretesting experiments when traditional informed consent would invalidate the proposed research. Both purposes were accomplished simultaneously by having the participants in this study evaluate controversial psychology experiments such as Asch's conformity study, Milgram's obedience study and Turner and Solomon's avoidance learning study.

Ten experiments were described in non-technical language, emphasizing the experience of the actual subjects. Eight of the experiments employed

ethically controversial procedures and one was essentially benign, without noteworthy controversial features. The remaining experiment, conducted by the Nazis and condemned at Nurenberg, was patently unethical and inhumane. This experiment was included as a check on the face validity of consulting "potential subjects" and on the technique used in this study.

Each participant was given a booklet that described six experiments and also contained a set of identical questions about each experiment. The questions covered possible benefits and harm from participation, whether they considered the experiment ethical or unethical and whether they would consent to be subjects themselves. The final question, asking if they would vote a permit for the experiment to be conducted, also presented them with two sets of alternatives, one for "Yes" answers, another for "No", representing various ethical issues. Each experiment was scored on a 21 point scale and the alternatives respresenting ethical issues were scored separately. In addition, each participant gave written explanations of his responses.

Participants not only overwhelmingly rejected the Nazi experiment but made definite distinctions among the remaining experiments. The ratings of all experiments, except the Nazi experiment, fell into three distinct groups and the written explanations reflected these distinctions. There was a Low group where the experiments were generally condemned (e.g. Turner and Solomon), an Intermediate group where the experiments were controversial, highly applauded by some, condemned by others (e.g. Milgram), and a High group where the experiments were usually enthusiastically endorsed (e.g. Asch). Contrary to the expectations of some critics of psychology experiments, two of the three experiments that were enthusiastically endorsed, used deceptive cover stories and were also stressful.

The implications of the findings were discussed in terms of how a 'pre-

sumed consent' procedure can be used in deciding if an experiment should be conducted and the information that was provided on ethical issues. The reactions of participants in this study were scrutinized in terms of physical and psychological stress and harm, acceptance of "disturbing insights" and the use of deception. The content of the responses as well as the ratings of the experiments, indicated that potential subjects favor those experiments that provide them with an opportunity to "learn about themselves". This motive for participating in psychology experiments can provide the means for psychologists to "reward" their subjects. It obviously also needs to be heeded in planning experiments since the desire for self-knowledge can create vulnerabilities as well. Although "insight" is certainly sought, acceptance of derogatory insights is still an open question in terms of its ultimate effect on subjects.

Despite the predictions of many, that deception is disturbing and potentially harmful, the findings of this study indicate that deception is usually neither condemened, nor objected to, by participants. Deception was considered onerous only when the deception "entrapped" subjects into situations that were considered distressing on other grounds. An alternative type of Consent Agreement is suggested that can provide informed consent to experiments that employ deception: a consent form based on individual clauses and applicable to a wide range of experiments. Indeed, deception itself can be consented to, or rejected, by future subjects.

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Chapter I

INTRODUCTION TO AN ETHICAL INQUIRY

Ethical questions arising from the participation of human subjects in experimental research have become increasingly important. Two factors contributing to the salience of ethical issues have been the controversy within psychology over certain practices in the experimental treatment of human subjects, such as deception and stress (Baumrind, 1964, 1971, 1972; Brandt, 1971; Brown, 1965; Jourard, 1967, 1968; Kelman, 1967; Schultz, 1969; Seeman, 1969; Vinacke, 1954), and the recent revision of the APA Ethical Principles (APA, 1973).

Another important factor has been the increased public concern over the treatment of human subjects in all kinds of experimental endeavor, but especially in certain medical experiments (e.g. cancer cell implantation, psychosurgery, Tuskagee, etc.). This concern has expressed itself in certain governmental regulations such as institutional review committees (1966, 1969) and in the "'Protection of Human Subjects Act' that for the first time makes the regulation of human research a legislative rather than an administrative matter" (Smith, 1973).

The controversy surrounding ethical issues has intensified in recent years. Ring (1970) very aptly comments in his introduction to an empirical study on the mode of debriefing subjects:

> The feelings aroused by this debate are clearly as ardent as data relevant to many of the issues discussed are sparse--and it may well be that the very scarcity of pertinent data is one of the factors which contributes most to the passionate intensity of much of the commentary as well as to its persistence. While it is perfectly obvious that some of the disagreements can never be settled by recourse to empirical procedures, many of the specific

> charges against and defenses of this kind of experimentation rest on assumptions concerning its effects on participating subjects. (underlining mine)

Most of the debate concerning ethical practices in the treatment of subjects has not been anchored in systematic empirical inquiry. Much of what has been said about the presumed reactions of subjects, or their attitudes toward psychological procedures, has been based on pure conjecture by psychologists and others, or on anecdotal reports.

When questions first arose concerning the use of deception in psychology experiments in 1954, E. Vinacke suggested two problems for empirical study: one, a comparison of experimental results, with and without deception, and the other, an attempt to find out directly from subjects and others, what effect the use of deception might have on the subjects themselves and on the general atmosphere surrounding psychology experiments. But the debate continued until quite recently without being bolstered by empirical procedures which might contribute to answering some of the questions that have arisen during this controversy.

> As science rests on certain values, so do almost all values depend on knowledge, and thus to some extent in turn on science, if they are to proceed from the realm of words to that of action. This implies a circular chain of causation or a feedback process, as do many processes of social and cultural development. To act morally is in one sense the opposite of acting blindly. It is acting in the presumed knowledge of what in fact it is that we are doing.
>
> . . . The duty to have good intentions, in other words, is meaningless without the duty to try to know the facts and try to foresee correctly the consequences of one's deeds. (Deutsch, 1958)

The prevalence of controversy, both general and specific, and the lack of knowledge with respect to some of the basic issues, are recognized even within the code of ethics of the APA (1973) which offers guidelines for the ethical conduct of research. For example:

> . . . We know also, however, that psychologists differ widely among themselves as to whether such experiences are felt by the

> research participants to be harmful, inconsequential, or positive. The same experience, for example, reaction to psychological stress, is judged by some to be potentially harmful and by others to provide a valuable opportunity for the development of self-understanding. Still others will say that the stress concocted by psychologists is so trivial compared to normal every day stress experiences that research participants characteristically shrug it off as inconsequential. . . . (p. 12)
>
> There remains a serious and controversial issue to be noted. One frequently hears it asserted that behavioral research is contributing directly to the moral ills of society. According to this argument, when an investigator invades the privacy of another person, employs deceit, or occasions pain or stress, he contributes to legitimizing these indignities, and therefore to their prevalence in interpersonal behavior. Many psychologists discount such claims, noting that it is quite easy for a research participant to understand the reasons for these behaviors when they occur in a research context and to distinguish them from their counterparts in everyday life. Research is needed to help establish the factual basis for estimating ethical costs and gains of controversial procedures in this respect as in others. (p. 17; underlining mine)

One way to approach the problem of empirically based knowledge of the reactions of subjects (and potential subjects) to psychology experiments is very simply to consult them. We certainly do not want to get ourselves in a position where we merely engage in pompous polemics. Empirical data, and a careful consideration of the issues, are needed.

Ethical questions may arise with respect to many aspects of psychological research--why the research is being conducted, its sponsorship, how the results will be used, protecting the confidence of participants, and so on. This study does not attempt to explore all possible facets in the ethical conduct of research. Nor does it attempt to solicit attitudes toward conducting, or not conducting, experiments involving human subjects. Some psychologists feel the traditional experimental approach is questionable, both on methodological and ethical grounds (Jourard, 1968; Schultz, 1969), and there are undoubtedly others outside the field of psychology who share this view.

Since, for this study, participants were invited to take part in an experiment, it must be assumed that they have no objections per se to experiments with human subjects. This approach is considered necessary since objections to specific experimental procedures would not have the same meaning if they were merely a reflection of a general condemnation of any and all experiments, rather than pertaining to a particular controversial dimension of a certain type of experiment. Thus, the procedure in this study is designed to focus primarily on those ethical issues directly related to the subject's perception of his experience of being a subject.

Nonetheless the scope is by no means limited. Some of the issues which can be examined are: the relationship of the experimenter and the subject in psychological research; deception; psychological and physical stress; lingering and harmful after-effects; self-revelation which is not under voluntary control; entrapment (no informed consent); and, balancing the interests of society and scientific progress with the rights of individual research participants. These issues will be discussed before proceeding to related studies and a description of the method.

The Relationship of Experimenter and Subject in Psychology Experiments

Some objections to psychology experiments arising from the relationship of experimenter and subject have been in the form of a general condemnation of the experimental approach, irrespective of particular procedures. Asserting that the traditional experiment is manipulatory and uses subjects as a means to an end, some psychologists feel that other methods of investigating human behavior should be substituted for the experimental approach (Jourard, 1967; Schultz, 1969). The endeavor of

experimentalists to remain at an objective distance from their investigation creates a situation in which the experimenter-subject relationship is of necessity a "deficient interpersonal relationship from an ethical point of view" (p. 1), according to some of its critics. "The human being, it is said, is debased in his role as a research subject and the experimenter is unethical in his manipulation and treatment of subjects" (Miller, 1972).

Others feel that a mutually satisfying interpersonal relationship can be maintained if the subject is not under any pressure or coercion (Leake, 1970) and the complementary responsibilities of the experimenter to his subject is acknowledged, thus avoiding a definition of the situation in terms of an implied differential in status or power (Golann, 1970). Yet Crawford (1970), who defends the experimental approach, states that social scientists almost automatically violate the Kantian ethic of never treating any person as a means to an end, when "conducting research with the primary purpose of testing a theory or increasing our understanding of some general behavioral phenomenon" (p. 181) and "a certain dehumanizing distance between the researcher and his subjects often results. This disinterested attitude carries with it a potentially dangerous propensity to ignore the rights and welfare of the individuals from whom we obtain our data."

Schultz (1969) feels this "potentially dangerous propensity to ignore the rights" of subjects has been strongly reinforced by the behaviorist model of man as "an organic machine--an inanimate, determined, reacting, empty organism" (p. 29) who can be "poked, prodded, manipulated, and measured" as if he were an object. "The relationship is not that of person-to-person, but rather that of person-to-thing, with its attendant

tendencies of domination, manipulation, and control" (p. 30). Jourard (1968) also feels that our experimental methods will have to be changed since our present experimental procedures treat subjects as objects--and furthermore, do so "for the benefit of some elite" (p. 7), rather than for the benefit of either the subjects themselves or human beings in general.

The inevitability of an experimenter-subject relationship which is conspicuous in its lack of concern for the subject as a person need not be considered inherent in the experimental approach. Some psychologists--for example, Pellegrini (1972)--feel that an experimenter's "overriding concern for life and a desire to contribute to its understanding" (p. 896) could be reflected in their treatment of people, informally, and in situations in which they serve as subjects in experiments. The crucial issue, then, is not the fact of experimentation itself, but rather the type of person who is conducting the experiment and his orientation and training. Aronson and Carlsmith (1968) share this view.

The assertion that experimentation inherently involves the manipulation of people has also given rise to objections. Kerlinger (1972) states that "manipulation of people in its ordinary sense means managing the behavior and thought of individuals to induce them to do what the manipulator wants them to do" (p. 895) and contrasts this meaning of manipulation with the "manipulation" incorporated into the experimental situation: "In research, independent variables are manipulated--and <u>not</u> people." The experimenter varies the conditions, e.g., manipulates the independent variable, and the subjects hopefully <u>respond</u> to these variations. They are not, according to Kerlinger, coerced or manipulated into doing so.

The Issue of Deception

Vinacke made the first protest against the use of deception in psychology experiments in 1954, but it was not until the late 1960s that deception became a widely discussed--and fervently debated--issue. In the meantime, the number of experiments employing deception had multiplied, especially in social psychological research (Seeman, 1969; Stricker, 1967). Kelman (1967) remarked that deception had become standard operating procedure in the social psychologist's laboratory and mentioned that we might be creating a situation in which deception is considered "as much de rigueur as significance at the .05 level."

Concern with the issue of deception paralleled the enormous increase in its use and its association with some experiments that were considered ethically controversial on other grounds. Deception has been frequently attacked and defended on methodological grounds--as well as on ethical grounds--and often these issues are difficult to disentangle. For if an experiment using deception is methodologically unsound, the deception cannot be considered essential to making valid inferences and, therefore, it would, at best, have to be considered frivolous, and, at worst, considered highly unethical--regardless of one's views on whether deception is a legitimate experimental practice in general.

Perhaps the most serious ethical questions raised by deception are those that are intimately related to other ethical issues. Seeman, in vociferous condemnation of deception, cites experiments that would be unacceptable to most psychologists even without the element of deception. (Since no references are cited, it cannot determined whether these are actual experiments.) Some critics of deception blame "deception" itself for ethical problems which are more appropriately conceptualized

under another rubric. Other issues related to the use of deception are that of informed consent or being exposed to unanticipated, overly severe stress. These issues will be discussed later. The present discussion focuses on the question of deception itself--misinforming subjects on some aspect of the experiment or experimental procedure.

Aronson and Carlsmith (1968) state that deception is one method of creating experimental realism in the laboratory, which may not be attainable through any other means. The use of deception can create a situation which has psychological impact on the subject and therefore makes it possible to study behavior that is both spontaneous and psychologically valid. Sasson and Nelson (1969) make a similar point, stating that in perception experiments the researcher often creates sensory illusions: "We are, of course, deceiving the student-subject, for in our effort to hold a mirror to nature in the laboratory, we must deceive" (p. 289). They then add that "the same pragmatic ends" are served when social interaction is studied in the laboratory and social deceit is used. They find the word "deception" unfortunate and prefer the more neutral word "simulation."

The term deception is certainly not a neutral one. The word deception implies misrepresentation which is generally done to further one's own ends, such as deceptive statements made by a confidence man in trying to sell fraudulent stocks (Webster's New World Dictionary). Some objections to deception seem to embrace this "con man" image of experimental procedures which employ deception.

Questions regarding deception have focused on its offending the subject, causing him to lose faith in others, modeling undesirable behavior and contributing to an atmosphere of dehumanization and moral insensibility.

Thus, the deception which is practiced in the laboratory could contribute "to a historical trend that threatens values most of us cherish" (Kelman, 1967).

Kelman, who brought the deception issue most clearly into focus and who expressed deep concern about the unquestioning acceptance and routinization of deception, did not rule it out altogether. There are, however, some who do. Baumrind states: "It is unjust to use naive, that is, trusting subjects, and then exploit their naivete, no matter if the directly resulting harm is small. The harm is cumulative to the individual and society" (1971, p. 890) and "no ethical system condones deceit" (1972, p. 1084). Seeman (1969) feels that once the subject has been deceived, there is no way in which the experimenter can rectify the situation because the subject will have "lost confidence in the person's veracity" (p. 1027).

Attitudes of ethical absolutism with respect to deception assume that the subject will not be able to discriminate between experimental deception and deception as it is practised in ordinary situations outside the laboratory with base motives. Miller (1972), on the other hand, calls attention to the contextual aspects of a particular act: "Could not one argue, however, that as pain administered by a physician is not to be equated with criminal assault, neither should deception by the research psychologist be likened to unfaithful activity on the part of one's spouse. The ethical parallels appear superficial" (p. 156). Moreover, a subject need not view a cover story for an experiment in the same way as he would view being mislead in the context of, say, a clinical interview. If someone walked into a doctor's office and was told to undress, it would not evoke the same reaction as would the same request, had he walked into a

lawyer's office. Nor would it have the same meaning.

The APA Principles (1973) specifically acknowledge the subject's potential capacity to recognize a distinction between deception in the experimental situation and deception in general, by stipulating that a subject should find the deception reasonable, when it is later explained to him. The Principles state that one of the considerations that may make the use of deception more acceptable is that "there is sufficient reason for the concealment or misrepresentation that, on being fully informed later on, the research participant may be expected to find it reasonable, and to suffer no loss of confidence in the integrity of the investigator or of others involved" (p. 37).

Alternative strategies have been offered to eliminate deception as an experimental procedure. One is to forego investigating phenomena that require deception. The other is to use role-playing (Brown, 1965; Kelman, 1967; Schultz, 1969). The adequacy of role-playing as an alternative to deception has been challenged on both theoretical (Carlson, 1971; Freedman, 1970; McQuire, 1969) and empirical grounds (Holmes & Bennett, 1974; Miller, 1972). Furthermore, it would seem that even a role-playing experiment may invoke the onus of ethical questions if it deals with a highly involving emotional situation that succeeds in engaging the subjects, as was the case in the Zimbardo prison experiment.

Rubin (1973) suggested that one could skirt the problem of deception by withholding information rather than by actively misrepresenting an action. In order to do this, the subjects will usually have to be unaware that they are participating in research. Thus, one ethical dilemma may be solved by creating another. It is also questionable as to whether the withholding of information--especially where it allows subjects to draw

their own false conclusions, as recommended by Rubin--is not merely an alternative form of deception: deception by omission rather than by commission.

The Issue of Stress

> The most predictable call for ethical debate . . . derives from those experiments which expose, either in fact or via deception, the subject to physical or mental anguish. Countless experiments can be cited in which subjects have received (or administered) electric shock, received fictitious or true reports of inadequacy on an intelligence or personality test, failed at a task, been exposed to the sight or sound of another in distress, been insulted or related to harshly by the experimenter or his accomplice, etc. . . . From a substantive point of view, these conditions may be crucial in operationalizing one or more conceptual variable. . . . The basic fact is that the psychologist, as well as the layman, is often vitally interested in behaviors which deal with ineffectiveness, with anxiety or stress, with interpersonal discord--in short, with man under less than optimal conditions. (Miller, 1972, pp. 75-76)

Questions posed by experiments which induce, or give rise to, physical or psychological stress, are multifaceted. What types of stressful experiences (e.g., anxiety, conflict, frustration) are particularly likely to be disturbing? For example, is it easier for a subject to tolerate situations involving conflict rather than frustration, or is the type of stress irrelevant? What degree of stress might be considered really noxious and what degree essentially trivial? And, finally, should stress, even if temporary and moderate, be allowed in experimentation?

Physical stress, such as shock or other induced pain, has not given rise to as much debate or controversy as psychological stress. This does not imply a more tolerant attitude toward physical stress but rather reflects the fact that the issues involved in physical stress are more tangible and therefore easier to confront. Physical stress can be more readily defined and assessed, even if pain has a subjective element. Moreover, the subject can always be given the choice of whether he is willing

to undergo the stress. In experiments involving physical stress, the nature and intensity of the pain can be explained, and even exaggerated, to the subject, and he can be given the option of participating or not. But the nature and extent of possible psychological stress usually cannot be detailed to the subject--sometimes because it is unknown and other times because it would contaminate the results of the experiment.

Baumrind (1970) complains that the APA Principles are "stricter" with regard to physical stress than they are with psychological stress as "there are no qualifications to the principles that prevent the investigator from exposing a subject to possible physical harm" (p. 888). But this need not reflect a more calloused attitude toward psychological stress, since physical harm can be determined and appraised with greater facility. Psychological harm, on the other hand, involves a greater degree of subjective interpretation. And, therefore, it is often much more difficult to specify the nature and extent of psychological stress in a precise manner. Thus the problems inherent in dealing with the issue of psychological stress are more subtle and complex than are the problems arising from physical stress.

One dilemma inherent in the problem of psychological stress--presenting enormous difficulties--is the fact that psychological stress is generally unanticipated by the subject and occasionally unanticipated by the experimenter himself. Although for some experiments, stress is deliberately created so that its effects can be investigated, in other experiments it is an "unexpected by-product of an experimental probe" (Milgram, 1965) as in the Asch (1952), Milgram (1963) and Haney et al. (1973) experiments. But even for those experiments where stress is deliberately

created, the intensity of the stress cannot always be predicted or controlled. Particular kinds of stress, such as conflict or anxiety, may be more painful or unpleasant for some individuals than others: tolerance undoubtedly varies.

In a situation eliciting psychological stress that is deliberately created for the purpose of studying reactions to stress, especially in an experiment that involves a deceptive cover story, exposure to unanticipated stress is inevitable. But unanticipated stress can also occur in experimental situations that do not use deception in its usual sense. For instance, in studying frustration or reactions to failure, a situation is created that is capable of producing these reactions. And the subject is exposed to an unanticipated unpleasant state regardless of whether a deceptive cover story is used. This exposure may involve varying degrees of stress, depending both on the situation and on the sensitivity of the person to the particular emotion involved. Generally a subject is not forewarned that he will face frustration or failure and, therefore, certainly cannot realize or anticipate that he will face a situation that could evoke a strong emotional response.

One cannot tell a subject who is about to undergo an experience of frustration the details of the anticipated reaction even when they are known, and expect to get valid experimental results. Nor could one study reactions to prolonged isolation, and inform the subjects about the details of their likely psychological experience. Again the results might be contaminated by inducing a reaction--through suggestion or expectation--that otherwise might not have occurred. Orne and Scheibe (1964) have suggested that even the presence of a panic button has more influence

on the results of sensory deprivation experiments than the state of deprivation itself.

Does anxiety, frustration or conflict, within the confines of an experiment of relatively short duration, constitute an experience of sufficiently painful magnitude to be considered an inhumane exposure to harmful and destructive psychological forces? (Within the confines of an experiment must be emphasized since the nature of the issue is different if the subject's experience in the experiment is such that it is likely to induce lingering and harmful aftereffects.) Kelman (1967) asks: "Do we have the right to add to life's little anxieties . . . ?" Some say no. But not all psychologists feel that anxiety or other psychologically stressful experiences are to be avoided categorically. Some approach the issue from the standpoint of what degree of stress is to be considered tolerable for a subject to endure and under what circumstances. Potential subjects should certainly be consulted.

Another point of view, put forth by Crawford (1970) and Elms (1972), is that even a disturbing experience in an experiment can have positive consequences in the life of a subject. In a sense they take the same attitude toward painful psychological experiences within an experiment that Baumrind (1972) takes toward pain and suffering in general. It need not "necessarily be bad or evil" (p. 1085) in itself, if a person is able to profit from his experience. In fact, Baumrind regards "self-chosen suffering as necessary for self-realization and therefore under certain circumstances as good," but objects to suffering within an experiment because she feels it is <u>inflicted</u>. Others feel that in experiments where the subject is given a choice of actions, suffering need not be considered "inflicted."

The Issue of Lingering and Harmful Aftereffects

In the previous discussion of physical and psychological stress, the focus was on stress confined to the experimental situation. Now another question must be raised. What kinds of stress are likely to have enduring harmful effects and what kinds of stress are likely to produce only temporary pain or upset, even if severe? Experiments that cause temporary psychological stress or physical discomfort are presumably not undertaken without careful and concerned deliberation. But perhaps even more worrisome are those experimental situations in which there is the possibility that stress, anguish, or other untoward reactions are likely to continue beyond the experimental session. Stress which is limited does not give rise to the same degree of concern as stress that could have both long-term, and possibly harmful, consequences.

That priority be given to the research participant's welfare in weighing the pros and cons of conducting research has been emphasized by the APA Principles (1973), particularly in reference to research whose consequences are likely to result in lingering harm. "The nearest that the principles in this document come to an immutable 'thou shalt' or 'thou shalt not' is in the insistence that the human participants emerge from their research experience unharmed--or at least that the risks are minimal, understood by the participants, and accepted as reasonable" (p. 11).

It can probably be assumed that all investigators would agree that permanent harm should not be inflicted on a subject. Despite this, controversy is still prevalent. In dispute is what experimental procedures are likely to be permanently harmful and what constitutes permanent harm. Indeed, the same consequence of an experiment--from the point of view of

the subject--is considered blatantly damaging by some psychologists and potentially beneficial by others, for example, actions or reactions within the context of an experiment that a subject might consider as being undesirable, improper or indecent behavior.

The question of risk is also at issue. What is considered a reasonable risk if there is a possibility of harm? Baumrind (1964, 1971, 1972) insists that no degree of risk is justified, however slight. But this requirement would rule out all experiments, no matter how seemingly trivial or benign they might appear. An apparently benign experiment might harm a subject because the experimenter conducting it is insensitive to the needs of others or because it could affect a subject unexpectedly for some unforeseeable idiosyncratic reason. Some risk may be unavoidable in any human endeavor.

But even Baumrind (1964) does not eschew risk in all research endeavors involving human subjects. With respect to medical research, risk of "real harm" can be justified by the "concrete benefit to humanity" of a particular research effort. For example, the Sabin vaccine. Medical research can afford the element of risk, psychological research cannot. Risk for subjects in psychology experiments is deplored by Baumrind who asserts it is unjustified because of the dubious importance and doubtful significance of psychological research. She alleges both explicitly and implicitly that psychological research has not made a noteworthy contribution to improving the human condition and that it never will. Perhaps she is right. But medicine itself has often been unable to predict where medical efforts will lead.

James (1969), in discussing ethical issues in the regulation of experimental medicine, emphasizes the lack of predictability in research

advances. "It has been said that those who were optimists in their predictions of health progress have been proved wrong--because they never dared to be optimistic enough! Who would have suspected 35 years ago that we would now have removed poliomyelitis, measles, and pneumococcal pneumonia as major threats. . . . A review of the major statements of the health leaders of the 1934 era gives no clue to these current realities" (p. 301). Visscher (1969) makes a similar point in discussing "two sides of the coin" in the regulation of experimental medicine. "In the past 100 years, biomedical research has led to what would have seemed to a person living a century ago, absolutely unbelievable advances in the control of disease and the relief of suffering" (p. 319).

It should also be mentioned that in spite of the fact that discussion of ethical issues in medical research has a longer history than in psychology, many aspects of medical research remain highly controversial and are by no means considered a simple matter to resolve. And those concerned with ethics in medical research have also argued the question of how much risk is justified. In regard to medical research, life itself may be at stake. Although medical research is not at issue here, its problems in dealing with "risk"--despite its "concrete benefit to humanity"--may be symptomatic of the uncertainty inherent in any endeavor involving human beings.

Turning to the question of what may give rise to harmful aftereffects, the responsibility has sometimes been attributed to general causes such as deception and, at other times, attributed to specific procedures that involve conflict, false attribution of undesirable traits, or extreme stress. The nature of the contemplated harm, of course, depends both on its source and on what is considered harmful. Three general

categories of harm have been mentioned: (1) prolonged trauma or increased anxiety; (2) an altered self-image or a damaged sense of self-esteem; (3) loss of faith in legitimate authority with resultant feelings of anomie or alienation. Naturally these categories are neither independent nor mutually exclusive.

Prolonged Trauma or Increased Anxiety

Prolonged trauma or increased anxiety can occur as a consequence of another category of harm or it can be the direct result of an experimental procedure. For example, Bressler et al. (1959) reported a case of traumatic neurosis that resulted from an isolation experiment, despite the fact that the participants had been screened, the isolation was relatively mild, and the experiment was discontinued as soon as the subject indicated that she found it disturbing. This article was the only instance of reported ill-effects from an experiment--based on the actual occurrence of a severe negative reaction--rather than mere conjecture. Needless to say, that does not indicate the lack of such reactions. They could have occurred unbeknownst to the experimenter or they may not have been published. But it would seem to indicate that routine follow-up of potentially disturbing experiments should be a standard procedure. Milgram (1974) had a psychiatrist evaluate the effect of his experiment on a group of subjects a year after they had participated in the obedience research. More empirical studies are needed on the possible, long-term deleterious effects of specific experimental procedures.

Kelman (1967) asks whether we have a right to risk the possibility of "extensive anxiety purely for the purposes of our experiments, particularly since deception deprives the subject of the opportunity to choose

whether or not he wishes to expose himself to the risks that might be entailed"? Exposure to risk cannot be undertaken lightly even when the subject is aware of the risk, but it becomes especially serious when he does not know there is a possibility of harm.

The APA Principles assert that in situations in which there is a possibility of harmful aftereffects "cautious exploration with a few pilot subjects may be justified, but the investigator should be prepared to apply effective ameliorative measures should aftereffects occur" (p. 74). Unfortunately, it is questionable as to whether "effective ameliorative measures" can be assured with our present state of knowledge. Therefore, it would be desirable to anticipate the likelihood, and the nature, of possible harm by systematically consulting with potential subjects before a study is even piloted. This would also allow an investigator to prepare himself to deal--in the most effective manner--with any adverse reactions that might occur, if it is decided to undertake the experiment because the risk appears to be minimal.

Altered Self-Image or Damaged Self-Esteem

In considering the question of an altered self-image or a damaged self-esteem, a distinction must be made between harm that might result because the experimenter has imposed a false impression of some psychological characteristic on the subject, and harm that might result from the subject behaving in a manner which runs counter to both his expectations and his conception of decent and desirable behavior.

In some experiments false feedback is given to the subjects--either on their performance on some task or on the results of some personality measure--to induce a desired psychological state. Kelman has

wondered whether the explanation at the end of the experiment that the information was false, is sufficient to remove the possibility of harmful aftereffects, especially when it involves an aspect of a person that arouses special concern, such as masculinity or homosexuality. A study by Walster et al. (1967) that investigated the residual effects of false attributions after debriefing found the level of concern to be unrelated to the effectiveness of debriefing in counteracting the false information. But they could not rule out the possibility of such an effect for experiments that use a stronger manipulation--attributions that are of greater potential concern than the one they used. Moreover, they did find evidence that debriefing might "not be as immediately effective as experimenters have hoped and assumed." Subjects, irrespective of their initial level of concern, seemed to adopt attitudes ascribed to them by the experimenter, despite a lengthy and unusually thorough debriefing.

That false attributions may not be as amenable to debriefing as other features of an experiment, is plausible when it is considered that subjects may desire to participate in psychology experiments because of an interest in "learning more about themselves." This study as well as the pilot study revealed the prevalence of this motive. Thus, false characteristics ascribed to a subject, even if later discounted, could be readily incorporated into the person's self-image, especially when they are conveyed by a psychologist, or psychological instrument, reputed to be able to provide insights into behavior. Furthermore, the subject can view the debriefing procedure as an attempt at reassurance and support rather than as a means of conveying accurate information. The subject may also be desirous of believing certain misinformation about himself, particularly if it seems to have positive implications.

Some experiments expose a subject to the possibility of an altered self-image, and subsequent harm, by what Baumrind (1971) calls their "psychological flaws" (p. 888) which makes them vulnerable to being exploited by an experimenter that they trust. In criticizing the Milgram obedience experiment, she states (1964): "It is potentially harmful to a subject to commit in the course of an experiment, acts which he himself considers unworthy, particularly when he has been entrapped into committing such acts by an individual he has reason to trust." Kelman also feels that obedient subjects in the Milgram experiment could come away from their experience with a lower self-esteem--"having to live with the realization that they were willing to" inflict "extreme pain on a fellow human being."

Although Kelman feels that this lesson would constitute an "instructive confrontation" and "provide valuable insight" if it took place in the "real world," he questions its legitimacy in the laboratory because subjects do not come for potentially disturbing insights. Yet if the participants in this study are typical, subjects do volunteer for experiments because they seek knowledge of themselves. Of course, they may prefer that this knowledge is not unfavorable--but that may also be true in life or psychotherapy--where Kelman feels that truthful confrontation has value. Milgram reported that his subjects endorsed their participation, feeling that they had learned something of personal importance (1964). Ring (1970) confirms this finding in an independent study of subjects' reactions to an obedience experiment: "Their evaluation of the experiment (was) prevailingly and unmistakenly positive."

Miller (1972) wonders why the social psychological laboratory should be considered to be divorced from other experiences in life,

pointing out that people learn unpleasant things about themselves--quite unexpectedly--in a variety of life events. Crawford (1970) feels that Kelman holds two ethical guidelines which are mutually exclusive: "The first is that manipulations which serve to increase freedom of choice are ethically superior, and the second is that participants in our studies should not leave the experience with less self-esteem or more anxiety than they brought to it."

Others have also questioned whether avoiding experiments in which there is a possibility of the subject being confronted with potentially disturbing insights is necessarily ethically superior. They question whether "blind trust" in authority and a false self-image are assets or liabilities. "Perhaps a realization of one's flaws leads to a useful and constructive examination of ourself" (Kaufman, 1967). Elms (1973) points out that psychologists have observed that a "discrepant" self-esteem may be detrimental to an individual and that a positive self-image should have a realistic basis. He then adds that if a psychologist, through his actions, weakens an individual's self-esteem, "he should be prepared to help the individual find more realistic bases for rebuilding a positive self-image" (p. 155).

Bypassing Debriefing as a Solution

One solution of a completely different order has also been proposed for the problem of a subject learning something unfavorable about himself, thus lowering his self-esteem and discovering he's been deceived. Don't debrief him. Stollack (1967) asks, "Does the truth always set our subjects free?" In discussing the obedience experiment, he suggests that if a subject has behaved "ignobly"--be compassionate and either bypass

the debriefing or avoid that aspect of the debriefing which could convey that to the subject. Campbell (1969) advocates omitting debriefing altogether in deception experiments.

But not only can this approach be questioned on ethical grounds, it seems highly questionable on pragmatic grounds. First, a subject is undoubtedly aware of how he behaved, even if he is not immediately aware of the full implications of his behavior. Second, if he later thinks about his behavior, he may reappraise his actions and also be in ignorance of essential aspects of the situation and, therefore, be unable to properly judge his deed. He would not know that the majority of the subjects behaved as he did nor would he know that he actually did not hurt anyone. Third, he might subsequently read about the experiment, learning both that his behavior was considered "ignoble" and that he had been deceived. Any of the above could result in a reaction of greater magnitude and seriousness than that which might have occurred if he were debriefed and it would occur without the experimenter's awareness. Thus, there would be no opportunity for the subject's possible feelings of anger, humiliation or anxiety to be ameliorated through a sensitive and supportive debriefing. Ring's study (1970) suggests that the mode of debriefing does make a difference, and a significant reduction in emotional tension can be achieved by providing the subject with justification for her behavior. Holmes (1976) also found that effective debriefing is possible. "Behaved ignobly" is a value judgment. Truth and compassion can be combined when judgmental attitudes are not inflicted.

Loss of Faith in Legitimate Authority

In discussing deception, it was noted that some psychologists object to deception in a psychology experiment because it runs counter to the ideal of an open and honest relationship with people. Further objections have been made to deception based on the possibility that it can contribute to harmful aftereffects from an experiment by influencing subjects' attitudes toward legitimate authority. If their trust in adult authorities is undermined, feelings of anomie and alienation will result. Baumrind believes the subject can be adversely affected by experiences in experiments "that result in loss of trust in themselves and the investigator and, by extension, in the meaningfulness of life itself" (p. 888) and that deception bears a substantial responsibility for this eventuality.

Empirical efforts to explore reactions to deception, including deception where severe stress is encountered, have failed to document these dire predictions (Holmes, 1976; Lowin et al., 1968; Miller, 1972; Ring, 1970). In the Ring (1970) study of reactions to a Milgram-type obedience experiment, he found that none of the subjects expressed resentment at being deceived, and even responded "remarkably well . . . on being informed of the deception-within-a-deception design." A double deception* undoubtedly runs a significantly greater risk of disturbing subjects than the usual deception experiment. In fact, it has been categorically prohibited by some (Kelman, 1967; APA Principles, 1973).

The Ring study did indicate that among the subjects--who had a follow-up interview by telephone, two to five weeks after they had participated in his experiment--there were many that were experiencing difficulties in trusting "adult authorities." (Approximately one half of the

*A false and deceptive debriefing which is actually a part of the experimental treatment, before the actual debriefing is provided.

original group were interviewed.) These subjects indicated that they were now more suspicious of psychology experiments and more wary of being deceived. (About one-half of this group had been in subsequent deception experiments.) Nevertheless, there was "no necessary concomitant decrease in their interest in serving as subjects in psychology experiments." Nor did they regret having participated in the obedience experiment or express anger over having been deceived.

Perhaps the crucial ingredient in a subject's reaction to deception is whether he can understand, and accept as reasonable, the explanation of the deception, and therefore be able to discriminate between deception designed to serve a valid experimental purpose and deception designed to serve the self-interest of the deceiver. It is quite possible--as Aronson and Carlsmith (1968) have pointed out--that the style of debriefing (and the attitudes toward subjects and experiments it reflects) can influence the subjects' subsequent reaction to a deception experiment. One might also note that reflexive and indiscriminate acceptance of adult authorities, legitimate or not, need not be considered an unequivocally preferred state.

The Right to Privacy

In considering the potentially harmful aftereffects of experiments, subjects behaving in a manner that would alter their self-image was discussed from the vantage point of an experiment inflicting lingering harm. In that context, the discussion centered on whether investigators have a right to expose subjects to disturbing insights that could continue to plague them long after the experiment was over. A subject being confronted with unexpected and unanticipated behavior raises

another issue--that of the right to privacy. In answering a questionnaire, a subject has a choice of whether he wants to provide, or withhold, the information that is requested. In an experiment, self-revelation may not be under voluntary control. A subject's behavior or response to the experimental treatment may convey personal information--both to himself and others--without the subject being able to exercise conscious and deliberate choice over such revelation.

The likelihood that this could occur is even greater in experiments where the subjects are unaware of the true purpose of the experiment or that the activities they are engaged in are part of a research effort. Schultz (1969) laments: "In the laboratory our subjects' inner feelings, fears, and fantasies are often exposed to view through deception and other techniques designed for such purposes. That we insist we are only interested in behavior may have no meaning to a subject who, through some overt action, feels that he has displayed cowardice, conformity, or some other characteristic he would rather not have displayed."

The panel on privacy in behavioral research (1967) asserts: "The essential element in privacy and self-determination is the privilege of making one's own decision as to the extent to which one will reveal thoughts, feelings and actions. When a person consents freely and fully to share himself with others--with a scientist, an employer, or credit investigator--there is no invasion of privacy, regardless of the quality or nature of the information revealed." In an experimental context, choice over what is revealed cannot always be exercised, even when the true purpose of the experiment is known, since neither the subject nor the experimenter may be able to predict what will occur. A dramatic

instance of this is the Zimbardo prison experiment, where extreme forms of behavior were elicited in a situation in which the subjects knew, in advance, what the experiment entailed and what would be required of them.

The experimenter faces a dilemma with many unknown parameters when his research is likely to elicit unexpected revelations from his subjects. For one thing, he is often unable to predict the reaction his experiment may provoke, both with respect to the individual and the group. For another, he is often unable to foretell what an individual might consider an intrusion on his privacy. In situations where people have been directly questioned, attitudes toward revealing information of a personal nature are often surprising. Respondents may readily give the intimate details of their sex life and balk at questions concerning the family income (Westin, 1967).

In an experimental situation, a subject is not presented with an opportunity to withhold information which he may deem of a personal nature nor to decide of his own volition whether he wants to volunteer it, but rather the information is extracted from him by the experimental treatment. How a subject will feel about exposing himself in an experimental situation may depend on the circumstances surrounding the "exposure," such as how the experimenter handles the situation and how the subject feels about having particular information revealed.

The possibility of revealing information that may be unfavorable or derogatory could be considered only from the standpoint of its unfortunate consequences for the individual. But it could also be argued that if a person learns something unfavorable or derogatory about himself, that it is better to have learned this in an experimental situation where

anonymity and confidentiality are respected, than in a real-life situation where the same behavior might be openly and publicly humiliating or have some other undesirable repercussions.

The Issue of Informed Consent

The doctrine of informed consent as a prerequisite for the ethical conduct of experiments is a fundamental principle. It is not only designed to prevent the exploitation of subjects by exposing them to harm (or any other untoward consequence of participation), without their knowledge and permission; it is a recognition that the individual's right of free choice is an essential expression of human dignity.

But, although the concept of informed consent may appear simple and obvious in theory, in practice it presents many problems. Some problems arise over what information is necessary for consent to be considered truly informed and other problems arise when the purpose of the research would be invalidated if the subject is given a detailed explanation of the research, when informed consent is obtained. This is especially the case for behavioral research but it also applies to medical research where informing the subjects of the possible side-effects of a drug could induce these effects through suggestion.

Some have questioned whether truly informed consent is even possible. Mann (1970) asserts that "the usual consent document is little more than a legal crutch" (p. 353) since to obtain truly informed consent in medical studies, one would need to limit subjects to medical students. Fox (1970) also stresses the "loopholes in the quality of consent" pointing to the "competence gap" that exists between the investigator and even a very intelligent and well-educated subject, making

even the most scrupulously detailed consent agreement of dubious value. Furthermore, an investigator may not be privy to all the necessary facts himself--especially those aspects of an experiment relating to possible discomfort or benefits for a subject--and, therefore, is not in a position to convey this information to the subject.

That an informed consent agreement may not function as smoothly as one might hope is illustrated by a study by Martin et al. (1968), investigating why prisoners volunteer for medical research. "The studies indicate . . . that the act of consenting is not necessarily a token of informed understanding" (p. 1430) and volunteering is not necessarily as rational a process as an informed consent agreement implies. Peer pressure and environmental influences seem to have more of a bearing on the decision to volunteer than explanations concerning the experiment itself.

The content of an informed consent agreement also raises questions. How much information is needed for consent to be considered informed? Resnick and Schwartz (1973) in a parody of the informed consent provisions of the APA principles, conducted an experiment in which they ran an "ethical" (informed) and a "nonethical" (uninformed) group of subjects in a verbal conditioning experiment. For the "nonethical" group, they used the usual procedures for recruiting and running subjects. For the "ethical" group, they explained the purpose and details of the experiment and procedure down to the last boring minutiae. Not only did they have difficulty in recruiting subjects for the "ethical" group and then having them appear ("it is possible that people lose their interest in participating in psychological research when it is disclosed fully

what the research is about" [p. 137]), but some subjects indicated that they thought it was either a joke or an elaborate deception in disguise. That attitude could be attributed to scuttlebutt about deception which pervades college campuses but it could also have been provoked by a "Gertrude" reaction: "Thou dost protest too much" (Shakespeare, 1601).

The APA Principles (1973) state: "Providing complete information about all of the many conceivable considerations that might be important to any possible participant is obviously impracticable and would be unacceptable to the research participant and investigator alike. Human judgment is required as to what information the individual might reasonably want to have" (p. 30). The New York Regents' decision in the Chronic Disease Hospital case regarded no consent as valid unless it is "based on a disclosure of all material facts" (p. 664). The decision further stipulated the intent of the disclosure by defining material facts as "any fact which might influence the giving or withholding of consent" and also specified that deliberate nondisclosure of a material fact is no different from deliberate misrepresentation.

Objections to deception in psychological research have often been based on its depriving the subject of the opportunity to give informed consent (Baumrind, 1971, 1972; Kelman, 1967). Baumrind (1972) feels that "deceptive instructions prevent informed consent" and therefore deprive the subject of "his ability to decide freely and rationally how he wishes to dispose of his time" and is therefore "demeaning" (p. 1085). She does not feel, however, that a researcher has a moral obligation to inform a subject as to why he has been selected for the research as long as the researcher does not misinform him (1971, p. 891), for example, to inform the subject that he was selected because of

evidence of latent homosexual tendencies. Bur can it be assumed that this would have no influence on his desire to consent and give freely of his time?

The panel on Privacy and Behavioral Research (1967), stressing the difficulties of truly informed consent, has indicated that "some modification of the traditional concept of informed consent is needed" if behavioral research is to be effective. They maintain that the principle that underlies consent can be maintained if the subject has enough information about the investigator and the research to form a basis of reasonable trust, and that, in addition, the subject can be given the option to discontinue the research at any time.

Wolfensberger (1967) proposes that consent be considered informed if the subjects know what "rights" they will be yielding to an experimenter, such as the invasion of privacy, the types and degree of risk involved, and the detrimental or beneficial consequences of the research for them, if any. He also suggests that explaining the purpose of the study should be considered a desirable but not an essential element in a consent agreement.

The Issue of the Social Value of Psychological Research

The issue of the social value of experimental research encompasses balancing the rights of individual research subjects with the needs of society for knowledge and scientific progress. Many assume that people can ultimately benefit--either directly or indirectly--from the findings of experimental research: "The failure to experiment is equally an experiment which may also have unsatisfactory consequences" (Katz, 1970, p. 5). Uncontrolled observations or beliefs sanctioned by "common

knowledge" have often proven erroneous, when "subsequently tested in a controlled situation" and misinformation can be either directly harmful to man or prevent him from obtaining needed benefits. "The controlled experiment can provide answers to questions not obtainable through observation" (Lasagna, 1969, p. 461). Not all share this view. Jourard (1968), for example, feels that controlled experimentation will lead to man being transformed into a "robot" and to his exploitation.

For those psychologists who do not believe that the experimental approach can provide consequential or valid knowledge of human behavior, questions concerning the ethical conduct of experiments do not pose a problem. Ethical conflicts or dilemmas do not arise because there is no need to consider the potential contribution of research findings to the long-range, broader interests of man and society.

"Morality," according to Baumrind (1971), "consists not of constructing a good life for oneself alone, but also of abetting others in the pursuit of the good" (p. 1086). Some have hopes that psychological research may contribute to the "good life" through its contribution to the knowledge of man. One could, for example, cite the influence of a study by Clark and Clark (1948) on the Supreme Court decision on desegregation as contributing to both morality and the "good life" (a study, incidentally, which aroused stressful reactions in children).

But since Baumrind feels that psychology cannot provide any concrete benefit to humanity (1964) and that experiments can merely "impair" a subject's "pursuit of virtue," she feels that a "compromise among ethical ideals is no more unavoidable in the research endeavor than any other human endeavor" (1971, p. 887). Quite apart from the dubious assertion that a compromise in ethical ideals can always be avoided in any

human endeavor and the "Machiavellian" and "evil" intent imputed to the investigator (p. 890), this attitude fails to recognize legitimate differences in opinion as to what is the "pursuit of virtue" and what may violate "human rights."

Most people concerned with the problem of experimentation with human subjects recognize an inevitable conflict of values in decisions relating to research with human subjects. The APA principles, individual psychologists and others, involved in experimentation with human subjects in medicine, have given concerned and thoughtful consideration to the various facets of this problem. Controversy has arisen because one value or another has been emphasized and because it cannot always be determined if the research is likely to make a contribution and what imposition on the subjects is likely to occur as a result of the research.

Also at issue is how the interests of the research participant and the interests of the research can be protected most effectively--where a conflict between the two seems to exist. "The crux of the matter is to find the inner checks or other safeguards that will mitigate and justify the socially useful risks" (Freund, 1967, p. 395). Some fear that the bias of an investigator in favor of his research, combined with the bias and support of his scientific colleagues, may result in their blindness to the possible harm that an experiment may inflict on a subject. Others fear the opposite.

> As advisory committees are now generally set up, they have, in contrast to the experimenter, little to gain by approval of research, but may have much to lose professionally, if ethical difficulties arise. The maximum pay-off therefore lies in the direction of minimizing all risk both for the subjects and for themselves. This is unfortunate, for many of the major advances in science have involved physical, mental and political risks. (Schwitzgebel, 1968)

McQuire (1969) has expressed the view that psychologists are more likely to be guilty of "nonfeasance" than malfeasance in their experimental work. The feeling exists, both with respect to psychological experimentation and medical experimentation, that inaction is always easier to justify than action, since an action may turn out to be wrong. Yet, inaction in some instances could possibly be more harmful. If one does not act, personal risk can be avoided while responsibility for inaction is usually difficult to assign. Moreover, it is easier to identify and describe instances of injustice: "We are much surer that particular processes or results are unfair than that particular arrangements are just in some positive sense" (Calabresi, 1970).

The balancing of the rights of subjects and the need for experimentation is made especially difficult in psychological research since it involves two unknown parameters: the potential value of the research and empirical data on how subjects are likely to respond to experimental procedures.

Determining the significance of psychological research often involves subjective judgment even after the research is completed. It can be even less apparent before it is undertaken. Furthermore, the contribution of a single study may become apparent only after accumulating enough congruent findings so that each individual outcome can become a significant contribution to the whole. This future possibility is difficult to determine a priori. The history of science is dotted with examples of significant knowledge being the outcome of either the cumulative findings of seemingly wasted efforts or being the result of some unforeseen fortuitous occurrence: a single planned effort to produce a great discovery is difficult to identify.

Another problem to be confronted is that the closer psychological research comes to exploring questions of vital human concern--in an effective manner--the more likely it is that an experiment could raise ethical questions. Shils (1959) feels that the record of experimentation in the social sciences is quite "unblemished" as far as ethical problems are concerned, but its "purity . . . can be partly associated with its scientific inconsequentiality. If it studied more important variables which touch more deeply and lastingly on the life, conduct, and outlook of the subjects, it might perhaps have acquired more scientific substance, but it would have done so at a much greater ethical risk."

An experiment dealing with vital human questions and one that is sufficiently well-designed to arouse genuine psychological responses, runs the same risk of disturbing a subject as would a similar situation in life--but perhaps to a lesser degree. Elms (1972) feels that "it's possible to conduct research without raising a participant's blood pressure or arousing his slightest concern; but since the important aspects of human life often involve concern and heightened blood pressure, I don't feel researchers should avoid them" (p. 152).

Other attitudes toward stressful experiments--and the possible harmful consequences for the subjects--have been discussed previously. But it should be noted that in discussions of the pros and cons of experimentation, the possible risks and discomfort for the subjects is usually mentioned without considering the possible benefits that a subject may derive from his participation in an experiment. Besides possible material gain, a subject in an experiment could value his research experience for any number of reasons--reasons which may be either altruistic or selfish.

Subjects' rights must of necessity be protected. But this protection should be based on their genuine needs and interests, and not on hypothetical possibilities of debasement or injury which do not correspond to the subjects' reactions to the experimental situation. A realistic, and not an imaginary (or projected), appraisal of how subjects respond is needed: an appraisal which does not bypass the feelings and opinions of actual and potential subjects in psychology experiments.

Empirical Approaches to Ethical Issues

The APA has proposed a mandatory review of its ethical principles every five years. In the meantime, empirical information on the attitudes and reactions of subjects to psychology experiments are being accumulated. Often, in discussions of ethical issues, the psychologist is pictured as being so wrapped up in his research goals that he is unable to visualize the impositions he is making on his subjects or the violation of their basic rights. Psychologists who have conducted ethically controversial experiments and have questioned their subjects on how they felt about their participation, have not had the negative reactions that might be expected from the assertions of critics, but this has been challenged as having no value. Critics contend that these subjects are merely telling the psychologist what they think he wants to hear (Baumrind, 1964). It has also been claimed that a subject's endorsement of an experiment, after he has participated in it, is merely a dissonance reaction.

There is, however, some evidence that subjects may not react as negatively, or at least in the same manner, to various experimental procedures as do psychologists. In one study by Sullivan and Deiker (1973),

the reactions of psychologists and potential student subjects were compared. They sampled the opinion of 285 psychologists and 357 students on four different controversial experiments, asking questions about volunteering as subjects, deception and unethical aspects. "In 18 of 20 response categories, psychologists gave a stricter interpretation of the ethical issues than did the student subjects." The major purpose of their study was "to determine if important differences existed between experimenters and students on various issues in human research." And they concluded that "such a difference clearly exists, with psychologists expressing views that are much more ethically stringent than those given by their most typical human subjects. This is somewhat surprising in view of the amount of discussion in the professional and popular literature concerning researchers' abuse of reticent subjects."

The Sullivan and Deiker study does not justify a relaxation of vigilance in protecting the rights of subjects. But it does suggest that we need further clarification of how subjects view their participation in psychology experiments and how they react to various procedures which have been fervently debated by psychologists. The APA Ethical Principles has emphasized, and rightly so, that the investigator could be hindered in accurately assessing the impact of his procedures on his subjects "because of differences in age, economic and social background, intellectual orientation" and his personal involvement in his profession. Perhaps this could also apply to those psychologists who judge their colleagues' experiments in terms of how they affect the subjects.

Empirical studies of participants' attitudes toward psychology experiments and procedures have continued since the Sullivan and Deiker (1973) study. Berscheid et al., the same year, did a study that focused

on "anticipating informed consent" for deception experiments. Farr and Seaver (1975) culled 81 different procedures from the APA Ethics Manual and different journals, and presented them to participants for their judgments on the degree of discomfort they would arouse. Thirty-six dealt with privacy, 30 with physical discomfort, and 15 with psychological discomfort--scaled from one to five--no discomfort to unbearable discomfort. Wilson and Donnerstein (1976) assessed the general public's reactions to field experiments. They abstracted the procedures of eight field studies, presenting four to each participant, and asked a series of ten 'yes' or 'no' questions about reactions to the legal aspects, ethical aspects, value, willingness to be a participant, and so forth. Neither of the latter two studies presented the experiments in narrative form but rather abstracted the procedures.

Baumrind (1972) has suggested polling "representative groups of prospective subjects in order to determine their ethical and personal objections, if any, to social science procedures." One way of doing this is to describe a series of controversial experiments to groups of potential participants and then ask questions that could elicit reactions to the experiments, reactions that would include the experiment's impact on the well-being of the subjects. The present study, designed to do this, was undertaken with two main objectives: (1) to determine the attitudes of potential subjects toward psychological procedures that have raised ethical questions, and (2) to develop an alternative procedure for a consent agreement when traditional informed consent procedures would invalidate the proposed research. Both these purposes were executed simultaneously by having potential subjects for psychology experiments evaluate certain experimental procedures in terms of the

effect of these procedures on participants and their ethicality. Although the method of this study was developed and piloted in 1970, it has certain features in common with the Sullivan and Deiker (1973) study since both studies ask a potential subject population, specific questions about experiments that are presented in narrative form. However, the procedures and goals of this study differed quite markedly from the Sullivan and Deiker study. Their primary interest was in comparing the responses of psychologists and students about consenting, ethical aspects of the experiment, and deception.

The present study asked potential subjects to give their reactions to a group of experiments that were described in terms which emphasized the subject's experience in being a participant. Included in the study were experiments that have given rise to ethical controversy among psychologists and others. Objections to these experiments have been made in terms of their employing particular procedures, such as deception, or in terms of the stress and possible harmful aftereffects of the experimental manipulations themselves. Volunteers were asked to evaluate the experiments, indicating how they respond to them along subjective and ethical dimensions. Their reactions provide an empirical baseline for viewing psychology experiments. Although emphasis was placed on exploring various ethical issues from a subject's point of view, a further purpose of the study was to continue the investigation of the concept of the "presumed consent of a reasonable man" as an alternative procedure for the informed consent of an actual subject. Investigation of the concept of "presumed consent" was begun in 1970 with a study that also presented various experiments to volunteers. The 1970 study suggested

the need for a more detailed exploration of how potential subjects view ethical issues and psychology experiments since the attitudes of the participants appeared to differ, in many respects, from those attributed to them by psychologists.

In deciding whether an experiment should be conducted, the question of paramount importance, from the standpoint of the subject, is: would he consent to participate if he knew beforehand what was being asked of him? Perhaps this question can be resolved by invoking the principle of the "presumed consent of a reasonable man." The experiment could be explained to another group of subjects who are asked to give their reactions to the experiment and to state if they are willing to be subjects in it. It could then be decided whether the experiment could reasonably be undertaken without the necessity of a full explanation to the actual subjects. And, wherever feasible, a consent agreement could specify, in general terms, aspects of the experimental experience that might influence the actual subject's willingness to participate. The "presumed consent" procedure could be used to obtain the necessary information to do this. In some instances, of course, it might be decided that the experiment should not be undertaken under any circumstances.

If the "presumed consent of a reasonable man" is accepted as a viable alternative for traditional informed consent, it is crucial to ascertain whether potential subjects for psychology experiments can make reasonable and valid discriminations between experiments. Acceptance of a clearly unethical experiment, such as one condemned at Nuremberg, evidence of lack of awareness of the discomfort or stress of the actual subjects, or a calloused attitude toward subjects, would make a "presumed

consent" procedure of dubious value. If a participant's attitude is "anything goes for science," his opinion on various experiments and experimental procedures would be valueless as a basis for presumed consent or for evaluating ethical aspects of experimental methods.

The "presumed consent" procedure would be congruent with the USPHS (1969) directive which apparently makes allowance for research in which "informed consent . . . can be anticipated" (p. 10) and with the APA Principles (1973) which suggest some of the following strategies in research that raise ethical questions:

1) Pilot work on a few individuals in order to evaluate the potential impact of the procedures (p. 38);

2) Not relying on the investigator's unaided judgment (p. 38);

3) Consulting others who are in a position to "adequately recognize and weigh impositions on the participants," including "members of the participants' significant groups, for example, college students, minority people, factory workers, etc." on the effect of the procedures on "members of their groups who are participating in the research" (pp. 23-24).

The Berscheid et al. study (1973) mentioned previously--Anticipating Informed Consent: An Empirical Approach--is similar in concept to the "presumed consent" approach of this study but different in method. Starting with the premise that where informed consent conflicts with the methodological requirements of an experiment, current practice of merely consulting an "ethics advisory group" is of questionable predictive accuracy, they suggested the following: "Draw a sample from the proposed subject population, present it with the full procedure to be followed in the experiment along with the purpose of the experimentation,

and determine the extent to which these subjects would be willing to participate in the experiment described" (p. 914).

For the Berscheid procedure, each subject was presented with six typical social-psychological experiments--four that were stressful, two that were not. The primary dependent measure was the subject's expressed willingness to participate in the experiment after having received one of seven different levels of information about it.* This willingness was expressed on a five-point scale, going from "definitely not" to "definitely." In addition, subjects were asked to rate how they might have felt afterwards if they had participated in the experiment. They made their judgments on two nine-point scales ($r = .75$) in terms of whether they would be happier or sadder than before, or more satisfied with themselves, or less so. They were also asked to rate the experiment itself in terms of whether it was worthwhile or of value to science. Again, two nine-point scales were used ($r = .85$).

Recognizing the possibility that a prospective participant "may not always accurately foretell the degree of discomfort or stress that will be aroused by an experiment" (p. 914) (a problem, incidentally, which is shared by subjects who actually give informed consent), Berscheid et al. concluded that the method employed appeared to have face validity as well as predictive validity in determining whether consent can be anticipated. They also felt that it is "less susceptible to error than judgments by the principal investigator or an advisory board" (p. 925)

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*Cover story information (1); Cover story information and procedure (2); Procedure, plus a desirable or undesirable behavioral expectation (3, 4); An explanation of the experiment in the form of a debriefing that is either neutral, desirable or undesirable, depending on the previous behavioral expectation (5, 6, 7).

since it elicits the reaction of people who are as similar as possible to the actual subjects who would participate in the experiment.

A fundamental difference between the present study and the Berscheid et al. study is that this study attempts to explore potential subjects' reactions to various experimental procedures that merit ethical consideration rather than merely focusing on "anticipating informed consent." Moreover, it includes a means of determining whether volunteers can exercise reasonable, sensitive and humane judgment in responding to different experimental situations.

An experimenter who knows beforehand the likely range of reactions and attitudes toward his experiment is in a better position to plan post-experimental sessions that will lessen any possible negative impact of the procedures. The two studies by Holmes (1976(a), 1976(b)) and the Ring et al. study (1970) pointed to the importance of the mode of debriefing in influencing a subject's subsequent reaction to a stressful experiment. The investigator may also be able, through using information obtained from "presumed consent," to turn a potentially negative experience into one that can have value for the actual participants. Because of a prior understanding of how subjects might benefit, and what they might have difficulty in coping with, he is in a better position to arrange or manage the experimental situation so as to avoid any untoward reactions.

As is recognized by the APA Ethical Guidelines, subjects may differ widely in their reactions to experiments: "The investigator must also recognize the possibility that both the benefits to the participants, and, importantly, the costs of their participation in the research may vary from individual to individual" (p. 13). By using a "presumed

consent" procedure, an experiment can be presented quickly and efficiently to a relatively large number of people, allowing for individual differences in reaction to be assessed. If it is then possible to identify certain characteristics in potential subjects that might make them particularly vulnerable to an experimental procedure, the investigator may be able to "screen out of participation those (subjects) for whom the risks would be high" (APA Ethical Principles, p. 13) or devise the means for minimizing possible undesirable aftereffects.

The Present Study

The present investigation of ethical issues in psychology experiments described ten experiments in non-technical language to groups of volunteers. Eight of the experiments have aroused specific controversy or have controversial designs. They were selected to represent various experimental procedures that psychologists have questioned or objected to on ethical grounds. One experiment was included that is unlikely to be considered controversial or objectionable since it does not involve either deception or stress. The final experiment was conducted by the Nazis, condemned at Nuremberg, and is one which presumably all responsible people would consider unacceptable on humane and ethical grounds.*

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*The Nazi experiment is included since it cannot be assumed a priori that individuals, who are asked to evaluate experiments, will exercise sensitivity and judgment in fulfilling the task. Endorsement of this experiment would raise serious questions concerning a participant's ethical judgment or ability to comprehend the task at hand. If the procedure is used to anticipate informed consent, it is of crucial importance that the endorsement of an experiment be made by responsible and ethically sensitive individuals. Identifying those with dubious judgment is also important in evaluating the opinions of participants on various controversial experimental procedures.

In common with the Berscheid et al. study, the participants were presented with six experiments and asked to answer a series of questions. As in the Berscheid et al. study, a question on willingness to consent to be a subject was included, but in this study, the response to the consent question was dichotomized. As the study was designed to explore participants' reactions along ethical dimensions, a number of questions--in addition to the consent question--were asked to elicit information on the attitudes and reactions of potential subjects to specific experiments. This information can also be of value if this method is used for "anticipating" informed consent since the investigator should be able to gain insight into what aspects of his experimental procedure potential subjects endorse or condemn, and why.

In the present study, the emphasis was placed on how each participant reacts to an experiment from the perspective of being a subject in it. The experiments were described by briefly stating the purpose and then narrating the procedure in a manner that emphasized the experimental situation as it is experienced by subjects. For the main condition, the results of the experiments were not presented but rather possible outcomes were suggested. Recognizing that people are often unable to predict their own behavior accurately, each participant was asked to indicate how he thinks he would have behaved if he had been a subject in the experiment. Further reactions to being a subject were explored by asking participants if they thought they could benefit or be harmed by their participation. (And, as mentioned previously, they were asked if they would consent to be in the experiment.)

Two other questions specifically focused on the ethical dimensions of the experiments. The first question asked participants if they considered

the experiment ethical or unethical, and why. Since there are many possible criteria for judging ethicality, it was considered particularly important to find out what criteria the participants offered to explain their decisions. Because a participant may not be able to spontaneously verbalize some of the ethical issues raised by psychologists, another question was designed to elicit opinions on specific ethical issues. Participants were asked to vote permission for the conduct of an experiment. After conveying their decisions, they were then asked to indicate what reasons influenced the decision by checking the appropriate alternatives from two groups of eight, provided separately for 'Yes' and 'No' answers. These alternatives were provided to call attention to specific issues, such as deception, that might not occur to participants spontaneously.

Besides the main condition, there were two conditions in which the results of the experiments were presented in order to ascertain how the outcome of an experiment might influence the reactions to it. There are two possible ways that an outcome of an experiment could influence reactions. The results may suggest to potential subjects that they will behave in a manner that runs counter to what they consider desirable behavior or it may convey an impression of human conduct that they would find "unacceptable."

Two experiments were chosen as the focus of the "outcome" manipulation: the Milgram experiment on obedience and the Asch experiment on conformity. To investigate the possible influence of an outcome of an experiment on how participants evaluate it, the Asch and Milgram experiments were presented with both actual and fictitious results. For the Asch experiment, the real results stated that 30% of the subjects conformed while the fictitious results stated that 90% conformed. For the Milgram experiment, the

real results relayed that over 60% obeyed. The fictitious results corresponded to the prediction of 40 psychiatrists when they were asked to state what they thought would happen: less than 1% obeyed. It should, therefore, be an acceptably realistic outcome in terms of participants' expectations. Other groups have also predicted that only 1 or 2% would be completely obedient.

Chapter 2

METHOD

The general method used in this inquiry was to present written accounts of experiments to groups of participants, and to determine, by means of a questionnaire, their reactions to being a subject and to ethical issues. The chief tool was a booklet, given to each participant, that described six experiments and that also contained a set of identical questions about each experiment.

Participants

The participants in this study were 192 undergraduate students at Hunter College (48 males and 144 females). The age range was 16 to 47 but 68% were from 17 to 19. They were recruited from an introductory psychology course* before having been exposed to content areas that might have familiarized them with some of the experiments covered by this research.

After a brief description of the study, the students were told that it would take approximately one hour and that they would receive an honorarium of $2.50 for their participation. If they were interested, they filled out a form indicating the times they were free, and they were subsequently contacted individually by telephone.

Henceforth when the word "subject" is used, it will always refer to the subject in the experiments that were described to participants. The

*This course was a two-semester course and in the first semester the so-called hard areas of psychology were covered.

"subjects" of this study are referred to as participants and occasionally potential subjects.

Procedure

Participants were run in groups. In addition to the verbal instructions, each experimental booklet had a summary of the instructions on the cover. The participants were told that psychology experiments are one way in which we learn about human behavior, that there are many different kinds of psychology experiments and that we were interested in how each individual would react to an experiment from the standpoint of being a subject in it. They were told to read the account of each experiment carefully, answering the two pages of questions about it before proceeding to the next experiment. Emphasis was also placed on their explaining their answers in the spaces that were provided.

After they had completed answering the questions on the experiments, they filled out two pages of the booklet that asked for information about themselves. They were not required to sign the booklets and they were told in the initial instructions that their responses would be anonymous. Some participants wanted to sign their names and they were permitted to do so. Most participants completed their booklets in 1 to 1-1/2 hours. Some, however, took considerably longer and there was no attempt to enforce a time limit.

Two of the 192 participants had to leave before the session was completed and their protocols had to be discarded. Four other protocols had to be discarded because the final question was either omitted or completed incorrectly. This question had provided separate alternatives for 'Yes' and 'No' answers and if a participant checked both sets without giving a 'Yes' or 'No' answer, the protocol was eliminated. Whenever an experimental

booklet had to be discarded, booklets with an identical order of experiments were substituted for the ones which were eliminated.

The Experiments

Ten experiments were included in the study: eight of these were chosen because they employed ethically controversial procedures and the remaining two served as controls. Reactions to the controversial experiments could be evaluated by comparing them to the two control experiments. The first, a study by Mintz (1951), was neutral in character. It had subjects play a game in which they tried to remove cones from a bottle simulating a panic situation. This experiment can be considered essentially benign from an ethical standpoint. The second experiment was conducted in Nazi Germany and consisted of a series of experiments involving exposure to freezing temperature. Many fatalities occurred. This experiment was included because it can be considered unquestionably unethical and inhumane. The subjects were prisoners and were forced to participate. The Nazi experiment, condemned at Nuremberg, was conducted by Sigmund Rascher.

The eight controversial experiments were: 1) Asch (1956) studies of conformity; 2) Berkun et al. (1962), an experimental study of psychological stress in which soldiers, who do not know they are in an experiment, are led to believe the plane they are in is about to make a crash landing; 3) Bramel (1962), an experimental study involving the attribution of homosexuality by means of a "rigged dial." The dial was hooked up to subjects as they viewed nude photographs of same sexed persons; 4) Campbell et al. (1964), an aversive conditioning experiment in which a drug-induced paralysis occurs without warning. An impression of impending death is created since subjects are unable to breathe or move for more than a minute. The

subjects were hospitalized alcoholics; 5) Heron (1957), a sensory deprivation experiment; 6) Milgram (1963), experimental studies of obedience; 7) Murray (1963), study of stressful interpersonal confrontations in which a law student confederate debates with a subject and attacks his values and beliefs; 8) Turner and Solomon (1962), a study of avoidance learning in which electric shock is administered at near maximum painful intensity.

All experiments were described in non-technical language, emphasizing the experience of actual subjects. A description of the Asch study on conformity follows. The remaining descriptions can be found in appendix A.

Conformity and Independence

To what extent will a person yield to, or resist, the influence of a group? The purpose of this experiment is to discover how a person will react when confronted with a unanimous view which is contrary to his own.

A group of eight people is assembled and asked to judge which of three lines is the same length as another line. Many such judgments are required and each member of the group must give his answer publicly so that all can hear. The correct answer is a simple and obvious one. Normally it would be extremely rare for someone to make an error. However, in this situation, only one person is the real subject. The other members of the group, assistants of the experimenter, have been instructed to unanimously give incorrect responses for many of the judgments. The subject answers last and thus must resolve a powerful conflict. He must either announce an answer which is in disagreement with all the others or else he must give an answer which he is probably sure is incorrect. He faces, perhaps for the first time in his life, a situation in which the unanimous opinion of a group of people differs from his own. And, he must state his own opinion, publicly.

Possible results: When subjects give their opinion after hearing the incorrect answers of others, they may also give incorrect answers. There may be pronounced differences among the subjects in the extent

to which they conform to group opinion rather than giving the correct answer. Conflict and tension may be frequently experienced by the subjects, especially when they express an opinion which differs from that of the unanimous majority.

Experimental Booklets

Each booklet included six experiments. The Mintz (1951) and Nazi experiments were included in every booklet and the remaining four were from the group of eight controversial experiments. Identical sets of six questions immediately followed each experimental description. The selection and order of the experiments were random. A permutated Latin Square Design was utilized so that every experiment appeared in each position in the booklet, an equal number of times.

The Questionnaire

Two pages of questions followed each experiment. For the first five questions, space was provided so that the checked replies could be explained. Included with the questions, listed below, are the numerical scores assigned to each answer.

1. How do you think you would have behaved, if you had been a subject in this experiment?

2. Do you think you could benefit in any way by participating in this experiment?

   ($_{+2}$) Definitely ($_{+1}$) Possibly ($_{-1}$) Probably not ($_{-2}$) Definitely not

   Please explain your answer

3. Do you think you could be harmed in any way by participating in this experiment?

   ($_{-2}$) Definitely ($_{-1}$) Possibly ($_{+1}$) Probably not ($_{+2}$) Definitely not

   Please explain your answer

4. Would you consent to serve as a subject in this experiment?

   ($_{+2}$) Yes ($_{-2}$) No ($_{0}$) Not sure

   Please explain why

5. Do you feel that this experiment is ethical or unethical?

   ($_{+2}$) Definitely ethical ($_{+1}$) Probably ethical ($_{-1}$) Probably unethical ($_{-2}$) Definitely unethical

   Please explain why

6. Suppose an experiment could be carried out only with the consent of a board made up of representatives of possible subjects for the experiment. The board would make a judgment based on the experiment's effect on subjects, considerations of the worth of the experiment, its acceptability to community moral standards, or any other factors it deemed relevant. If you were a member of this board, would you vote to give permission for the conduct of this experiment?

   ($_{+2}$) Yes ($_{-2}$) No

   Please check any of the reasons below which influenced your decision. Make 2 checks for the one reason which is of particular importance in this decision.

After participants had checked 'Yes' or 'No' to question 6, they checked the alternatives provided to explain their decisions. There were eight alternatives for both 'Yes' and 'No' answers and a ninth alternative "other" where participants could furnish their own reasons. The alternatives, as presented to participants, can be found in appendix A.

Quantitative Scores

Questions 2 to 6 were given the appropriate quantitative scores as indicated above. The plus scores are favorable replies and the minus scores are unfavorable ones. The range for each question was from -2 to +2. In addition to the scores for the questions, a total rating was computed by

using the arithmetic total of the scores for the individual questions. These ratings ranged from -10 to +10.

For the alternatives provided for question 6, the scores were based on the number of checks given each alternative. The alternatives were scored separately and, of course, did not enter into the composite score mentioned above. A double-check was scored as 2, a single-check as 1, and no check was scored as 0. Occasionally a participant made a check for the 'Yes' group when he had indicated 'No' and vice versa. These checks were ignored in the scoring. Further, if a double-check was made for more than one alternative, contrary to instructions, all double-checks were treated as if they were single-checks and scored accordingly.

Qualitative Scores

Questions 1 to 5 required a written response from participants. For questions 2 through 5, they were asked to explain their checked replies. Codes for these questions were constructed separately for favorable and unfavorable replies. A maximum of two codes was assigned to each response. In the rare circumstance where a response could have been appropriately assigned to three coding groups, the two that were either emphasized, or most representative of the response, were selected. Codes were constructed separately for each experiment and were designed to be as reflective as possible of the actual content of the response. If a response was quite specific, but a sufficient number of participants made that response, the coding category was specific. More general codes were used only when there were not enough participants who made similar specific comments. Codes that did not fit either a specific

or general group were designated "other." If a response was ambiguous or unclear, it was coded "not interpretable."

Besides the individual codes, groups of codes with similar content were assigned to a general category. Some codes belonged to more than one general category while others did not fit any general category. The frequencies of the general categories were based on the number of participants who made a comment belong to that category, e.g., if a participant made two comments that fit one general category, the frequency of the general category was increased only by one. In other words, the frequency of a general category reflected the number of participants who made comments fitting that category and not the number of comments made.

Ten percent of the protocols were coded by a second person. The average intercoder agreement was 90%. The range was from 81% for Turner and Solomon to 96% for Campbell et al. and Milgram.

Main Condition

Twenty-four males and 72 females participated in the main condition (96). There were eight groups--with 12 participants each--who received identical experiments, four of which were randomly selected from the eight controversial experiments. Each controversial experiment was presented 48 times. There were only four pairs of experiments that never appeared together in a booklet, namely, Milgram and Berkun et al; Asch and Bramel; Heron and Murray; Campbell et al. and Turner & Solomon. All other possible combinations were represented in the booklets. This method of arranging the experiments was used so that each experiment would appear with as many other experiments as possible. The eight

experiments were not divided into two groups of four experiments each, which would have simplified the statistics, because of the distinct possibility that reactions to individual experiments might be influenced by the particular group of experiments in which they were embedded. By randomly assigning the experiments to eight different groups, this influence, if any, could be both controlled and evaluated.

"Outcome" Manipulation

Twenty-four males and 72 females took part in the two outcome conditions. The descriptions of the experiments were the same as they were in the main condition except that the results of the experiments were presented rather than stating a possible outcome. Every experiment, except Asch and Milgram, had the results stated as they were when the experiments were conducted. The Asch and Milgram experiments, appearing in every booklet along with the Mintz and Nazi experiment, had both actual and fictitious results. The booklets had six experiments and two were chosen, at random, from the remaining six controversial experiments. Each booklet with real results had an identical counterpart with fictitious results.

The fictitious results of the Asch experiment stated that 90% conformed rather than 30%. For the Milgram experiment, the fictitious results stated that most subjects did not go beyond 150 volts, that fewer than 4% were still obedient at 300 volts, and that less than 1% continued until 450 volts. The real results stated that over 60% obeyed until the end, 450 volts. For one condition, therefore, participants were presented with 90% of the subjects conforming and very few obeying, while in the other condition, over 60% obeyed and only 30% conformed.

Chapter 3

RESULTS AND DISCUSSION

This chapter is divided into six sections. The first section will review the effect of the Nazi experiment on reactions to other experiments. Section two will present findings on the Nazi and Mintz (1951) experiments, included in every protocol as controls. Section three will compare all of the experiments, detailing the quantitative and qualitative findings. Illustrative quotes from the protocols will be used to illuminate the more subtle distinctions that participants made among the experiments. Section four will focus on the questions, presenting data that illuminate relations and distinctions among the questions. In section five, the alternatives that influenced the decision to grant, or not grant, a permit will be analyzed, emphasizing their implications for ethical issues. The final section will discuss the 'outcome' manipulation.

The data for male and female participants have been pooled. In the *t* tests comparing males and females, there were no significant differences in either the average rating for the six experiments in each participant's booklet or in the ratings of the individual experiments. Furthermore, of the 50 *t* tests for the questions (5 for each of the 10 experiments), only 3 were significant (Table 1B, Appendix B).

In the subsequent presentation and discussion, the experiments are entitled as they were in the actual protocols and will be referred

to by abbreviations of these titles. The experiments, and their titles, are listed below:

1) Asch (1956): Conformity and Independence

2) Berkun et al. (1962): Airplane Crash Simulation

3) Bramel (1962): Reaction to an Undesired Trait (Homosexuality)

4) Campbell et al. (1964): A Traumatically Conditioned Response

5) Heron (1957): Sensory Deprivation

6) Milgram (1963): Obedience to Immoral Orders

7) Mintz (1951): A Game to Learn about Panics

8) Murray (1963): Attack on Personal Values

9) Rascher: Prolonged Exposure to Freezing Temperature (Nazi experiment)

10) Turner and Solomon (1962): Traumatic Shock and Learning

Responses Before and After EXPOSURE Experiment

Exposure was included in every protocol because of its extremely brutal treatment of subjects. But the question of Exposure's effect on the evaluations of other experiments must be raised. Would it make other experiments seem more benign or better by contrast? This question was confronted by comparing the responses to each experiment, before and after Exposure (Table 1C, Appendix C).

Of the 54 t tests for the mean rating and the mean scores for each question for an experiment, when it appeared before Exposure and when it appeared after Exposure, only 3 were significant. For Game, the mean rating and the mean score for Ethical were significantly higher if Game appeared after Exposure rather than before. For Conformity, the mean score for Ethical was also higher when participants had Exposure first. It is highly likely that these are chance findings but even if

they are not, the effect of Exposure on evaluations of other experiments seems negligible. Exposure does not influence responses to more controversial experiments but merely makes the more favorably viewed experiments more favorable, in some respects, than before.

The reasons influencing the decision on a permit were also compared for the same experiment when it appeared before, and after, Exposure. For this analysis, 144 t tests were made, and of these, only 13 were significant at the .05 level. This is slightly more likely to represent a real finding (9%), but is still not of sufficient magnitude to conclude that consideration must be given to whether an experiment appeared before, or after, Exposure.

EXPOSURE and GAME: Findings and Implications

Participants do make differential judgments about psychology experiments. Not only the ratings of experiments, but answers to individual questions on Benefit, Harm, Consent, Ethical and Permit, reflected an extreme range of reactions to each of the experiments. Although a highly differential response to the ten experiments is informative, that in itself would be meaningless unless it was accompanied by a rejection of Exposure. Had the response to Exposure been equivocal, one would have to conclude that either the technique was ineffective or that potential subjects are not able to make judgments that can contribute to ethical decisions. But the rating of Exposure is distinctly different from the other nine experiments.

There were two questions where the mean score for Exposure was not significantly different from at least one other experiment, but this need not necessarily denote a more tolerant attitude toward Exposure.

Participants were not significantly more willing to consent to be a subject in Shock than they were in Exposure and they were just as unwilling to grant a permit to Traumatically Conditioned Response and Airplane, as to Exposure. But the mean score for Consent for Shock was significantly lower than the means of the other questions. Permit had the lowest mean scores for Airplane and Traumatically Conditioned Response, compared to the other questions. Moreover, for the remaining three questions--Benefit, Harm, and Ethical--the means for Exposure were significantly lower than all three Low-rated experiments* and not all Low-rated experiments approached the mean score for Exposure for the same question. Therefore, it would seem that for these two questions, Consent and Permit, it is the mean scores for Shock, Traumatically Conditioned Response, and Airplane that approached the mean score for Exposure, rather than that participants were more lenient in their attitudes toward Exposure.

Forty-three percent of the total ratings for Exposure were -10, signifying that it received the lowest possible score for all questions, and only 5.0% of the ratings were positive.** Nonetheless, 14 participants (14.7%) were apparently willing to grant Exposure a permit. This is sufficiently low not to invalidate the procedure, but it is still notable. Why did this occur?

It is of interest to observe in this connection that Exposure is the only experiment where its position in the experimental booklet had a significant relationship to the total rating.*** For Exposure, not only

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*See below, pp. 66-67, "Mean Scores for the Questions and Rating."

**See Table 6F, Appendix F.

***See Table 2C, Appendix C.

was there a significant linear trend for rating and position in the experimental booklet but those who received Exposure as their first experiment gave it a significantly higher rating than those who received it as the third to sixth experiment (-5.44 versus -7.88 to -8.69, Duncan, $P = .05$). There were not significant differences for Harm and Consent, but Benefit and Permit had significant linear trends and Ethical, a significant quadratic trend. For all three questions, the mean scores were significantly higher for those who had Exposure as the first experiment.

The fact that three of the five questions were affected by the position of Exposure in the experimental booklet may indicate that encountering Exposure as an initial experiment makes it more difficult to assimilate and assess because it has such an extremely divergent approach to human subjects. Therefore, the sooner it is encountered, the more likely it will be misunderstood, or distorted, to make it more acceptable and in line with expectations. That this is indeed the case is indicated by the fact that by far the most important reason for granting Exposure a permit was that the "subject voluntarily agreed to be in the experiment." A few participants checked this alternative although, as their comments revealed, they realized that Exposure was not voluntary. Without doubt, being involuntary is not the only feature of Exposure that makes it unacceptable from a humane standpoint. But if this aspect of the experiment was misunderstood, or deliberately altered, to make the experiment acceptable, other aspects may also have been distorted. Eleven of the 14 participants, willing to grant Exposure a permit, apparently did so on the basis of misunderstanding, or changing, an essential element of the experiment, namely, that it was not voluntary.

Although position in the booklet may have contributed to misunderstanding or distorting Exposure, being willing to grant it a permit cannot be explained solely on the basis of the initial shock of encountering an experiment such as Exposure as one of the first experiments. Another factor predisposing participants to accept Exposure is a generally more lenient attitude towards, or a positive bias in favor of, experimentation. The average rating for the remaining five experiments in the booklet was significantly higher for those participants who granted a permit to Exposure than for those who did not (+3.97 versus +1.32, P = .0001).* Moreover, if there were any differences between the two groups on either total rating or mean scores for the questions, it was invariably the group willing to grant Exposure a permit that had the higher rating or mean score. There were differences in the two groups that were either significant, or approached significance, for the rating or questions, for seven of the ten experiments. Only Traumatically Conditioned Response, Obedience and Conformity had no significant differences. (See Table 3C, Appendix C, for t tests comparing those who were willing, or not willing, to grant Exposure a permit.)

The question arises as to why the findings were presented without excluding the participants who were willing to grant a permit to Exposure. The answer is a pragmatic one. Every analysis, done with all 96 participants, was also done separately for the 14 and 82 participants who answered the Permit question differently. None of the analyses with only the 82 participants differed from the analyses done with the entire sample of 96 participants. This, of course, does not imply that the group granting a permit to Exposure did not differ from the group that did not because, as

*See Table 4C, Appendix C, for the distribution of average ratings.

we have seen, they did differ. But since the number of participants who appeared to accept Exposure was small, and the ways in which they differed were not extensive, including or excluding them from an analysis did not have a significant effect on the outcome. The disadvantage of excluding them, of course, was that it resulted in unequal Ns.

Exposure was included in every protocol as a check on both the technique and the participants. A second experiment, Game, was also included in every protocol because it was considered an essentially uncontroversial and benign experiment, without either deception or a significant amount of stress. It was selected because it had a clear and understandable objective as well as a procedure that could be of interest to participants. Yet it does not occupy a unique standing for either the mean rating or the mean scores for the individual questions, as did Exposure, at the other extreme. Neither the mean rating for Attack and Conformity differed significantly from Game nor did Game receive the highest rating. Nor can it be said that a ceiling effect is responsible for the similarity of ratings. Not only is the total rating for Conformity higher, even if insignificantly so, but the negative rating of Exposure was decidedly more extreme (-7.52) than the rating for Game (6.19).*

Although Attack received lower mean scores for some questions, namely, Harm, Consent, and Ethical, Conformity did not differ significantly from Game on any question. Conformity and Attack were endorsed by participants notwithstanding the fact that both can be considered stressful and both employ deception. Moreover, one of the lowest rated experiments, Shock, was an experiment in which there was no deception. A chart of the eight controversial experiments, showing their distinctive features as far

*See below, pp. 66-67.

as deception, stress, and special ethical problems, is presented in Table 1.

Focus on the Experiments

In this section, the qualitative and quantitative data on the ten experiments will be detailed. Before describing the results for each experiment, the relevant data analyses and tables will be presented.

Mean Scores for the Questions and Total Rating

It should be recalled that although ten experiments were included in the study, each participant was presented with only six. The method of random selection resulted in 8 groups--of 12 participants each--receiving an identical set of six experiments. Table 1D, Appendix D, presents the repeated measures ANOVAS for each of these groups. All 48 ANOVAS (6 for 8 groups) were highly significant (42 beyond the .001 level).

To ascertain whether the 8 groups of 12 differed from each other on the mean ratings or scores for the same experiment, oneway ANOVAS were performed for the rating and each of the five questions. These analyses involved 8 groups for Exposure and Game that were included in every protocol and 4 of the 8 groups for the remaining experiments. Only 2 of the 60 ANOVAS were significant: the total rating and the Benefit question for Shock (see Table 2D, Appendix D).

Since all 48 of the repeated measures ANOVAS, within groups, were significant and only 2 of 60 were significant between groups, a negligible finding, it seemed justified to pool the data from the eight groups. Therefore, subsequent analyses will be based on the combined results of all groups for each experiment. To be conservative, the data are treated as if they were between subject measures, with a higher error term, even though

Table 1. Distinctive Features of the Experiments

	Type of Deception	Type of Stress	Special Ethical Aspects
Traumatically Conditioned Response	Ss are recruited on false pretenses; Information on the nature of the procedure is withheld.	Unnecessarily severe stress (procedure is considered horific even when it is expected).	Use of a vulnerable population (sick and dependent on institutional personnel), hospitalized alcoholics.
Traumatic Shock and Learning	No deception.	Exposure to very painful electric shocks on a voluntary basis.	Idea of painful shock would seem to be quite distasteful to potential Ss, even when voluntary.
Airplane Crash Simulation	Double-edged: Ss do not know they are in an experiment and are lead to believe they are in a plane that is about to crash.	Severe stress involving a threat to life.	Use of a deceptive and extremely stressful procedure with Ss who do not know they are in an experiment.
Obedience to Immoral Orders	Ss are led to believe they are seriously harming another person.	Severe tension based on a potent conflict between obeying authority and harming another person.	Ss may act contrary to what they consider to be desirable behavior.
Reaction to an Undesired Trait	Ss are given false feedback on their psychological and physiological response to semi-nude photographs of same sex persons.	Ss are led to believe they have homosexual tendencies.	Raises questions on the effectiveness of debriefing when false psychological impressions are attributed to Ss, especially by "experts".
Sensory Deprivation	Withholding of information: Ss are not told of possible severe, although usually temporary, psychological reactions.	Stress which lasts for a relatively long period, days rather than hours.	Ss may experience severe psychological reactions such as hallucinations and mental impairment that may have a harmful aftereffect.
Attack on Personal Values	Ss think they are to have a friendly discussion with another person but will face a trained debater instructed to tear apart their views.	An unexpected and personalized attack on the S and his basic values.	Ss may feel betrayed.
Conformity and Independence	Actions of peers in giving wrong answers deliberately and falsely.	Tension involving a powerful conflict between the evidence of one's own senses and majority opinion.	Ss may act contrary to what they consider to be desirable behavior.

both repeated, and not repeated, measures are represented in the combined data.

Table 2 is a summary of the ANOVAS for the five questions and the total rating.* Tables 3 through 8 present the mean scores for the total rating and the five questions, including the a posteriori contrasts.

The means for the ratings fell into four discrete subsets, with Exposure being significantly lower than any other experiment. There were three groups of three experiments each. These three groups will subsequently be referred to as the High, Intermediate and Low groups. The three highest rated experiments--Conformity, Game, and Attack--formed a homogeneous group. The Intermediate group was comprised of Sensory, Reaction (homosexuality), and Obedience, but Sensory was significantly higher than Obedience. Traumatically Conditioned Response, Shock, and Airplane were in the Low group with Airplane significantly higher than Traumatically Conditioned Response.

The mean scores for the questions were also highly significant and followed similar, but not identical, patterns. Table 9 summarizes the mean scores for the five questions. Table 10 portrays the mean scores within each experiment and indicates which of the five differed significantly.**

Table 11 lists both the zero order correlations and the third order partials for each experiment and question. Although many possible pairs of questions did correlate, the correlations were often moderate to low and, in many instances, disappeared altogether, when the variance in common with the other questions was partialled out. This is an indication that the participants used the questions to express different facets of their

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* All ANOVAS were computed using weights of 0.5 for Exposure and Game since they were presented twice as often as the other experiments.

** See Table 3D, Appendix D, for repeated measures ANOVAS.

Table 2. ANOVAS for Rating and Questions[1]

	MS	df	F
Total Rating			
Between groups	1071.76	9	43.98*
Within groups	24.37	470	
Benefit			
Between groups	25.94	9	15.81*
Within groups	1.64	470	
Harm			
Between groups	46.00	9	31.91*
Within groups	1.44	470	
Consent			
Between groups	59.68	9	27.91*
Within groups	2.14	470	
Ethical			
Between groups	38.46	9	25.01*
Within groups	1.54	470	
Permit			
Between groups	65.04	9	23.49*
Within groups	2.77	470	

*$P < .0001$

[1]Exposure and Game were weighted as .50 since all 96 participants had these experiments in their booklets while only 48 participants had the remaining eight experiments.

Table 3. Total Rating: A posteriori Contrasts, Duncan .05

EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
-7.52	-4.67	-2.96	-2.33	-0.02	+1.27	+2.27	+4.54	+6.19	+6.63

*

Table 4. Benefit: A posteriori Contrasts, Duncan .05

EXPOSURE	TCR	SHOCK	REACTION	OBEDIENCE	AIRPLANE	SENSORY	GAME	ATTACK	CONFORMITY
-1.35	-0.83	-0.60	-0.29	-0.21	+0.02	+0.10	+0.50	+0.83	+0.98

Table 5. Harm: A posteriori Contrasts, Duncan .05

EXPOSURE	TCR	AIRPLANE	SHOCK	SENSORY	OBEDIENCE	REACTION	ATTACK	CONFORMITY	GAME
-1.62	-0.92	-0.60	-0.60	+0.27	+0.60	+0.71	+0.71	+1.02	+1.44

*The underlinings in this table, and all subsequent tables, denote ranges of means that are not significantly different.

Table 6. Consent: A posteriori Contrasts, Duncan .05

EXPOSURE	SHOCK	TCR	OBEDIENCE	AIRPLANE	SENSORY	REACTION	ATTACK	GAME	CONFORMITY
-1.73	-1.21	-1.08	-0.71	-0.58	-0.04	+0.08	+0.75	+1.38	+1.58

Table 7. Ethical: A posteriori Contrasts, Duncan .05

EXPOSURE	TCR	AIRPLANE	SHOCK	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
-1.41	-0.75	-0.33	+0.02	+0.04	+0.35	+0.75	+0.83	+1.33	+1.38

Table 8. Permit: A posteriori Contrasts, Duncan .05

EXPOSURE	TCR	AIRPLANE	SHOCK	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
-1.42	-1.08	-0.83	-0.50	+0.25	+0.42	+1.17	+1.42	+1.54	+1.67

Table 9: Summary of the Mean Scores by Experiment

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
+2.00										
+1.50								PERMIT	PERMIT HARM CONSENT ETHICAL	PERMIT CONSENT ETHICAL
+1.00							PERMIT	BENEFIT ETHICAL		HARM BENEFIT
+0.50					HARM	HARM PERMIT ETHICAL	ETHICAL	CONSENT HARM	BENEFIT	
0			ETHICAL	BENEFIT ETHICAL	ETHICAL BENEFIT	CONSENT BENFIT	HARM BENEFIT CONSENT			
-0.50		ETHICAL BENEFIT HARM	PERMIT HARM BENEFIT	CONSENT HARM PERMIT	CONSENT					
-1.00		CONSENT PERMIT	CONSENT							
-1.50	BENEFIT ETHICAL PERMIT HARM CONSENT									
-2.00										

Table 10. Significant Differences in Mean Scores for Questions Within Experiments: A Posteriori Contrasts, Duncan .05

		EXPOSURE		
Consent	Harm	Permit	Ethical	Benefit
-1.73	-1.61	-1.42	-1.41	-1.35

		TCR		
Permit	Consent	Harm	Benefit	Ethical
-1.08	-1.08	-0.92	-0.83	-0.75

		SHOCK		
Consent	Benefit	Harm	Permit	Ethical
-1.21	-0.60	-0.60	-0.50	+0.02

		AIRPLANE		
Permit	Harm	Consent	Ethical	Benefit
-0.83	-0.60	-0.58	-0.33	+0.02

		OBEDIENCE		
Consent	Benefit	Ethical	Permit	Harm
-0.71	-0.21	+0.04	+0.25	+0.60

		REACTION		
Benefit	Consent	Ethical	Permit	Harm
-0.29	+0.08	+0.35	+0.42	+0.71

		SENSORY		
Consent	Benefit	Harm	Ethical	Permit
-0.04	+0.10	+0.27	+0.75	+1.17

		ATTACK		
Harm	Consent	Benefit	Ethical	Permit
+0.71	+0.75	+0.83	+0.83	+1.42

		GAME		
Benefit	Ethical	Consent	Harm	Permit
+0.50	+1.33	+1.38	+1.44	+1.54

		CONFORMITY		
Benefit	Harm	Ethical	Consent	Permit
+0.98	+1.02	+1.38	+1.58	+1.67

TABLE 11: CORRELATIONS AND THIRD ORDER PARTIALS FOR THE QUESTIONS

	Exposure	T.C.R.	Shock	Airplane	Obedience	Reaction	Sensory	Attack	Game	Conformity
Benefit with Harm	.29***	.40***	.38***	.27*	-.15	.40***	.27*	.25*	.14	-.27*
	(.21***)	(.22)*	(-.02)	(.07)	(-.37)***	(.25)**	(-.07)	(.00)	(.07)	(-.30)**
Benefit with Consent	.17*	.40***	.51****	.42***	.57****	.50****	.53****	.57****	.40****	.20
	(.09)	(.12)	(.32)**	(.25)**	(.45)****	(.36)***	(.40)****	(.50)****	(.25)***	(.17)
Benefit with Ethical	.20**	.42***	.40***	.31**	.30**	.46****	.41***	.23	.20**	-.01
	(.11)	(.13)	(.08)	(.09)	(.03)	(.23)*	(.11)	(-.12)	(.16)*	(-.07)
Benefit with Permit	.19*	.54****	.58****	.32**	.40***	.33**	.33**	.28*	.40****	.20
	(.01)	(.23)*	(.39)***	(.06)	(.23)*	(-.18)	(.12)	(.09)	(.27)***	(.15)
Harm with Consent	.26***	.38***	.48****	.49****	.13	.34**	.47****	.42***	.27***	.17
	(.11)	(.18)	(.28)**	(.38)***	(.07)	(-.10)	(.24)**	(.29)**	(.27)***	(.09)
Harm with Ethical	.28***	.23	.56****	.23	.40***	.47****	.51****	.25*	.05	.26*
	(.06)	(-.06)	(.37)***	(-.06)	(.17)	(.15)	(.18)	(-.07)	(.03)	(.17)
Harm with Permit	.44****	.40***	.50****	.31**	.41***	.50****	.55****	.32**	-.01	.14
	(.31)****	(.15)	(.19)	(.10)	(.29)**	(.29)**	(.37)***	(.17)	(-.15)*	(.08)
Consent with Ethical	.17*	.29**	.36***	.44***	.44***	.52****	.56****	.49****	.08	.43***
	(.00)	(-.10)	(.01)	(.15)	(.10)	(.09)	(.31)**	(.30**	(-.02)	(.31)**
Consent with Permit	.33****	.54****	.44***	.49****	.52****	.63****	.40***	.46****	.41****	.53****
	(.22)**	(.37)***	(.09)	(.19)*	(.19)*	(.46)****	(-.02)	(.04)	(.33)****	(.42)***
Ethical with Permit	.22**	.66****	.52****	.68****	.72****	.64****	.55****	.71****	.12	.32**
	(.40)****	(.56)****	(.26)**	(.58)****	(.55)****	(.41)***	(.31)**	(.63)****	(.05)	(12)

****P ≤ .001, ***P ≤ .01 **P ≤ .05 *P ≤ .10. Zero order R, two-tailed. 3rd order partial, one-tailed.

reactions to the experiments. The highest correlations existed between two pairs of questions: Ethical and Permit; Benefit and Consent. For Ethical and Permit, not only were the correlations of the greatest magnitude--for seven experiments they were above .50--but eight of the nine significant zero order correlations had significant third order partials. For Benefit and Consent, the correlations were more moderate but seven of the nine zero order correlations had significant third order partials.

What They Said: Written Replies to the Questions

As described in the method section, the explanation given for each question was coded with one or two codes, as appropriate. Tables 1E to 5E in Appendix E present the codes and general categories for questions 1 through 5. In the summary below, only general themes--applicable to most experiments--are presented. To facilitate comparisons among experiments, the percentages in the tables are based on the total participants for each experiment. The tables in Appendix E give both the percentages based on the total participants and the percentage of participants who checked the same answer, e.g., ethical rather than unethical.

QUESTION ONE: How do you think you would have behaved, if you had been a subject in the experiment?

Although the participants were asked to describe their behavior, in many instances they responded by stating how they would have reacted to the experimental situation rather than describing their behavior. Some comments classified as behavior verged on the borderline between behavior and reactions--they did not denote a voluntary action--but rather were the outcome of a situation, e.g., hallucinated, developed claustrophobia, etc. They were classified as "behaviors" rather than "reactions" since they did not emphasize the affective component.

Reactions and Behaviors. Table 12 shows the frequency of reactions and behaviors. The highest percentage of reactions were given to Traumatically Conditioned Response and Airplane and most of them had a negative affective tone. The highest percentage of behaviors were described for Conformity and Obedience. This is not surprising since definite actions are involved. For both experiments, the behaviors described tended to follow socially desirable lines.

QUESTION TWO: Do you think you could benefit in any way by participating in this experiment?

One of the most frequent reasons given for benefiting from an experiment is that it enables the subjects to see how they would react or to learn something about themselves. This benefit was mentioned for nine out of ten experiments. The same theme also made its appearance in a negative form, with a few participants claiming no benefit was possible because they could not learn anything about themselves. All experiments with High and Intermediate ratings had denials of this type. These are the same experiments that had a substantial percentage of participants asserting they would benefit by learning about themselves (Table 13).

Benefiting by having the experimental situation modify the subjects' behavior in some manner, or having it have an effect in changing their lives, was mentioned in connection with six of the ten experiments. Learning in general was another theme. Learning about others, about events, or about how to cope with similar situations, was subsumed under this rubric.

Table 12. Frequency of Reactions and Behaviors Given in Response to Question One

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
Reactions	38	35.8	34	66.7	31	58.5	12	24.0	2	4.5	18	38.	18	34.6	10	17.2	12	10.7	5	10.0
Behaviors	68	64.2	17	33.3	22	42.5	38	76.0	42	95.5	29	61.7	34	65.4	48	82.8	100	89.3	45	90.0
(N)	106		51		53		50		44		47		52		58		112		50	

Table 13. Frequency of General Themes for Benefit

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
See reaction, learn more about self	-		4	8.3	8	16.7	10	20.8	17	35.4	17	35.4	13	27.1	23	47.9	33	34.4	22	45.8
Change self or life	-		-		5	10.4	12	25.0	2	4.2	-		2	4.1	12	25.0	16	16.7	12	25.0
Learn about others or in general	6	6.3	-		3	6.3	-		2	4.2	2	4.2	12	25.0	5	10.4	26	27.1	6	12.5
Would not learn about self	-		-		-		-		7	14.6	12	25.0	2	4.1	3	6.3	5	5.2	4	8.3
Do not like experiment	26	27.1	17	35.4	18	37.5	-		12	25.0	12	25.0	7	14.6	2	4.2	16	16.7	2	4.2
No way to benefit	34	35.4	4	8.3	14	29.2	2	4.2	4	8.3	-		6	12.5	-		5	5.2	-	
Could only be harmful	29	30.2	12	25.0	-		18	37.5	3	6.3	-		5	10.4	-		-		-	

QUESTION THREE: Do you think you could be harmed in any way by participating in this experiment?

One aspect of harm is of particular concern to psychologists is harm that could extend beyond the experimental situation, especially if the resulting harm is permanent. Death, as a category of harm, is certainly permanent, but most other categories of harm can only be considered "permanent" if the participant states that it will be permanent. Permanent harm that could definitely be classified as such was mentioned fairly frequently for only two experiments, Exposure (54.2%) and Traumatically Conditioned Response (20.8%) (Table 14).

When harm that goes beyond the experimental situation--including that which is permanent--is considered, the frequency of this response is greatly increased. Harm, of differing degrees of severity, that could extend beyond the experimental situation was mentioned for all ten experiments.

QUESTION FOUR: Would you consent to serve as a subject in this experiment?

The opportunity that an experiment provided to learn about themselves, or see their reaction, was the most frequent reason for consenting to be a subject. The most frequent reason for not consenting was that the experiment was too unpleasant, stressful or fearful. Harm, as a result of participation, was also frequently mentioned as a reason for not consenting (Table 15).

"Not Sure" Responses. Table 16 lists the frequencies for the different categories of 'Not sure' responses. The most frequent response, both in terms of absolute frequency, and in terms of the number of experiments where it was coded, was "An indication of, or a reason for, no." The responses in this category would have been equally plausible as reasons

Table 14. Frequency of General Themes for Harm

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
Permanent harm	52	54.2	10	20.8																
Harm beyond experimental situation -																				
stated:	84	87.5	37	77.1	5	10.4	12	25.0	3	6.3	10	20.8	11	22.9			2	2.1	3	6.3
implied:	6	6.3	—	—	—	—	14	29.2	—	—	3	6.3	—	—	5	10.4	—	—	1	2.1
Total	90	93.8	37	77.1	5	10.4	26	54.2	3	6.3	13	27.1	11	22.9	5	10.4	2	2.1	4	8.4
Physical	42	43.8	13	27.1	11	22.9	19	39.6							2	4.2				
Psychological	17	17.7	22	45.8	11	22.9	22	45.8	14	29.2	13	27.1	20	41.7	10	20.8	10	10.4	7	14.6
Only temporary effect			7	14.6			3	6.3	5	10.4	9	18.8	9	18.8	11	22.9	5	5.2	13	27.1
Harmless					6	12.5			4	8.3	5	10.4	4	8.3	3	6.3	34	35.4	6	12.5
Could only benefit									3	6.3	4	8.3			7	14.6	9	9.4	8	16.7

Table 15. Frequency of General Themes for Consent

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
See own reaction					3	6.3	4	8.3			12	25.0	7	14.6	14	29.2	25	26.0	19	39.6
Worthwhile experiment									3	6.3	3	6.3	2	4.2			10	10.4	2	4.2
Harmless															2	4.2	17	17.7	7	14.6
Too unpleasant or stressful	22	22.9	14	29.2	30	62.5	13	27.1	9	18.8			10	20.8	3	6.3	2	2.1		
Harmful	48	50.0	14	29.2	2	4.1	5	10.4			3	6.3	3	6.3						
Worthless experiment	13	13.5	3	6.3	3	6.3					4	8.3	2	4.2			4	4.2		
Dislike experiment or experimental conditions	18	18.8	5	10.4			4	8.3	3	6.3			4	8.3	8	16.7				
No personal benefit	12	12.5			2	4.2											4	4.2		

Table 16. Frequency of "Not Sure" Responses For Consent

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
An indication of, or a reason for, NO.	2	2.1	3	6.3	4	8.3	6	12.5	4	8.3	5	10.4	2	4.2	2	4.2	2	2.1	3	6.3
Because results would be invalid, no choice, not voluntary	3	3.1	1	2.1			9	18.8	3	6.3									1	2.1
Ambivalence	1	1.0	2	4.2	2	4.2	3	6.3	7	14.6	3	6.3	2	4.2	2	4.2			2	4.2
Because it might be harmful, unpleasant or distasteful			3	6.3	2	4.2	1	2.1	1	2.1	1	2.1	2	4.2	1	2.1			2	4.2
Experiment not worthshile, not sure worthwhile					2	4.2											2	2.1	1	2.1
Depends on mood, pay, time, etc.			1	2.1					1	2.1	2	4.2	1	2.1	1	2.1	2	2.1		
Desire for more information	1	1.8	2	4.2									2	4.2						
YES IF - beneficial, not harmful or personal state permits.	3	3.1			1	2.1							1	2.1						
YES IF, NO IF, Re experimental conditions					1	2.1	2	4.2	2	4.2			1	2.1			1	1.0		
Other*	2	2.1							1	2.1			1	2.1						
TOTAL	11	11.5	8	16.7	9	18.8	16	33.3	13	27.1	12	25.0	11	22.9	6	12.5	6	6.3	8	16.7

*Not originally coded as other. Created by collapsing two categories.

for not wanting to be a subject. For some participants this seemed to serve as a means of refusing to participate, without requiring a definite 'No' while for others it might have served to convey their doubt and, therefore, would represent an inclination towards 'No' rather than a substitute for 'No.' Responses that indicated manifest ambivalence about participation were also relatively frequent.

If a participant mentioned that participation was involuntary, choice was not involved, or since they knew the procedure beforehand, it would invalidate the findings, the answers formed one group. They were grouped together because they denoted a lack of willingness to participate that was not expressed in terms of personal preferences.

QUESTION FIVE: Do you feel that this experiment is ethical or unethical?

Comments referring to how subjects are treated, whether fairly or unfairly, were a frequent response to the question on Ethical. For two experiments, only the unfair features of the experiments were noted while for four experiments, comments were exclusively focused on the features that were fair. The remaining four experiments had adherents on both sides of the issue (Table 17).

Supporting the contention that an experiment was ethical by alluding to the value of its findings or purpose was done for all experiments.

Another Perspective on What Participants Said

The previous overview of participants' comments summarized what they said to each of the five questions. But some types of comments may be equally appropriate for more than one question. For example, harmful aftereffects may be mentioned in response to the question on Harm or Consent, or may be reserved for the Ethical question. Since there were

Table 17. Frequency of General Themes for Ethical

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
Useful purpose or results	3	3.1	2	4.2	8	16.7	6	12.5	9	18.8	6	12.5	11	22.9	5	10.4	26	27.1	13	27.1
Treats Ss fairly			4	8.3	18	37.5			2	4.2	5	10.4	24	50.0	7	14.6	11	11.5	6	12.5
Good for Ss							7	14.6	2	4.2			2	4.2	6	12.5	11	11.5	5	10.4
Harmless							4	8.3	2	4.2	9	18.8			16	33.3	38	39.6	19	39.6
Results useless - no social value	7	7.3			7	14.6	4	8.3			2	4.2	2	4.2			5	5.2		
Treats Ss unfairly	53	55.2	15	31.3	8	16.7	4	8.3	3	6.3			7	14.6						
Too drastic, too much suffering	27	28.1	9	18.8	6	12.5	14	29.2			1	2.1	2	4.2						
Harmful	27	28.1	5	10.4	6	12.5			2	4.2			3	6.3					3	6.3
Harmful after-effects, too risky	15	15.6	8	16.7			9	18.8	6	12.5	7	14.6			2	4.2				

certain themes that were repeated across experiments, it was possible to record what percentage of participants alluded to these themes in responding to each of the ten experiments. This was done by ignoring the number of times participants may have made a particular type of comment and recording only the fact that they made them. Table 18 shows this analysis.

The first five categories cover comments of a favorable nature. The value of the experiment was praised for all ten experiments. Commenting that an experiment enabled subjects to learn about themselves was done frequently, especially for the High-rated experiments. Another cluster of responses revolved around personal gains for the subjects such as helping them, being good for them, or teaching them a new skill or way of behaving. All experiments had comments of this nature. The final category refers to learning in general, such as learning about others, learning about situations of panic, and so forth.

Comments of a derogatory nature were also tabulated across experiments. Harmful aftereffects were mentioned for all experiments but comments on permanent harm were reserved for the four lowest rated experiments. If all references to harm--including harmful aftereffects--are tabulated, it is again the four lowest rated experiments that differ from the others. For these experiments, harm is mentioned by the majority of the participants. Being overly stressful, traumatic or inhumane was commented on by the majority to the three Low-rated experiments (58.3% to 79.2%). For Exposure (38.5%), participants' concern with extreme harm apparently overshadowed their concern with stress and trauma. However, nearly every participant (95.8%) alluded to harm, stress, or both, in their comments to Exposure. The percentage of participants mentioning

Table 18. Frequency of Content Themes Across Questions: Percentage of Participants

	EXPOSURE		TCE		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
Valuable experiment	3	3.1	2	4.2	8	16.7	6	12.5	12	25.0	9	18.8	12	25.0	5	10.4	28	29.2	15	31.3
Harmless					6	12.5	4	8.3	15	31.3	14	29.2	18	37.5	16	33.3	59	61.5	23	47.9
Learn about self			4	8.3	10	20.8	13	27.1	17	35.4	20	41.7	16	33.3	28	58.3	44	45.8	29	60.4
Good for S, teaches new skill or behavior	5	5.2	7	14.6	5	10.4	17	35.4	4	8.3	6	12.5	6	12.5	19	39.6	26	27.1	21	43.8
S learns, other than two categories above					3	6.3			2	4.2	3	6.3	5	10.4	4	8.3	30	31.3	6	12.5
All three of above categories where S learns or has specific benefits	5	5.2	11	22.9	17	35.4	26	54.2	22	45.8	23	47.9	24	50.0	43	89.6	67	69.8	40	83.3
Permanent harm	63	65.6	17	35.4	4	8.3	6	12.5	1	2.1	1	2.1								
Harmful aftereffects stated:	12	12.5	15	31.3	6	12.5	17	35.4	4	8.3	9	18.8	6	12.5	4	8.3	1	1.0	3	6.3
implied:	6	6.3	4	8.3	—	—	7	14.6	3	6.3	5	10.4	2	4.1	2	4.2	1	1.0	1	2.1
Total	81	84.4	36	75.0	10	20.8	30	62.5	8	16.7	15	31.3	8	16.7	6	12.5	2	2.1	4	8.4

Table 18. Frequency of Content Themes Across Questions (continued)

	EXPOSURE		TCR		SHOCK		AIRPLANE		OBEDIENCE		REACTION		SENSORY		ATTACK		GAME		CONFORMITY	
All references to harm	92	95.8	42	87.5	29	60.4	33	68.8	8	16.7	19	39.6	13	27.1	9	18.8	3	3.1	5	10.4
Too stressful, traumatic, inhumane	37	38.5	38	79.2	28	58.3	37	77.1	13	27.1	2	4.2	16	33.3			2	2.1		
Harm only	55	57.3	8	16.7	9	18.8	5	10.4	6	12.5	15	31.3	9	18.8	9	18.8	3	3.1	5	10.4
Stress only	1	1.0	4	8.3	8	16.7	9	18.8	11	22.9	-		12	25.0	-		2	2.1	-	
Both harm and stress	36	37.5	34	70.8	20	41.7	27	56.3	2	4.2	2	4.2	4	8.3	-		-		-	
Either harm or stress	92	95.8	46	95.8	37	77.1	41	85.4	19	39.6	17	35.4	25	52.1	8	16.7	5	5.2	5	10.4
Neither harm nor stress	4	4.2	2	4.2	11	22.9	7	14.6	29	60.4	31	64.6	23	47.9	39	81.3	91	94.8	43	89.6

harm, stress, or both, decreases for each successive group of experiments, Low, Intermediate, and High.

Reasons that Influenced Decisions On A Permit

QUESTION SIX: Suppose an experiment could be carried out only with the consent of a board made up of representatives of possible subjects for the experiment. The board would make a judgment based on the experiment's effect on subjects, considerations of the worth of the experiment, its acceptability to community moral standards, or any other factors it deemed relevant. If you were a member of this board, would you vote permission for the conduct of this experiment?

Not only does question 6 ask participants to vote on permission for the conduct of an experiment, but it instructs them to indicate why, by checking any of the eight alternatives, provided separately for 'Yes' and 'No' answers.

Table 19 examines the relative salience of each reason within an experiment.* For the 'Yes' alternatives, there were significant differences for every experiment. For the 'No' alternatives, neither Conformity nor Sensory had significant differences among the reasons for refusing a permit.

There are some noteworthy patterns among the reasons influencing decisions on a permit. For the 'Yes' alternatives, "Of value to subjects in understanding themselves" was the favored reason for the High-rated experiments, and "subjects voluntarily agreed . . ." was the favored reason for the Low-rated experiments. For the 'No' alternatives, the four lowest rated experiments shared three reasons in common as the most salient for denying a permit: "Long term harmful consequences"; "Too unpleasant or stressful"; and "Value does not justify possible harm."

*For the repeated measures ANOVAS, see Table 4D, Appendix D.

Table 19. Ranking of Reasons Within Experiments: A Posteriori Contrasts, Duncan .05

EXPOSURE

Yes Alternatives

NOT TOO STRESSFUL	DECEPTION JUSTIFIED	OF VALUE TO Ss	NOT UNFAIR TO Ss	VALUE JUSTIFIES	LEARN ABOUT BEHAVIOR	STRESS TEMPORARY	Ss VOLUNTEER
0.07	0.07	0.29	0.43	0.43	0.64	0.64	1.29

No Alternatives

ENCOURAGES UN-DESIRABLE BEH.	LOWERS SELF ESTEEM	Ss FEEL DECEIVED	NO SOCIAL VALUE	Ss DO NOT VOLUNTEER	TOO STRESSFUL	VALUE DOES NOT JUSTIFY	LONG TERM HARM
0.12	0.21	0.23	0.59	0.93	0.99	1.00	1.01

TCR

Yes Alternatives

DECEPTION JUSTIFIED	NOT TOO STRESSFUL	NOT UNFAIR TO Ss	VALUE JUSTIFIES	STRESS TEMPORARY	OF VALUE TO Ss	LEARN ABOUT BEHAVIOR	Ss VOLUNTEER
0.09	0.18	0.36	0.45	0.55	0.81	0.91	1.09

No Alternatives

Ss DO NOT VOLUNTEER	ENCOURAGES UN-DESIRABLE BEH.	LOWERS SELF ESTEEM	Ss FEEL DECEIVED	NO SOCIAL VALUE	VALUE DOES NOT JUSTIFY	TOO STRESSFUL	LONG TERM HARM
0.14	0.16	0.16	0.54	0.62	0.92	0.95	1.14

Table 19. Ranking of Reasons Within Experiments (continued)

SHOCK

Yes Alternatives

DECEPTION JUSTIFIED	NOT TOO STRESSFUL	OF VALUE TO Ss	NOT UNFAIR TO Ss	VALUE JUSTIFIES	STRESS TEMPORARY	LEARN ABOUT BEHAVIOR	Ss VOLUNTEER
0.06	0.17	0.44	0.56	0.72	0.72	0.89	1.28

No Alternatives

Ss DO NOT VOLUNTEER	ENCOURAGES UNDESIRABLE BEH.	LOWERS SELF ESTEEM	Ss FEEL DECEIVED	LONG TERM HARM	NO SOCIAL VALUE	TOO STRESSFUL	VALUE DOES NOT JUSTIFY
0.10	0.17	0.17	0.23	0.67	0.87	0.93	1.03

AIRPLANE

Yes Alternatives

NOT UNFAIR TO Ss	VALUE JUSTIFIES	DECEPTION JUSTIFIED	NOT TOO STRESSFUL	STRESS TEMPORARY	Ss VOLUNTEER	LEARN ABOUT BEHAVIOR	OF VALUE TO Ss
0.36	0.36	0.36	0.43	0.71	0.71	0.79	1.00

No Alternatives

ENCOURAGES UNDESIRABLE BEH.	LOWERS SELF ESTEEM	NO SOCIAL VALUE	Ss DO NOT VOLUNTEER	Ss FEEL DECEIVED	VALUE DOES NOT JUSTIFY	TOO STRESSFUL	LONG TERM HARM
0.24	0.24	0.47	0.62	0.76	0.79	0.88	0.88

Table 19. Ranking of Reasons Within Experiments (continued)

OBEDIENCE

Yes Alternatives

NOT TOO STRESSFUL	NOT UNFAIR TO Ss	STRESS TEMPORARY	DECEPTION JUSTIFIED	VALUE JUSTIFIES	OF VALUE TO Ss	Ss VOLUNTEER	LEARN ABOUT BEHAVIOR
0.26	0.41	0.41	0.48	0.59	0.85	0.89	0.93

No Alternatives

Ss DO NOT VOLUNTEER	NO SOCIAL VALUE	LONG TERM HARM	ENCOURAGES UN-DESIRABLE BEH.	Ss FEEL DECEIVED	VALUE DOES NOT JUSTIFY	LOWERS SELF ESTEEM	TOO STRESSFUL
0.05	0.38	0.38	0.43	0.48	0.71	0.76	0.86

REACTION

Yes Alternatives

VALUE JUSTIFIES	NOT UNFAIR TO Ss	STRESS TEMPORARY	DECEPTION JUSTIFIED	NOT TOO STRESSFUL	Ss VOLUNTEER	LEARN ABOUT BEHAVIOR	OF VALUE TO Ss
0.21	0.41	0.48	0.52	0.52	0.62	0.93	1.07

No Alternatives

TOO STRESSFUL	Ss DO NOT VOLUNTEER	ENCOURAGES UN-DESIRABLE BEH.	VALUE DOES NOT JUSTIFY	Ss FEEL DECEIVED	LONG TERM HARM	NO SOCIAL VALUE	LOWERS SELF ESTEEM
0.11	0.11	0.47	0.58	0.63	0.63	0.68	1.00

Table 19. Ranking of Reasons Within Experiments (continued)

SENSORY

Yes Alternatives

DECEPTION JUSTIFIED	NOT TOO STRESSFUL	NOT UNFAIR TO Ss	VALUE JUSTIFIES	OF VALUE TO Ss	STRESS TEMPORARY	LEARN ABOUT BEHAVIOR	Ss VOLUNTEER
0.03	0.42	0.50	0.66	0.66	0.76	1.00	1.08

No Alternatives

Ss DO NOT VOLUNTEER	Ss FEEL DECEIVED	NO SOCIAL VALUE	ENCOURAGES UNDESIRABLE BEH.	LONG TERM HARM	LOWERS SELF ESTEEM	TOO STRESSFUL	VALUE DOES NOT JUSTIFY
0.20	0.20	0.40	0.40	0.50	0.50	0.60	0.90

ATTACK

Yes Alternatives

VALUE JUSTIFIES	DECEPTION JUSTIFIED	NOT TOO STRESSFUL	NOT UNFAIR TO Ss	STRESS TEMPORARY	Ss VOLUNTEER	LEARN ABOUT BEHAVIOR	OF VALUE TO Ss
0.29	0.46	0.49	0.51	0.66	0.73	0.78	1.10

No Alternatives

NO SOCIAL VALUE	Ss DO NOT VOLUNTEER	ENCOURAGES UNDESIRABLE BEH.	Ss FEEL DECEIVED	VALUE DOES NOT JUSTIFY	LONG TERM HARM	TOO STRESSFUL	LOWERS SELF ESTEEM
0.00	0.29	0.57	0.71	0.86	0.86	1.00	1.29

Table 19. Ranking of Reasons Within Experiments (continued)

GAME

Yes Alternatives

DECEPTION JUSTIFIED	STRESS TEMPORARY	VALUE JUSTIFIES	NOT TOO STRESSFUL	NOT UNFAIR TO Ss	Ss VOLUNTEER	LEARN ABOUT BEHAVIOR	OF VALUE TO Ss
0.20	0.28	0.37	0.66	0.68	0.74	0.93	1.14

No Alternatives

LOWERS SELF ESTEEM	Ss FEEL DECEIVED	TOO STRESSFUL	Ss DO NOT VOLUNTEER	VALUE DOES NOT JUSTIFY	LONG TERM HARM	ENCOURAGES UN-DESIRABLE BEH.	NO SOCIAL VALUE
0.09	0.09	0.09	0.09	0.18	0.18	0.27	1.27

CONFORMITY

Yes Alternatives

DECEPTION JUSTIFIED	NOT UNFAIR TO Ss	STRESS TEMPORARY	Ss VOLUNTEER	VALUE JUSTIFIES	NOT TOO STRESSFUL	LEARN ABOUT BEHAVIOR	OF VALUE TO Ss
0.39	0.43	0.48	0.55	0.57	0.59	1.00	1.27

No Alternatives

ENCOURAGES UN-DESIRABLE BEH.	Ss FEEL DECEIVED	VALUE DOES NOT JUSTIFY	Ss DO NOT VOLUNTEER	LONG TERM HARM	TOO STRESSFUL	LOWERS SELF ESTEEM	NO SOCIAL VALUE
0.00	0.25	0.25	0.50	0.50	0.50	0.75	0.75

High-Rated Group

The following three experiments were in the High-rated group. None differed significantly from the others.

Conformity and Independence. Participants found Conformity more ethical, and were more willing to be a subject in Conformity, than any other experiment but Game. For the Benefit question, there were two experiments that did not differ significantly from Conformity, for Permit, three, and for Harm, four. Furthermore, except for the question on Harm, Conformity had the highest mean score for each of the questions. There was, however, at least one other experiment that did not differ significantly from Conformity.

Conformity was unique in that it was one of two experiments where there was a negative correlation between questions. Benefit and Harm had a low negative correlation (-.27) and a significant third order partial (-.30). It would seem that for Conformity, some participants expected to benefit without escaping the possibility of harm. Not that the harm that was contemplated was necessarily serious, but some stress, embarrassment, feeling foolish or wounded self-esteem was acknowledged, without concurrently denying that subjects could benefit.

Over 90% of the participants were willing to grant a permit to Conformity and the singularly most important reason was "knowing how they would behave . . . will be of value to subjects in understanding themselves" (88.6%).* That participants expected to learn about themselves

*For this, and all subsequent experiments, the percentages following each reason are the percentage of those who checked the 'Yes' or No' box for a Permit and then checked that reason.

through participating in Conformity was also apparent from their comments. This expectation was specifically mentioned by 60.4% of the participants. A second major reason for approving Conformity was the contribution it would make to learning "something of value about human behavior" (88.6%). Although this reason was significantly below being "of value to subjects in understanding themselves," it was more important than the remaining reasons and the same number of participants checked this alternative as had checked the alternative dealing with "self-understanding." Further, it would seem that different participants tended to emphasize these reasons since there was a low negative correlation between them (-.29, P = .05). Moreover, it would seem that participants who expected to benefit most from Conformity were also the ones that tended to stress the value of the experiment in providing "self-understanding." The correlation between Benefit and this alternative was .51 (P = .001). There was no relationship between the questions and approving the experiment because of its value in "learning about human behavior."

Both as a topic of psychological research and as something of immediate concern to their own lives, Conformity seems to have elicited an enthusiastic response. The comments by participants also reflected the same approval as the quantitative findings. Neither harm nor stress were specifically mentioned by many participants (only 10.4% mentioned being concerned about possible harm and none specifically lamented the stress) but some comments reflected an awareness that the situation might be difficult for a subject. 10.4% of the participants reported that they would be anxious or tense and 14.6% felt that lowered self-esteem or humiliation was a possibility. Perhaps the enthusiasm for Conformity induced some

participants to minimize the conflict and tension that could be provoked by the situation while for others, it may have prompted them to emphasize only the favorable aspects of participation--these being foremost in their thoughts.

That participants seemed to feel that the stressful aspects of Conformity were either minimal, or balanced by the benefits they expected, is further illustrated by the correlations between "Does not take unfair advantage of the subjects" (43.8%) and three other "Yes" alternatives dealing with stress. There were four positive correlations between the reasons for granting Conformity a permit and they all involved alternatives concerned with stress (see Table 20).

83.3% of the participants said they could benefit from Conformity.* In describing the benefits they felt could be derived, more than half of these (55.0%) mentioned "learning about themselves" and 32.5% were specific in stating either that they could learn whether they would conform or that Conformity would test their ability to defend their own point of view. This theme was repeated in explaining why they would consent to be a subject. 48.7% of those who consented said it would give them the opportunity to learn how they would behave or react in this situation. Thus, despite the fact that 75% of the participants--when asked how they would behave--claimed they would not conform, a large proportion felt they could benefit or were interested in being a subject, precisely because they could discover how they would actually behave in this situation. In fact, many specifically mentioned that they wanted to know if they would act as they had previously predicted.

*For the frequency distributions for each of the questions for the ten experiments, see Tables 1F to 5F, Appendix F.

Table 20. CONFORMITY: Correlations among Alternatives for Granting a Permit

Not Too Unpleasant or Stressful and Not Unfair to Subjects	.49, P = .001
Not Too Unpleasant or Stressful and Possible Discomfort or Stress is Only Temporary	.39, P = .01
Not Unfair to Subjects and Possible Discomfort or Stress is Only Temporary	.36, P = .02
Not Unfair to Subjects and Value of Experiment Justifies Possible Stress	.37, P = .015

The frequency of this concern was especially notable for the question on consenting to be a subject. Of those who consented, 15.4% specifically verbalized an interest in finding out if they had predicted their own behavior correctly. This response was not coded unless the participant was explicit about verifying his prediction and when participants expressed this interest while answering other questions, it was not given a special code. Therefore, the prevalence of a desire to verify one's own prediction is undoubtedly greater than it appears. Indeed, any participants expressing an interest in how they would behave may have had "verifying their prediction" as the implicit meaning.

Participants may state that they will not conform, when asked how they would behave, but obviously they need not be convinced. Being uncertain, they may find it more acceptable to give a socially approved response. There were, to be sure, some participants who indicated they had no doubts about being non-conformist. A few participants stated they would not conform, but nevertheless later indicated they would be interested in seeing if their behavior fit their prediction. One participant emphasized his being a non-conformist by stating that he "always sticks up for what [he] believes in" and that he would not benefit because it would just "reinforce what I already know." But in consenting to be a subject, he explained, "I would want to see if what I have said is true." Another participant consented to be a subject to see "how much I really am willing to stand for what I believe in," after saying he would not conform, and had willingly admitted his doubts about his own behavior, when he answered the question on benefit. He would benefit by knowing how much he would be "willing to stick to [his] beliefs." Still another

participant, who stated she would give the correct answer, felt that she could benefit by finding out if her "hypothesis" was wrong: "It might reveal a weakness I didn't know I had."

Interest in their reactions was also expressed by participants who did not state they would be non-conforming.

Thirty percent of the participants who expected to benefit from Conformity thought the benefit would be in the form of learning how to behave or react differently. That it would be an opportunity to learn how to stand up for their beliefs, or be non-conforming, was expressed by 25.0%. "It will teach me to go with my own thoughts and say what I want to say." This participant had said she would conform and, in responding to other questions, also emphasized the opportunity the experiment would provide for learning not to blindly follow what others say. Another participant had said she would not conform and yet expressed the same sentiment. "It would show me that I should always stick to my guns regardless of whether or not everyone else agrees."

Learning to react differently, specifically by building self-confidence, was a benefit postulated by 10.0% who expected to benefit. "If I found that I could stand up to the group I would probably get very self-confident when I learned that I was right and the group was wrong." For this participant, the resulting self-confidence was predicated on how he behaved rather than being a direct outcome of the experience, as it was for some participants.

79.2% of the participants did not expect to be harmed by Conformity. Various reasons for finding the stress temporary, trivial or non-existent was offered by 47.4% of these, as an explanation of Conformity

being harmless. 15.8% emphasized that stress was minimal or temporary, "A little anxiety, maybe, but no traumas." "Because the conditions are not that stressful." "Experience tension, but only temporary, learn about yourself." Others emphasized that they would not be bothered by having a group in opposition (15.8%), "I frequently disagree with a group and do not suffer." "There is no real strain, only a strong opposition of opinions that do not coincide with mine." "If I know I'm right I can't be harmed." For some, the situation would provoke only embarrassment or feeling temporarily shaken (10.5%) while still others expressed similar thoughts but made the embarrassment or feeling foolish contingent on conforming (7.9%). "I'd feel embarrassed, but I'd stick to my guns." "If I say the wrong thing I might be embarrassed but it will die."

That harm was possible was indicated by 20.8% of the participants, and of these 40.0% attributed the harm to injured self-confidence or lowered self-esteem. "You may lose some of your self-esteem if you realize that you're not the person you thought you were." "Because a person may not have stood up for his opinion: If the purpose of the experiment is revealed, his self-esteem goes down. If his character is such that he profits from something like this, he can work on it, if not, he may always feel he's being cheated."

Only one participant actually refused to be a subject in Conformity (2.1%) while 31.3% said "Yes." The most frequent explanation for consenting was that it would provide the participants with an opportunity to learn about themselves. 48.7% of those who consented expressed this desire in one form or another. "Interesting to see my response to such a situation. [It's] a self-realizing experiment." "It would probably help me find out about myself." "I would be curious to know how I

will react because I usually make my own decisions."

Conformity was considered ethical by 89.6%. The two explanations given with the greatest frequency were that it was harmless and that its findings were useful. Of those who considered Conformity ethical, 44.2% made some comment indicating that they thought it was harmless. "No one gets hurt (psychologically or physically)." It's a situation "one encounters everyday in the classroom and at work . . . everyone has probably been subjected to this type of experiment at some time in their lives." "The subject isn't subject to any lasting harm and goes against no moral principles." Being harmless might also be mentioned by participants when they commented on the usefulness of the results. "It would show how people do or do not tend to conform without any obvious harm to the subject." "It serves a purpose. Doesn't harm the subjects and the results should in some way help the subject" (11.6% of those who considered Conformity ethical felt that the experiment would help the subject). Various comments on the findings, both specific and general, e.g., results useful, were made by 30.2% of those who asserted that Conformity was ethical. "This experiment probably would be ethical because maybe scientists could find out if people really make their decisions in life because they want to, or because they are forced or influenced by someone else." "In learning about our behavior and societies, it is of important value to show how people conform."

A Game to Learn About Panics. Game was well received by participants, with the majority (60.4%) giving it a rating from +7 to +10 and only 7.3% giving it a negative rating.* The mean scores for the individual

*For the frequency distribution of total ratings for this and subsequent experiments, see Table 6F, Appendix F.

questions followed a pattern that was similar to Conformity, with the exception of the question on Benefit. For Game, the mean score for Benefit was significantly lower than the mean scores for the other questions. Fewer participants expected to benefit and those that did were less likely to be definite about it. Unlike Conformity, whether or not a participant was likely to benefit, related both to their willingness to be a subject and their willingness to grant the experiment a permit. There were moderate correlations between Benefit and these other questions (.40, third order partials, .25 and .27, respectively).

When Game was granted a permit by 88.5% of the participants, the two most salient reasons were identical with the reasons that influenced the decision for Conformity. "Of value to subjects in understanding themselves" (81.2%) was significantly higher than all others and learning "something of value about human behavior" (77.6%) ranked second, and was significantly higher than the remaining reasons. Game differed from Conformity, however, in that there were three reasons of intermediate importance: "Not too unpleasant or stressful" (64.7%); "Not unfair to subjects" (62.3%); and "Subjects volunteer" (68.2%).

There was a fairly substantial correlation between the question on Benefit and endorsing Conformity because it was "of value to subjects in understanding themselves." For Game, this was not the case, but rather there was a moderate correlation between Benefit and being "of value in learning about human behavior" (.37, $P = .001$). It would seem that the interest in Game was less directly personal. For example, slightly fewer participants, in their comments, indicated that they expected personal benefits (see Table 18) and when a personal benefit was expected, it was

more likely to be learning about something, such as panic situations, rather than learning about oneself or learning something that would be helpful in changing one's own behavior. Although there was a substantial number of participants who felt that Game would be valuable to them from a personal point of view, comments to Game often indicated less ego involvement and less personal investment in what would occur. Not only did the response to Game seem less fervent than it was to Conformity, but some participants, while endorsing the experiment, doubted whether or not it would accomplish its purpose, that of understanding panics.

A permit was denied to Game by 11.5% of the participants, and when it was denied, it was almost invariably denied because Game "does not accomplish anything of social value." Only 1 of the 11 participants who said "No" to a permit did not offer lack of "social value" as the reason or one of the reasons. Moreover, doubts about Game's "social value" were not limited to the participants who denied Game a permit. Some comment downgrading the experiment was made by 20.8% of the participants. None did so for Conformity. Being harmless or fun seemed to attract people to Game to a greater extent than finding it engrossing psychologically and of vital concern to their interests and lives.

The question on Harm was strongly correlated to denying a permit to Game because it had no "social value" (.72, $P = .01$). The less harmful a participant found Game to be, the more likely they were to check no "social value" as the reason for denying Game a permit. This is the only experiment where such a relationship existed. For some experiments, where harm or stress were of concern to participants, they might deny an experiment's social value to support these reasons for rejecting the experiment. For Game, doubts about its "social value" were not motivated

by dislike of, or concern about, the procedures.

For Game, not finding even a possibility of harm was advantageous for some participants. But its being "merely a game" also had disadvantages for others in that it seemed less likely to yield any significant information about human behavior. Comments often reflected the fact that Game did not really engage its subjects in a situation of vital and direct concern to them. Over half the participants who did not expect to benefit from Game (16.7% of all participants) complained that the experiment was unrealistic or that it was only a game and would not be taken seriously. "Because it is only a game and some people may only treat it as such and not take it seriously" was the explanation of one participant as to why she would not benefit. Others complained that they could not learn anything personally relevant (16.7% saying they would not benefit, 5.2% of the participants).

68.7% of the participants expected to benefit from Game and 50.0% of these expected to benefit by learning how they would behave or react. However, fewer participants expected to learn about themselves from Game than from the other two High-rated experiments. If we compare the proportion of participants who expected to learn about themselves from Game (34.4%) with Attack (47.9%) and Conformity (45.8%), we find that participants expected this benefit to a lesser extent for Game. On the other hand, twice as many participants expected to learn about others or gain general knowledge from Game (27.1%) than from Conformity (12.5%) or Attack (10.4%). Participants who felt they could benefit by learning about themselves from Game sometimes expressed this in general terms, such as "find out what I would do in that situation" and other times were specific:

"See how persuasive I am in convincing people or calming them down in a panic."

As mentioned above, learning about others or gaining in general knowledge, was a frequent benefit for Game. Of those who expected to benefit, 39.4% indicated they would benefit in this manner. One type of comment had as its focus, learning how other people behave or react while another type was concerned with learning about situations of panic. Applying what they learn to daily life was also stressed by participants as an accompaniment of other benefits they described. "It shows what happens when people panic. In a fire, it could be fatal." "Possibly because it could be a learning experience for me. Maybe one day I may be in the same situation and it may be a skillful drill to know at the time." Participants also felt it could be applied to their daily life if they benefited by learning how they would behave or react.

31.2% felt they could not benefit from Game and of these 53.3% said it was because Game was unrealistic or that it was "merely a game." Being unrealistic, or not analogous to a real panic situation, was the most frequent type of comment (46.7%). Another third of the participants, denying a benefit, either made general comments expressing no interest in this type of experiment or stated in one way or another that it was not personally relevant.

89.6% of the participants said they would not be harmed by Game. That it was "merely a game," fun, and nothing was at stake, was the explanation of 39.5% of those who felt they would not be harmed and another 39.5% of the comments simply labeled Game harmless. "I don't see any harmful side-effects." "No harmful effects are possible. Perhaps only temporary nervousness." This latter participant, despite feeling Game

was "definitely" harmless, did not grant it a permit because it did not "accomplish anything of social value." She also did not expect to benefit nor was she interested in being a subject. Some doubtful of Game's "social value," nevertheless, had no objection to being a subject or granting it a permit.

Like Conformity, 81.3% of the participants were willing to be a subject in Game. Of these, 43.6% emphasized the opportunity that Game provided for learning something. Learning about their own behavior or reaction was the concern of 32.1%, although not necessarily as the exclusive mode of learning. "To see how myself and others would react in this type of situation." Equally frequent were comments on its being fun, harmless, easy or painless (43.6%). "Would enjoy the fun and recreation." Being fun or painless and being a learning situation were not mutually exclusive: "It is a game and games are fun. It would teach you something about yourself."

12.5% of the participants did not consent to be a subject in Game and a majority (58.3%) explained by either making disparaging remarks about the experiment ("worthless") or by saying it would be a waste of time.

Game was thought to be ethical by 85.4% of the participants. That Game was harmless was the most frequent explanation for its being ethical (47.6% of those who checked ethical). "It can't hurt anybody physically or emotionally." Of lesser frequency were comments on the value of the findings (31.7%). Some participants commented on both. "There is no possible harm for the subjects involved and it could help achieve a better understanding of panic thereby giving the possibility of lessening the panic in an actual catastrophe." "This is a valid experiment in my opinion

because it proves what panic can do to a person." On the other hand, over half of the participants (55.6%) who thought that Game was unethical made disparaging comments about the value of the experiment, saying it had no relation to the topic being studied or was invalid. But only 9.3% of the participants asserted that Game was unethical.

Either the voluntary nature of Game or that it was fully explained--with an occasional reference to informed consent or lack of deception--was noted by 13.4% of those considering Game ethical. Mentioning informed consent was unique to Game but comments on being voluntary were made somewhat more frequently to Attack, an experiment employing deception, and almost three times as frequently to Sensory (4.2% of the participants for Game; 6.3% for Attack; and 14.6% for Sensory).

Attack on Personal Values. Attack did not differ significantly from either Conformity or Game, but there was a greater divergence of opinion on Attack. For two questions, Consent and Ethical, the mean score for Attack was significantly lower than the mean scores for Game and Conformity. As for consenting to be a subject, Attack was still significantly higher than the remaining seven experiments. But participants were less convinced about its ethicality. Only five experiments had mean scores that were significantly lower. The expectation of harm from Attack was significantly greater than for Game. Moreover, only the four lowest rated experiments had mean scores that were significantly lower than Attack.

For the 85.4% of the participants who granted Attack a permit, its "value to subjects in understanding themselves" (85.4%)was the singularly most important reason, as it had been for the other two High-rated experiments. But its "value in learning about human behavior" (70.7%)

did not have a special pre-eminence as it had for Game and Conformity. This reason did not differ significantly from two other reasons, "subjects volunteer" (63.4%) and "Discomfort and stress are only temporary" (58.5%). The comments also suggest that the participants placed more emphasis on the benefits that a subject might derive from Attack than on the usefulness of the findings.

14.6% did not grant Attack a permit. The most important reason was the possibility that "self-esteem" may be lowered" (85.7%). All but one participant, who rejected Attack, did so for this reason but it was not checked significantly more than three other reasons: "Long term harmful consequences" (71.4%), "Too unpleasant or stressful" (100.0%), and "The value of the experiment does not justify . . . the possible harm" (85.7%)--the three most important reasons for denying a permit for the sample as a whole.

It is also worth noting that being "too unpleasant or stressful" was checked by all participants who denied a permit to Attack and that participants, who had granted a permit, often signified a recognition of "stress and discomfort" by the frequency with which they checked that it was temporary. Stress with, or without, being compensated for, by other features of Attack, appears to be much more in the foreground of awareness than it was for either of the other High-rated experiments.

Participants were also more likely to specifically mention "harm" in their comments (Attack, 18.8%; Conformity, 10.4%; Game, 3.1%) and less likely to assert that Attack was "harmless." 47.9% of the participants specifically stated that Conformity was "harmless," 61.5% said so for Game, while only 33.3% said that Attack was "harmless."

That participants were less likely to praise Attack as an experiment (10.4% versus 29.2% and 31.3%) related undoubtedly to its more amorphous purpose. Attack was also unique among the three High-rated experiments in having participants who refused to be a subject because they disliked the experiment or the experimental conditions (16.7%) and in having participants who asserted in one way or another that Attack treated its subjects unfairly (14.6%).

Attack did not differ from the other High-rated experiments in the number of participants who mentioned specific benefits from the experiment in their comments. 89.6% made at least one comment referring to a benefit. In common with Conformity, the benefit was usually of a personal nature, such as learning about oneself (58.3%), and learning a new skill or behavior or some general comment on its being good for subjects (39.6%).

In response to the question on Benefit, 79.2% of the participants indicated that they expected to benefit from Attack and "learning about oneself" was as important for Attack as it was for Conformity. "In this debate I may actually learn something about my true feeling and understand better who I am." "That is a way to find out about one's own personality. Not having been prepared for such an attack, only the true spontaneous reaction could occur." Of those expecting a benefit, 36.8% thought that the situation provided by Attack could lead to self-knowledge. Others felt that self-knowledge would be transmitted via their beliefs (23.7% of those expecting a benefit). "By defending my point of view I may realize how good it is or whether I really believe in it or whether it is a good point of view." "I would want to try to see if I have good enough arguments for my beliefs since I formed them on facts and other beliefs I have heard."

To learn something in relation to their beliefs, or to reinforce their beliefs, was an expected benefit for 31.6% of those indicating they would benefit. One participant thought he would definitely benefit because it would "possibly strengthen my views or eliminate those that may prove faulty." Indeed, he consented to be a subject because "It would help to stimulate my thoughts."

Learning how to debate or how to behave when under attack was also an expected benefit for 21.2%. "You can learn to keep calm when being attacked and you learn to think fast." "The more I am exposed to attacks on my own point of view, the better am I able to defend it." "By learning to control myself when my values are challenged." Participants often emphasized these benefits even when they felt that they might be "temporarily upset" by the situation.

68.7% of the participants said they would not be harmed by Attack and 69.7% of these asserted, for a variety of reasons, that they would survive the experience, unscathed. 36.4% said it was a situation that would not bother them nor affect them. "Even though I have many faults, there is nothing in my nature that is so weak that it would leave me open to harm by a fast talker." For another participant, it was his belief in freedom of speech that enabled him to state: "I couldn't care less what the other person has to say about my beliefs and values."

Some asserted they would emerge from the experiment unscathed because of the temporary nature of the pressures or their reaction to them. 30.3% emphasized that any disquieting effects would be temporary. "I feel that any side effect, if any, of this experiment would only be temporary. The stress caused would not be damaging to me." "Except for getting angry

for awhile, not having any emotional ties to my 'partner'--I don't think it would be at all harmful." "You'd be a little shaken but I think I'd come out all right and maybe for the better." For another participant, the experience could have quite a profound effect and yet not be harmful. Indeed, the impact would be beneficial: "The only possible harm might be in harming the person's self-confidence, but such an experience I would feel does more good than harm."

31.3% of the participants thought they could be harmed by Attack. Lowered self-esteem, injured self-confidence or humiliation were mentioned for both Conformity and Attack, but for Attack, an adverse reaction from the anger, excitement, severe conflict or general emotional harm were also mentioned relatively frequently as sources of harm (46.7% of those expecting harm). "I have a feeling that after awhile, I wouldn't be in control of my reactions." "A lot of anxieties arise in time of severe conflict." "I might get very upset having to argue with a person and seeing that its a losing cause."

As previously mentioned, lowered self-esteem--or disappointment in oneself--was also alluded to as a source of harm by 33.3% of those expecting harm. "If I do find things about myself that I was not willing to admit because they are too terrible, I could go through life feeling all kinds of guilt (especially if I continue doing the bad things)." Nonetheless, she did not feel deterred from being a subject since "learning and uncovering myself means a lot to me. By knowing more about myself and my values, I can react stronger in many situations which can be more beneficial."

Although willingness to be a subject in Attack was significantly less than for either Game or Conformity, it was still greater than for the

remaining experiments. 62.5% of the participants expressed an interest in being a subject in Attack. And, as it had been for Game and Conformity, interest in learning about oneself was one of the most important reasons. Of those who said they would consent, 46.7% expressed this interest. "It would be interesting to see how I would react in the stress situation." "I would like to see if the way I say I would react would be in fact the way I do react. Sometimes what you say and do are two different things."

A dislike of arguing had prompted some participants to say "No" to being a subject but there were others who consented for this very reason. Of those willing to be subjects, 23.3% said it was because they enjoyed arguing, were good at it, or were not afraid of arguments. "Because there is always self-satisfaction when you fight for what you believe in."

25.0% of the participants did not want to be a subject in Attack and one-third of these refused either because they felt the situation would be too threatening for them or because they disliked being involved in arguments or both. Others, who did not want to be a subject, made comments of a general nature, expressing dislike of the character or content of the experiment. "I don't feel it is important or necessary to argue my point of view with anyone." "I would not because of the nature of the experiment."

As noted previously, participants were less sure about Attack being ethical than they were for the other High-rated experiments. But 72.9% of the participants said it was ethical and the largest percentage of these considered Attack either harmless or to involve harm or stress that was minimal or temporary (45.7%). "For a person like myself I know how I'd react but it might be a bit on the painful side. But not traumatic." "It wouldn't harm a subject except for a short period time."

"No one gets hurt as far as I can see." Others felt it provided subjects with an opportunity to benefit or learn something generally (17.1%). And, despite the deception involved in the experiment, 14.3% of those who thought Attack ethical, explained by citing the "voluntary" nature of the experiment, perhaps because the subjects were told they would be involved in a debate.

On the other hand, one of the most frequent reasons for calling Attack unethical was that it was "unfair" to subjects or a "betrayal" of them, sometimes by getting them into a situation that they would not like. "The subject is drawn in on false pretenses. He really doesn't know what's going on." "It takes unfair advantage of the subject who is not so skilled in debating techniques." Attack was called unethical by 23.0% of the participants and 63.6% of these attributed its unethical character to the "betrayal" or "unfair" treatment of subjects.

Summary and Discussion of the High-Rated Experiments

Most participants gave wholehearted approval to the three High-rated experiments. More than three-fourths of the participants had positive ratings for these experiments, and for both Conformity and Game, a majority had ratings from +7 to +10. Very few had negative ratings and no participant had extremely negative ratings. Furthermore, the majority of the participants gave a favorable response to each of the five questions.

The singularly most influential reason for granting a permit to the High-rated experiments was "the value to subjects in understanding themselves." Moreover, self-knowledge was a prominent theme in the comments of participants, albeit less so for Game than for Attack and Conformity.

Conformity, as a topic of study, was one the participants tended to accept as significant and important, both for themselves and for psychological research. No participant made a comment downgrading Conformity as an experiment while some participants did do so for the other two High-rated experiments (10.4% for Attack and 20.8% for Game). Although most participants preferred to consider themselves nonconformists--some more vehemently than others--if they were to discover they had conformed, it did not seem to threaten untoward discomfort. Further, quite a few were interested in discovering whether they had predicted their behavior correctly when they said they would not conform and 60.4% of the participants specifically expressed an interest in learning about themselves through participation. Stress, and possible harm, tended to be either minimized or overlooked by participants when they commented on the experiment and attention was almost exclusively focused on what Conformity was able to contribute to subjects and to knowledge.

Game did not evoke as much outright enthusiasm as either Conformity or Attack although there certainly were advocates who were enthusiastic, both in terms of their own participation and in terms of the topic of the experiment. There were however quite a few whose interest was impersonal or distant. Moreover, others were downright skeptical about Game's effectiveness in investigating panic and doubtful of any personal benefit from participation, even if they did not feel participation would be onerous. Game had less immediacy, and seemingly offered less personal rewards for being a subject, but this was compensated by its being benign, usually considered harmless, and sometimes considered "fun." Not only was there less expectation of personal benefit, but when personal benefit

was claimed, it was more likely to be in the form of learning something of an impersonal nature, such as how people react to panics, rather than the more intimately personal benefit of learning something about oneself. Furthermore, some possible benefits were less immediate--than for either Conformity or Attack--since the likelihood of being involved in a panic is fairly remote.

Attack was the most controversial of the three High-rated experiments. Although often favorably and enthusiastically received, there were some strong dissenting voices. The fact that subjects were taken unaware and had their values attacked by a trained debater, provoked distaste for a few, and was of concern to others, who nevertheless approved. There were some participants who maintained that arguing or defending their beliefs would be too threatening or unpleasant, although they, too, did not necessarily disapprove of the experiment, at least for others. Significantly fewer participants were willing to consent to be a subject in Attack than either Game or Conformity. And their willingness to consent was related to whether they expected to benefit, and, to a lesser extent, whether they expected to be harmed.

Participants did not specifically mention stress in their comments to Attack but they did acknowledge stress in the alternatives they chose for granting or denying a permit to Attack and occasionally by denying that the stress would affect them. Harm was also acknowledged to a greater extent than for the other High-rated experiments. But neither the stress nor harm precluded an interest in the experiment, possibly because of the concomitant benefits. 89.6% of the participants specifically described possible benefits from Attack in at least one comment. It is undoubtedly

the opportunity for benefit, especially since it was usually of an immediate and personal nature, that evoked the enthusiastic--if occasionally ambivalent--endorsement of Attack. Some, who did not consider the experimental situation overly threatening, nonetheless disclosed that they might react emotionally. But for these participants and others, the fact that it was a temporary situation or one where you have nothing to lose, induced a favorable attitude: a favorable attitude undoubtedly instilled by the prospect of immediate gains--knowledge of yourself, your beliefs, or how to handle yourself in a debate. Thus, Attack was an experiment that kindled enthusiasm but not without some criticism.

Attack was considered significantly less ethical than either Game or Conformity and was frequently criticized for its unfair treatment of subjects. Participants were also significantly less willing to be subjects in Attack than they were for either Game or Conformity.

In summary, then, it would appear that participants seemed to have felt that they would usually gain from Conformity, while for Game there was less enthusiasm and less gain, but not too much to lose, if anything. For Attack, there was both something to gain and something to lose, but the balance was in favor of gains.

Intermediate Experiments

Sensory, Reaction (homosexuality) and Obedience received Intermediate ratings. In this group, Sensory had the highest mean rating, significantly higher than Obedience.

Sensory Deprivation. Unlike the High-rated experiments, a substantial number of participants responded critically to Sensory. Nearly one-third gave it a negative rating and only 25.0% gave it a highly positive

rating (+7 to +10). Nonetheless, as far as the Permit question is concerned, Sensory did not differ significantly from the three High-rated experiments. Moreover, there was only one question, Consent, where the mean score for Sensory was significantly below all three of the High-rated experiments. Participants were less willing to be a subject in Sensory than they had been for Attack, Game and Conformity.

A permit was granted to Sensory by 79.2% of the participants and the most sanctioned reason was that the "subject voluntarily agreed." Of the participants who granted Sensory a permit, 91.2% checked this reason. That it was of "value in learning about human behavior" was also frequently checked (81.6%) and this reason did not differ significantly from "voluntary." The alternative asserting that any "stress or discomfort would be temporary" (68.4%) also influenced participants rather strongly although it was significantly less important than the "voluntary" character of the experiment. "Stress or discomfort being temporary" did not, however, differ significantly from "learning something of value about human behavior."

An awareness of stress (or discomfort) for Sensory was also highlighted by the participants' comments. One-third of the participants mentioned stress in their written explanations to the questions and more than one-half (52.1%) mentioned harm, stress, or both. This was a larger number than did so for either Obedience or Reaction, the two other experiments with Intermediate ratings.

As with every experiment in the Intermediate group, fewer participants mentioned that they would "learn about themselves, learn a new skill, be helped in other ways, or learn something in general," than they did for the High-rated experiments. But 50.0% commented on at least one of these

benefits for Sensory. When specifically responding to the question on Benefit, participants tended to emphasize learning something about others or learning in general, to a considerably greater extent than they did for either Reaction or Obedience. In this respect, Sensory was similar to Game. In fact, the more impersonal benefit was more frequent for Sensory than it was for either Attack or Conformity. In short, direct personal benefits seemed to be relatively less likely, while general knowledge was more emphasized.

In answering the question on Consent, fewer participants expressed an interest in their own reaction than they had for any of the three High-rated experiments. Furthermore, considerably more participants refused to be a subject because they found Sensory too unpleasant, stressful or fearful compared to the High-rated experiments (20.8% versus 6.3%, 2.1% and none).

Despite the fear, stress and lack of an immediate personal benefit, participants did not find Sensory objectionable from the standpoint of its treatment of subjects. In fact, 50.0% of the comments, in response to the question on Ethical, made references to the experiment that could be subsumed under the rubric "treats subjects fairly," e.g. subjects can quit at any time, "voluntary" and "subjects are not abused."

In responding to the question on how they would behave, a relatively large percentage of participants stated their reaction to the situation without actually mentioning their behavior. Some did both. Most of the reactions had a negative quality (31.3%), focusing on such feelings as being frightened (16.7%), lonely (8.3%) or bored (8.3%). "Frightened--I do not like being isolated and in dark rooms." "I would have been bored to death and extremely lonely."

For some, the reaction was that of being annoyed rather than some stronger feeling. "Sounds comfortable at first, but after a few hours (about 6) I think I would start to get annoyed."

Most of the behaviors cited had a negative quality, denoting that the situation would be uncomfortable and that the participant would act poorly, develop symptoms, or try to get out. 43.8% of the participants described their behavior in that manner. "I don't think I would have lasted for more than 6 hours." "I think I would have tried to hold out as long as I possibly could, being as patient and cooperative as possible. But I am fidgety, nervous, so it wouldn't have been very long." Others referred to behaviors specifically mentioned in the write-up such as hallucinating or having a disoriented reaction immediately after the experiment.

20.8% of the participants thought their behavior would be of an adaptive character such as relaxing or daydreaming. "I would do various exercises to keep my mind busy. Also I would just relax after exercising."

Unlike the High-rated experiments, only slightly more than half the participants (56.3%) expected to benefit from participating in Sensory. Of these, 48.1% said they would benefit by "learning about themselves," a predominant theme for the High-rated experiments. For others (44.4%), the benefit was learning or experiencing something new and interesting. Included in this latter group were those who said they would learn to be without their senses or how it felt to be blind or deaf (18.5%). Some participants misunderstood the purpose and thought it was to investigate visual and auditory impairments. The remaining participants in this group emphasized the experiential aspects. "It would expose me to a new side of my being because I have never done anything like that before. If you

keep in mind that it is only a temporary experiment it would not be too bad."

Some participants, who wanted to learn more about themselves, were, as we have seen, interested in their own reactions or behavior. Others wanted to test some ability or capacity (22.2%). "I could measure my own levels of mind control. See how long I could keep myself occupied with thought." "It would benefit me to find out the extent of my self-control."

Slightly less than half the participants (43.8%) did not expect to benefit from Sensory either because the situation was distasteful or the opportunity for benefit was lacking (57.1%). Others felt it was too upsetting or harmful (23.8%).

As they were for Benefit, participants were almost equally divided on the possibility of harm, with slightly more than half (54.2%) feeling they would not be harmed and 45.8% feeling that harm was "possible" or "definite." Of those expecting harm, 50.0% were concerned about harm that would be, or could be, of relatively long duration. Various adverse psychological effects were noted by 27.6%. "If I was in a weak state of mind during the experiment, it might cause a state of paranoia within me." For some, either "long term" or "unanticipated damage" was specifically alluded to (18.2%), and still others thought the described symptoms might persist (13.6%). "The predicted symptoms might persist longer than predicted. Also there might be more damage than anticipated."

Harm that need not be long term or permanent was posited by others (27.3%). Not being able to accept sensory deprivation, and adjust to it, was the basis of that harm, for most. "I love seeing, hearing and feeling most things (of course if they are pleasant) and as I said would not give up the chance of hearing, seeing or feeling."

On the other hand, some participants felt they would not be harmed because the situation, and their reaction to it, would be only temporary. As noted, over half the participants denied harm and 34.6% of these made this claim. 23.1% emphasized that the symptoms do not persist very long, or that the possible harmful effects were temporary. "Any harm would be temporary. While I was in the room I would be upset but after I was allowed to leave I would be all right." Being able to leave whenever they wished--as a way of avoiding harm--was emphasized by 42.3% of those who asserted they would not be harmed.

An almost equal number of participants consented, or refused, to be subjects in Sensory (37.5% and 39.6%, respectively). Of those that were willing, the largest number were interested in seeing how they would react (38.8%). For some, this was phrased in general terms and for others, it was related to a specific condition of the experiment such as having a "limited relation with the outside environment." Being "interesting" or "challenging" was the motive for consenting for some participants (33.3%). For those who did not want to be subjects, the unpleasantness or the fearfulness of the situation was the predominant theme for the majority (63.2%). 31.6% emphasized the unpleasant or "nightmarish" quality of the situation itself while 21.2% were afraid of their personal reactions to the situation. "I would not take the chance of becoming distorted in my thinking of reality."

Although opinions on Benefit, Harm and Consent were relatively divided, the majority of the participants seemed to agree that Sensory was ethical (79.2%). The major reason for considering Sensory ethical was that the subjects were treated fairly and neither abused (or harmed) (47.4%) and over half of these (28.9%) alluded to the fact that "subjects

may quit whenever they want" in support of their contention that 'subjects are not abused.' "This is probably ethical because no harm can come to the person unless he brings it on himself by staying isolated too long." The value or soundness of the experiment was also a relatively frequent reason for considering Sensory ethical (28.9%). "It seems like a good sound experiment. After all, they have sleep labs these days where they hook you up to electrodes and experiment with sleep."

For the 18.8% of the participants who considered Sensory unethical, concern that it would be harmful to subjects (33.3%) or the feeling that it was torturous or inhumane (22.2%) were given as the primary reasons.

Reaction to an Undesired Trait. Reaction, like Sensory, had a substantial number of participants that gave it a negative rating (37.5%). For three questions, Benefit, Consent and Permit, the mean scores were significantly below the three High-rated experiments. Only two experiments, Exposure and Traumatically Conditioned Response, had mean scores for Benefit that were significantly lower than Reaction, an experiment that attributes homosexuality to subjects by means of a "rigged dial." Furthermore, the mean score for Benefit was lower than the means of other questions.* Participants were also significantly less willing to grant Reaction a permit than they were for both Sensory and the High-rated experiments. For both Reaction and Obedience, there were four experiments that were granted permits significantly more often and four others that were granted permits significantly less often--the four experiments with the lowest ratings.

When Reaction was granted a permit by 60.4% of the participants, its "value to subjects in understanding themselves" and its "value in

*Benefit did not differ significantly from Consent, however,

learning about human behavior" had the greatest influence on the decision. These two reasons were significantly higher than the remaining reasons and were endorsed by 75.9% and 79.3%, respectively, of those who said "Yes." These are the same reasons that were salient for the High-rated experiments.

For the 39.6% who refused a permit to Reaction, the most influential reason was that Reaction could "lower self-esteem." Of those denying a permit, 73.7% checked this reason, but nonetheless it only differed significantly from the three least important reasons. One of these least important reasons, however, "Encourages undesirable, anti-social or neurotic behavior," had a moderately strong positive correlation with "lowered self-esteem" (.58, P = .009).

In answering the question on Benefit, a larger percentage than for Sensory (4.1%) and Obedience (14.6%) complained that they would not learn anything about themselves from Reaction (25.0%). But nonetheless, more participants consented to be a subject in Reaction because they were interested in seeing their reaction (25.0%). For some, the "rigged dial" precluded their learning about themselves, but nonetheless, this is but one reflection of a dual attitude toward Reaction, taken by participants. Another is that, despite greater concern with "harmful aftereffects" than was expressed for Obedience or Sensory, there were many participants who considered Reaction ethical because it was harmless (18.8% of the participants, 30.0% of those who said Reaction was ethical).

As was the case for Sensory, in answering the question on how they would behave if they were a subject in Reaction, a considerable number of replies (38.3%) described reactions rather than behavior. 14.6% were concerned with unhappiness over or anxiety about discovering what the dial

conveyed and 10.4% expressed annoyance, anger or hostility at being exposed to this situation. The behaviors fell into two general categories: not giving credence to what the "rigged dial" conveyed and attributing, or not attributing, homosexuality to their partner.

More than half the participants (56.2%) did not expect to benefit from Reaction. Of these, 44.4% complained that they would not learn anything about themselves, some because they already knew how they would behave or react (11.1%) and others because the situation did not permit real reactions to be revealed since it tried to lead them to believe they were something they were not (25.0%). "I don't believe I have any homosexual traits. I couldn't benefit because I would know my reactions." "I am aware there is homosexuality in all of us to a degree, some very little, and some a lot. I love being heterosexual and am very content with it." For some, benefit was impossible because the "rigged dial" made the situation false: "Because the dial is not an accurate indication of reaction and the subject is told that it is not, I wouldn't find out anything about myself or about the partner in the experiment."

Others responded by criticizing the experiment or the experimental situation, often in terms of its subject matter. "There is nothing to be learned by finding out about gay tendencies." One participant objected to the experimenter fooling around with a "touchy" area as "sexual identity" in response to question 1 on behavior and then complained she definitely would not benefit: "To be blunt about it, I think the whole experiment is of no social value. If the purpose of this experiment is just to see how people form opinions of others then it is of no validity at all."

Of those expecting to benefit (43.8% of the participants), 81.0% attributed that benefit to learning more about themselves. Three participants (14.3%) apparently misunderstanding, thought they could discover whether they had homosexual tendencies. "If the experimenter told me I was homosexual I would want to know why and if so I would try to adjust and accept the 'new' me, even though it may frighten me." Most were interested in their reaction to the situation, irrespective of whether homosexuality or "bad traits" were involved. For these participants, the benefit came from finding out their attitude toward being told they were homosexual even if they knew it was a false imputation. "I might have found out something new about myself as far as feelings concerning homosexuality and how I might react if I found out that I was a homosexual." Some participants thought they might discover if they actually were homosexual by their attitude toward being led to believe they were homosexual while others did not have a clear understanding of the role of the homosexual attribution in the experiment. There were also participants who obviously misunderstood the role of ascribing homosexuality to the subject or where it was difficult to determine if they understood that homosexuality was not of real concern. Many, however, were clear that in learning about themselves, the issue was not their homosexual tendencies. One participant revealed his understanding by saying he could benefit by learning "if I would resolve a conflict by attributing a particular trait to others."

The majority of the participants (70.8%) indicated they would not be harmed by Reaction. Two major factors making the experiment harmless were that the participants would not be bothered by the attribution of homosexuality (29.4%) or that they would be debriefed (26.5%). One

participant who presumed she would "probably" not be harmed "when [she] realized that the experiment was rigged by the experimenter," nonetheless declared it was "probably unethical" because it "may be harmful and have prolonged effects upon the subject." Thus, she did not seem convinced that the debriefing would be very effective, at least, for others.

For most who would not be disturbed by the attribution of homosexuality, the reason was simple and straightforward: they would not be bothered or influenced by what the dial indicated (20.6%). "I don't feel susceptible to such things."

Although only 29.2% presumed they would be harmed by Reaction, 71.4% of these were concerned that doubts or beliefs regarding homosexuality would be the source of harm. For some, it was a "very sensitive nature" or a lack of "self-esteem" that made them vulnerable to harm in this situation. For others, the situation itself was harmful. "A person may believe what the dial said and then when the experimenter told him it was rigged, he may not believe him." "Some people feel very strongly against those who are gay. Finding out that they have gay tendencies can harm them."

Approximately an equal number of participants were either willing (39.6%), or unwilling (35.4%), to be subjects. For those who were willing to be subjects, learning something useful or seeing how they react, were the most compelling reasons (63.2%). "This experiment would teach me something about myself." Finding the experiment, or the experience, worthless was the most compelling reason for not wanting to be a subject (64.7%). "No special reason, I'm just not interested." "The experiment has no social value."

The majority considered Reaction ethical (62.5%). For some it was ethical because it was harmless (30.0%) while for others it was considered

actually beneficial for subjects since it provided them with insight into themselves (20.0%). One participant stated that Reaction was "harmless" and then remarked that "anyone who reacts all too strongly against it will have found an area for self-inspection." Another stated: "It might help someone who has homosexual tendencies but does not really know it, be aware of it and go thru therapy if he or she wanted to." The usefulness of the findings was cited by 20.0% of those who called the experiment ethical and 16.7% cited the fact that the subjects were debriefed.

The major reason for considering Reaction unethical--for the 37.5% who did--was that it could be harmful (55.6%). "Telling a person he has homosexual tendencies, no matter how much you later assure him it was set up, can cause some mental harm and anxiety." "Here in this experiment mental images that people have of themselves is being tampered with."

Obedience to Immoral Orders. Participants were less positive toward Obedience than they were toward Sensory and the total rating was significantly lower. Moreover, Obedience had significantly lower mean scores than Sensory for three questions: Consent, Ethical and Permit. For the Consent question, the mean score for Obedience was also significantly lower than Reaction. However, this divergence from both Intermediate experiments--when it comes to Consent--may be somewhat artifactual since many participants, as we shall see, considered consenting to be a subject analogous to saying they were willing to give shocks or to inflict pain.

For the question on Harm, the mean score for Obedience was above the four lowest rated experiments and only Game was significantly higher. The mean score for Harm, however, may also be somewhat artificial since there were participants who claimed they would not be harmed because they would not participate or obey. Unique to Obedience was the fact that a

significant negative correlation between Benefit and Harm emerged when the variance in common with other questions was controlled (-.37, third order partial). (Conformity had a significant low negative correlation and a third order partial.) The assertion that they would not give the shocks may have prompted some participants to conclude that they would neither benefit nor be harmed, since they would remain at a distance from the experimental manipulation.

56.3% of the participants granted a permit to Obedience and the three reasons that were most influential in their decision were "to learn about behavior" (74.1%), "of value to subjects in understanding themselves" (74.1%) and "subject voluntarily agreed" (85.2%). These three reasons were checked significantly more often than four other reasons. Only "value justifies the possible stress" (48.1%) did not differ significantly from the three most salient reasons. (This latter alternative also did not differ significantly from the least checked alternatives.) Two of the primary reasons for endorsing Obedience were negatively correlated: "to learn about behavior" and "subject voluntarily agreed" (-.43, $P = .02$). This correlation suggests that the more emphasis participants placed on the value of the experiment in advancing knowledge, the less compelled they were to attribute granting a permit to the "voluntary" nature of participation. This interpretation becomes even more tenable when one notes that there is an even stronger negative correlation between "To learn about behavior" and "Not unfair to subjects" (33.1%), -.55, $P = .003$). This latter reason for endorsing Obedience was not of particular salience.

The most frequently checked reason for denying a permit to Obedience by the 43.8% who said "No" was that it was "too unpleasant or stressful" (61.9%) but this reason was not checked significantly more frequently than

three other reasons: "Lowers self-esteem" (57.1%), "Value does not justify possible harm" (52.4%) and "Subjects feel deceived" (42.9%). Nonetheless, "Too unpleasant or stressful" had a comparatively higher rank for Obedience than it did for some other experiments. The mean for this alternative was unique for Obedience with five experiments that were significantly lower, and only the four lowest rated experiments were significantly higher. Furthermore, "Too unpleasant or stressful" had a moderately strong positive correlation with "long term harm" (.53, P =.015). Relatively few participants, in denying a permit to Obedience, checked "long term harm" (38.1%) as a reason, but those that did also tended to consider Obedience "too unpleasant or stressful."

Only one participant said he would obey when asked how he would behave in Obedience and two more indicated they were not sure. Most (85.4%) said they would disobey, which follows the usual pattern when people are asked to predict their own or the behavior of others in the Obedience experiment. Unlike Conformity, however, where socially approved behavior is stated as their own, participants were not anxious to verify their prediction. And many strongly protested that obeying was unthinkable.

Participants were almost equally divided on the possibility of benefiting from Obedience: 47.9% said they would, 52.1% said they would not. Of those expecting to benefit, 73.9% asserted that the benefit would be from seeing how they would behave or react. The interest in their behavior or reactions was sometimes phrased in general terms and other times it was quite specific. For some it was a question of how they would respond to authority (17.4%). "Learn how far I would follow orders knowing full well that I would be hurting someone in the process."

"I would have tested to see just how another individual can control my behavior." For others, it was a test of character and moral judgment (21.7%). "This is a true test of strength of character, to observe the extent of one's sureness of morals." "To see how far I can go in obeying before my own moral judgment sets in." A few (13.0%) put the question in terms of whether they were capable of giving pain or making people suffer, totally ignoring the role of authority in the situation. "I would find out if I am capable of giving pain to another person." The remaining participants either expressed an undefined interest in their reaction or were specific about some aspect of the situation, not alluded to above (26.1%). "It would be interesting, and curiosity would encourage me to take part, to see my reactions." "I cannot really tell what I would do in this situation. Maybe if I was under stress I would have given the shocks." Despite this possible benefit, this latter participant refused to be a subject, candidly admitting she would be "afraid to find out my results."

For the 52.1% of the participants who said they would not benefit, factors that contributed to disliking the situation because it evoked tension or because it involved inflicting pain, were offered as an explanation by 48.0%. Some of these complained that it involved harming another person (24%). "Causing intentional pain to anyone is wrong." "What could I learn by hurting someone else? If I continued to listen to the experiment and administer shocks to the victim, this would prove I don't have a mind of my own." "I do not get any kicks out of harming another person." Some participants declared that they could not benefit because they already knew how they would behave or react in such a situation (28.0%) while others expressed dislike for the situation because it was too extreme or tension provoking (20.0%).

Although the majority of the participants (66.7%) claimed they would not be harmed by Obedience, the avoidance of harm for many was predicated on their refusing to obey. Of those denying harm, 31.3% said they would either not obey, or not participate, which may be alternative modes of saying the same thing. "I wouldn't agree to administering such treatment! (I don't believe in smacking children around either!!!!)." Others, denying harm because they would not obey, also mentioned, or implied, that harm or guilt could occur, if for any reason they actually did obey, or were forced to obey (25.0%). "If you are going against what you believe in, you would stop, but if you wanted to impress someone then you might do harm to yourself." "If I was forced to participate it would be harmful because I would be doing something I would not want to do. Inflicting pain on someone."

One-third of the participants felt they could be harmed by Obedience and for 56.3% of these, guilt, anxiety, conflict or possible psychological damage were the major sources of harm. For one participant both conflict and guilt were held responsible: "Mentally a person could be torn between not wanting to disobey and also not wanting to hurt someone. This could create a great deal of confusion and possibly guilt feelings." Guilt was accentuated by another: "If I was to participate I would feel terrible guilt afterwards and be disgusted with myself for harming someone else." Conflict was the theme for still another participant who said, "If I were the one giving the shocks I would be under a great strain of indecision whether to go on or not." Other participants emphasized psychological harm. "If I thought I was hurting my fellow man in such a way as pain could be administered, that would hurt me emotionally."

For 25% of those expecting harm, it was the overly stressful situation, or tension, that was blamed.

Recall that consenting to be a subject to enable a participant to ascertain how they would behave or react was a motive for at least 25.0% of the participants, for the three High-rated experiments and for Reaction. Fewer consented for this motive for Sensory (14.6%). Where Obedience is concerned, none of the participants said they were persuaded to be a subject to see their behavior or reaction. Indeed they were more likely to assert vehemently how they would behave rather than to evince an interest in discovering it. Moreover, one participant in refusing to be a subject, because she knew she would not obey, openly expressed the fear that she might discover she was "wrong." When an interest in how they would behave was expressed for Obedience, it was expressed in answer to other questions, such as Benefit, where there were no implications of a commitment to action, or in terms of an intellectual interest in behavior in general. Both these strategies can achieve the purpose of creating a greater psychological distance between the act of obeying, or not obeying, and the individual's own response to the situation.

For the few who consented to be subjects in Obedience (18.8% of the participants), the reasons were a general interest in the findings, non-specific curiosity or a general concern with human behavior. Again, expressions of interest at a psychological distance from oneself.

Over half the participants (54.2%) did not consent to be a subject in Obedience. For both Sensory and Reaction, participants had been approximately equally divided. The majority of those who refused suggested, in one way or another, that they would not want to "give shocks." For many, the emphasis was on hating to see people suffer or not enjoying

harming another (34.6%). "It seems like more of a test of compassion than anything else. The results would only reveal that a high % of people are human and are considerate when they see others in pain." Others merely said they would not consent because they would be unable to administer the shocks or that they would not obey (19.2%).

Slightly more participants considered Obedience ethical (54.2%) than unethical (43.8%). For 46.2% of those who considered the experiment ethical, being ethical was attributed to the usefulness of the experiment. For two participants it was useful to the subjects themselves while for the others its utility lay in its contribution to knowledge. "It does give a true picture of the response by humans in a situation involving a conflict of obeying administration versus human feelings." In praising the contribution of Obedience to knowledge of behavior, some were specific and relevant (19.2%) while others made general comments such as "results-valuable" or remarks on the value of the findings that had no bearing on the actual purpose (15.4%): "It explains how one's behavior is under such tension." And there were two participants who asserted that the purpose of Obedience was to show the violent or aggressive nature of some people (7.7%).

Being harmless was another reason for considering Obedience ethical (42.3%). For quite a few, the fact that the victim was not really being shocked was the rationale of its being harmless (26.9%). Others said no one would be harmed or that the tension or conflict was temporary (15.4%). "If the subject refused to go on, he wouldn't be forced to do so. If he showed conflict and extreme tension, it would last for the experiment. All discomfort would disappear when the subject found out he wasn't really hurting the other." Both the utility of the findings

and being harmless might be mentioned together. "No one is being harmed. The subject does not have to listen to the experimenter and can refuse if he wants. Also, important knowledge can be gained from this experiment about human behavior."

Over half the participants who considered Obedience unethical cited the fact that the subject was being forced to hurt someone, being "bullied," or that it puts the subject in a position of doing something wrong (52.4%). "It is unethical because you are harming someone (supposedly) for something they couldn't help." For many, the "immoral" behavior of the subject in giving shocks, and harming another, determined the "immorality" of the experiment (38.1%). "It's wrong to inflict pain on others." If harming another is unethical, then an experiment that is concerned with harming another is also unethical, appeared to be the tacit assumption for many, underlying the feeling that Obedience was unethical. A few emphasized the force that was exercised by the experimenter and focused on what they deemed "immoral orders."

That it was overly traumatic for the subject, or could be harmful, were other reasons for considering Obedience unethical (38.1%). Some emphasized the trauma and tension (10.0%)--"The subject is exposed to extreme tension which may have an after-effect," while others emphasized the subject's reaction to giving the shock (19.0%): "You're tricking a person into feeling the stress of giving pain to someone else and being told to make the pain greater."

Some participants, in explaining their answers to Obedience, were not specific enough about certain aspects of the experiment to allow one to judge whether they were aware that electric shocks were not actually

being administered. Occasionally participants, in placing themselves in the role of the 'real subjects,' might discuss the experiment as if the shocks were real but later on indicate that they were aware that the 'victim' was pretending. Two participants, however, gave clear evidence of having misunderstood. One suggested that there were "different ways to study memory and learning." Another commented that the experiment could be ethical "if the shocks applied are within the range that a human can withstand."

Summary and Discussion of the Intermediate Experiments

The majority of the participants gave the Intermediate experiments a positive rating but, compared to the High-rated experiments, very few (25% or less) had ratings from +7 to +10. Further, a larger proportion had ratings in the negative range, 31.3% for Sensory to 45.8% for Obedience. But unlike the Low-rated experiments, only 12.5% of the participants had ratings that were extremely negative, -7 to -10.

While for the High-rated experiments the majority gave favorable responses to every question, there were only three questions--Harm, Ethical and Permit--where the majority gave favorable responses for the Intermediate experiments. But for two of these questions, Ethical and Permit, there was sufficient variation among the three Intermediate experiments to result in significant differences. Sensory was granted a permit significantly more often than either Reaction or Obedience, and Sensory was also considered significantly more ethical than Obedience. There were no significant differences for Harm but only slightly more than half thought that harm could be avoided for Sensory. For Obedience and Reaction, however, where over two-thirds said they would not be harmed, the checked answers cannot be

taken at face value, and the proportion claiming they would not be harmed may be spuriously high. For Reaction, the replies could be a form of 'denial' since some claimed they would not be harmed because the attribution of homosexuality would not bother or influence them (16.7%). Perhaps these contentions are accurate but it is also possible they are defensive. For Obedience, what is likely to be an erroneous assumption protected many from harm. 20.8% said they would not be harmed because they would refuse to obey and another 16.7% said that if they were forced to obey or if they did not obey, guilt or harm might result.

For Benefit, only Sensory had a majority that said they would benefit (54.2%), whereas for Reaction (56.2%) and Obedience (52.1%) a slight majority disavowed a benefit: there were no significant differences in the mean scores. For Consent, both Reaction and Sensory had an approximately equal number of participants, replying "Yes" and "No," but the majority replied "No" to Obedience (54.2%). This resulted in a significantly lower mean score for Obedience. However, since many participants (31.3%) seemed to equate consenting to be a subject with agreeing to give shocks, inflict pain, or obey, the percentage saying "No" and the mean score may, in part, be artifactual.

The reasons for granting Reaction a permit were similar to the High-rated experiments. But the reasons for granting a permit to Obedience and Sensory were more diffuse as were the reasons for denying a permit to Obedience and Reaction. There were no significant differences in the reasons for denying Sensory a permit.

While less than a majority mentioned harm or stress in their comments to the Intermediate experiments, both harm and stress were mentioned with greater frequency than they were for the High-rated experiments.

Furthermore, fewer participants made specific references to a benefit for the Intermediate experiments, one-half or less, with a concomitant drop in the number of participants who thought they could learn about themselves.

For the Intermediate-rated experiments, there were three pairs of questions in common that had moderately high correlations and significant third order partials. One of these, Ethical and Permit, had significant correlations and partials for most experiments, and another, Benefit and Consent, was also frequently correlated. The correlation for Harm and Permit, however, was almost unique. Only Exposure had a significant correlation and third order partial for Harm and Permit. It would seen that the recognition of harm--or a denial of it--had a greater influence on whether a permit was granted for the Intermediate experiments.

The Intermediate experiments are apparently the most controversial for participants. Most controversial in the sense that there were participants who were strong advocates as well as participants who strongly condemned them. And there were also more participants with ambivalent attitudes. The purpose of the Intermediate experiments were also misunderstood more frequently--a misunderstanding that may have contributed to their being less highly regarded. But there is another possibility. The misunderstanding may have been the product of ambivalent feelings about the experiment or may have been propelled by an emotional avoidance of some features of the experiment, at least for Reaction and Obedience. For Reaction, the topic of homosexuality, and for Obedience, the obeying of "immoral" orders, seemed to arouse strong emotional reactions. For Sensory, misunderstanding the purpose may have been without emotional implications, merely representing a certain lack of sophistication in psychological topics. For instance, some participants thought the experiment concerned being blind or deaf and

there were others, not making this assertion, who did not seem to grasp the theoretical implications.

Many participants were wary of Sensory, and the effect it might have on them if they were subjects, but this was compensated by the fact that it was voluntary and that subjects could withdraw at their discretion. These features not only muted the threat but gave the experiment a moral sanction. Being voluntary also made it possible for participants to vote Sensory a permit when they were unwilling to be subjects themselves. For some, however, this appeared to be a rationalization rather than a legitimate consideration.

There seemed to be a dual attitude toward Reaction among participants, expressed by the ratings and the comments. For example, more participants pronounced Reaction ethical because it was harmless and, at the same time, more participants expressed concern about harmful psychological aftereffects, as compared to the other two Intermediate experiments. Notions about the "rigged dial" was another reflection of dual attitudes. For some participants the "rigged dial" precluded their being harmed, since they would recover from their "chagrin" once they were debriefed, while for others it precluded a benefit. A primary motive for being a subject--learning about oneself--was not available because a 'personality test' was 'fake.' Subjects could of course learn whether they would attribute homosexuality to their partner, but very few were interested in finding out about this--some because it was too obscure in terms of immediate psychological insight and others because they did not understand that this was the behavior that was being investigated.

Dual attitudes toward homosexuality being the topic of the experiment were also evident and prompted a variety of responses. Some condemned

the experiment on this basis while others seemed to bend over backwards to assert that the topic was fine or that it had no importance. For some participants, it was as if they feared that in showing too great a concern, they would reveal something about themselves. There were participants who--in denying a concern--confidently asserted they would not be bothered by being told they were homosexual while others seemed to carefully avoid any signs of interest, or of protest, as if they were afraid of being accused of 'protesting too much.' There were, of course, some who categorically denied they were homosexual, others who said they would not believe they were homosexual, and a few who candidly admitted that the experiment would be upsetting because of their own problems with sexual identity. And some of these complained about homosexuality as the topic.

While for Reaction, different participants had different attitudes and opinions toward the experiment, for Obedience the same participant might reveal contradictory or ambivalent attitudes. (There were also participants who either wholeheartedly praised or condemned Obedience.) Some of the contradictory findings, however, may be more apparent than real. For instance, there was a fairly strong negative third order partial between Benefit and Harm. This would seem to indicate that those who expected a benefit also expected to be harmed, or conversely, those who did not expect to benefit also did not expect to be harmed. For the latter participants, it is their conviction that they would not obey that would preclude a benefit, for example, learning about themselves, and, at the same time, protected them from harm. Others could foresee both a benefit and the possibility of harm, as for Conformity.

There were many vehement assertions about not obeying, and in contrast to assertions about not conforming, the participants were not eager to

find out if they were wrong. A few candidly admitted that they did not want to know, or were afraid to discover, that they might actually obey. The labeling of the orders, "immoral," may have intensified reactions. For some, it seemed to convince them that the experiment itself was "immoral" and they cited the "immoral orders," or the "immoral" behavior of subjects when they inflicted pain, as reasons for considering Obedience unethical. There were also participants who misunderstood the Obedience experiment and thought it was a test of sadism or the willingness of individuals to inflict pain. Even without this misunderstanding, the role of authority was often underestimated or bypassed altogether. A horror at the deed of inflicting pain on someone--merely on command--and the denial that oneself, or others, might engage in this behavior is not an unusual reaction to the Obedience situation. Indeed, forty psychiatrists, in predicting the outcome of the experiment, undoubtedly based their extremely low estimate of obedience on the "concept of the autonomous man" (Milgram, 1975), disregarding the power of legitimate authority. The extent of control of legitimate authority over the actions of a subordinate individual is usually underestimated by those who are asked to predict the outcome of the Obedience experiment and often reacted to with horror, or denial, when the results are known.

In summary, then, the reactions of participants to the Intermediate experiments were often either highly favorably or highly unfavorable, and, at the same time, there were other participants who were quite ambivalent. These experiments were sometimes praised, but unlike the High-rated experiments, stress and possible harm were not ignored or bypassed in the comments. There were also participants who did not fully comprehend, or actually misunderstood, some features of the experiments. For Obedience and

Reaction, the emotional impact of the procedures seemed to propel these distortions. But it is also possible that the more subtle, and less easily understood, purpose of the Intermediate experiments made it more difficult for participants to appreciate the goals and overlook, or minimize, the stress and possible harm, as participants had done for the High-rated experiments.

Low-Rated Experiments

The following three experiments formed the group with the lowest mean ratings, except for Exposure. The rating of Exposure was significantly lower. Airplane had the highest rating in this group, a rating that was significantly higher than Traumatically Conditioned Response. Shock did not differ from either.

Airplane Crash Simulation. In common with other experiments in the Low group, the majority of the participants (68.8%) were critical of the experiment and had ratings that were in the negative range.

The mean score for the question on Benefit was significantly higher than the means for Harm, Consent and Permit. The Benefit question was also relatively high compared to other experiments with Low ratings. Only the three High-rated experiments had mean scores that were significantly higher than Airplane. On the other hand, for the questions on Harm and Permit, the mean scores were significantly lower than all experiments in the Intermediate and High-rated groups. And, although it was significantly higher than Exposure for the question on Harm, Airplane did not differ from Exposure for the question on Permit.

For the question on Ethical, Airplane did not differ significantly from Obedience, but the remaining experiments in the Intermediate and High

groups had means that were significantly higher. Yet, this comparatively high rating for Consent cannot be considered to represent a greater willingness to participate in Airplane. The mean score is spuriously elevated by one-third of the participants who checked "not sure," a neutral rating. Usually neither ambivalence nor indecision were responsible. Of the 16 participants, 9, who checked "not sure," made some comment conveying the idea that consent was not possible since they would not know what was going to happen and 6 participants gave explanations that would be more appropriate as explanations for saying "No." There was some overlap between the two groups.

Only 29.2% of the participants said "Yes" to granting Airplane a permit. In granting a permit, being "of value to subjects in understanding themselves" (78.6%) was a favored reason. But this reason did not differ significantly from "of value in learning about human behavior" (71.4%), being "voluntary" (57.1%) and the "possible stress or discomfort being temporary" (57.1%). "Possible discomfort or stress being temporary" had a rather strong correlation with considering the experiment "Not too unpleasant or stressful" (35.7%, .61, $P = .02$).

Although the majority of those who granted Airplane a permit labeled it "voluntary," a larger number of participants criticized Airplane for being "involuntary." Checking "Subject voluntarily agreed" as a reason for granting Airplane a permit requires quite a stretch of the imagination, and seems to have functioned as a rationalization. Evidence for this is a moderately strong negative correlation with the Benefit question and endorsing Airplane because it is "voluntary" (-.55, $P = .05$). The less benefit expected, the more likely that "voluntary" became important as a reason for granting Airplane a permit. It is also of interest to observe that

there was a moderately strong correlation between checking "If the subject knew the true purpose or nature of the experiment ahead of time, he would behave unnaturally" (35.7%) and finding the experiment ethical (.53, P = .05).

70.8% of the participants refused to grant a permit to Airplane. The four most influential reasons were "long term harmful consequences" (73.5%), "too unpleasant or stressful" (85.3%), the "value of the experiment does not justify . . . the possible harm" (64.7%) and the subjects may "feel deceived" (67.6%). None of these reasons differed significantly from each other, or the fifth most important reason, "Not voluntary" (44.1%).

In commenting about Airplane, over half the participants (56.3%) specifically noted that it was both harmful and stressful. And only 14.6% did not mention either harm or stress. On the other hand, participants also made references to possible benefits. Comments referring to benefits were more frequent than to either of the other Low-rated experiments. Indeed they were made with about the same frequency as they were made to experiments in the Intermediate group (54.2%). 27.1% of the participants indicated they could learn something about themselves and 35.4% said it would be helpful to the subject or that it could facilitate the learning of new skills or behavior.

Airplane, along with Traumatically Conditioned Response, were the two experiments where reactions predominated over descriptions of behavior. Reactions of 60.4% of the participants were described in terms of being frightened, panicky or upset. "I would be extremely upset. I would be in a state of panic. My first thought would be to pray. I'd be furious when I found out this was only simulated." Some participants described their behavior as well as stating their reactions. "I would've been scared to death. I don't think I would've had the strength to fill out all the papers."

Airplane was the only experiment in the group with Low ratings, where the majority of the participants expected to benefit (54.2%). 25.0% of the participants mentioned that it could evoke either a change in themselves, or in their lives, and in this respect it was similar to Conformity. This percentage represents 46.2% of those who expected to benefit. That it could help people learn to control themselves in fearful situations, and that learning to control themselves may be applied to other situations, was an oft-repeated theme for those claiming they would benefit (38.5%) by Airplane evoking a change in themselves. "It could teach you how to handle a life and death situation or many other important situations involving fear."

Learning more about themselves was another possible benefit (38.5%). Most who believed they could benefit in this manner expressed an interest either in their reaction or in whether they would be able to control themselves in this situation (26.9%). One participant said she could benefit "by knowing how you would react in an emergency. It may or may not be useful." Another expressed favorable attitudes throughout, and felt he could benefit by seeing "how I would control myself under such a situation" and volunteered to be a subject for exactly the same reason.

45.9% denied they could benefit from Airplane and the major reasons were that it was too traumatic, drastic or emotional. 63.6% of those who would not benefit evoked these reasons. "All it would do is scare the s--t out of me. I'd probably be afraid of planes, too," was the forthright response of one participant. One participant declared, "This experiment would be too stressful for me. There would probably be irreparable damage to my mental condition." Another remarked, "I think there are few situations of such extreme stress in normal day-to-day working conditions. Therefore, knowing how I would react in such a drastic situation does not

seem comparable to situations I would encounter in life." This participant denied a type of benefit that some participants had emphasized.

In contrast to the question on Benefit, the percentage of participants expecting harm from Airplane was approximately the same as the other Low-rated experiments (72.9%). Of those anticipating harm, 40.0% mentioned physical harm, such as heart attacks, shock, or other bodily reactions. "The extreme stress conditions could affect your health, especially if you had a health problem you were unaware of." "People do strange things under stress. I probably would have fainted or gotten sick from being so nervous." In fact, more participants reported harm of a physical nature for Airplane than either of the other Low-rated experiments. For Shock it was 22.9% of the participants, Traumatically Conditioned Response, 27.1% and Airplane, 39.6%. Besides the physiological harm cited above, 14.3% remarked that the plane might really crash, or that some other kind of accident might occur, that would result in physical injury.

Inducing an unpleasant emotional state (31.4%) or psychological harm with possible aftereffects (31.4%) were also contemplated as vehicles of harm. Some participants proposed that both an unpleasant emotional state and physical harm might occur: "I could have a heart attack or a nervous attack or could freeze with fright and not be able to do anything but sit there and go into shock." "I might have a heart attack and/or get myself very upset just for an experiment." For others, the emotional impact of the situation was sufficient to create the harmful outcome: "Since I have a fear of heights, I would probably react in a very emotional way."

Some participants emphasized actual psychological harm rather than an unpleasant emotional state that might lead to harm. "It would harm me

emotionally if I knew I had to fill out emergency data such as the name of the next of kin." "I don't see any physical harm (besides possible freak occurrences such as heart attacks, people trying to commit suicide, etc.). I personally might, however, be so panicked that permanent damage (mentally) might occur."

Relief, or recovery, after the experiment was over, or that daily life is full of stress, were reasons participants gave for finding Airplane harmless. 27.1% of the participants assumed they would not be harmed and 38.5% of these proposed these reasons.

Only 18.8% of the participants were willing to consent to be a subject in Airplane while 47.9% said "No." The remaining one-third, as noted, checked "Not sure" without implying any inclination to be a subject. The majority of the participants who refused to be subjects cited the overly stressful and frightening nature of Airplane (56.5%). "Too terrifying" was the succinct comment of one participant. For another, her own reaction was emphasized: "I don't need to be shaken emotionally." That "life or death" was involved in the stress was specifically disturbing to some participants. "Much too dangerous. I don't like the idea of having to 'face death' unnecessarily."

Of those who did not want to be a subject, 21.7% explained by saying it would be harmful, and all but one designated adverse physical reactions, such as a "heart attack," as the type of harm. "Unnecessary physical damage" was the comment of one participant who had previously mentioned that the airplane might actually "go out of control."

For the few that were willing to be subjects (18.2%), learning about themselves was a frequent reason (44.4%). "It would benefit me and test my basic attitudes, philosophy and concept of myself." Another participant

asserted that it might be important for her to see her reaction to an emergency situation since "in this type of situation one has to remain calm or you may wind up doing all the wrong things instead of the right ones."

The majority of the participants pronounced Airplane unethical (60.5%). Moreover, this was the only experiment, besides Exposure, where no participant mentioned or implied that the subjects were treated fairly. That it was overly stressful, fearful, or risky were prominent themes for those who checked "probably" or "definitely" unethical (55.2%). "No reason justifies scaring people to death. A healthy person would probably fall apart in this situation." "It is playing with a person's life when one is put under too much stress." "There are probably other ways of testing people under stress. There was no reason to put those people through something like that."

27.6% proposed that the subjects were taken advantage of or deceived. "The soldiers were not fully aware of what was involved." Harm, both physical and psychological, was still another reason for considering Airplane unethical (24.1%). "Though it might prepare soldiers in their behavior when the real thing comes up, but panic might bring on the real thing. Also soldiers might get a heart attack or sickness." "Too much harm psychologically. Too great a risk. There should be limits to what type of experiments should be done to find out more about behavior."

For the 25.4% of the participants who considered Airplane ethical, benefiting subjects (41.2%) or providing valuable knowledge (35.3%) were predominant reasons. "It can help people learn how to react without getting panicky in a real plane crash landing." Its specific value to soldiers was mentioned: "In the force we need to train for stress and they are

definitely going to need the training." Even the usefulness of the findings were discussed in terms of the value of the experiment to soldiers and other flyers.

Traumatic Shock and Learning. Not only did the majority give Shock a negative rating (62.5%) but all, except two participants, had negative ratings that were in the -5 to -10 range. Furthermore, participants were as reluctant to be a subject in Shock as they were for Exposure. The mean score for Consent also did not differ from Airplane or Traumatically Conditioned Response but both these experiments were significantly higher than Exposure. The mean score for Consent was significantly below any of the other questions for Shock. On the other hand, the mean score for Ethical was significantly higher than the other questions and was also significantly higher than the mean score for Traumatically Conditioned Response. The mean scores for the questions on Harm and Permit did not differ from either of the other Low-rated experiments but the mean score for Benefit was significantly lower than Airplane.

37.5% of the participants were willing to grant a permit to Shock. When Shock was granted a permit, the singularly most important reason was that the "subject voluntarily agreed to be in the experiment." Every participant who granted Shock a permit checked this reason at least once. A reason of lesser importance was "to learn something of value about human behavior" (72.2%), but this reason did not differ significantly from "Possible discomfort or stress being temporary" (66.7%), "Value . . . justifies possible stress" (50.0%) and "Not unfair to subjects" (50.0%). "Possible discomfort or stress being temporary" and "Not unfair to subjects" had a moderately strong positive correlation, .63 ($P = .005$).

When Shock was denied a permit by 62.5% of the participants, the most frequently checked reason was that the "Value . . . does not justify the possible harm" (80%). Nonetheless, this alternative did not differ significantly from two others: "Too unpleasant or stressful" (83.3%) and "Does not accomplish anything of social value" (70%).

The majority of the participants did not expect to benefit from Shock (64.5%). Of these, 45.2% asserted in one way or another that Shock did not offer an opportunity to benefit. The inutility of learning to terminate shocks, or the lack of a life-like quality, was deplored by 32.3%. "I cannot think of any time in my life that this will be beneficial. This is a specially set up experiment with controls that are not real." "There is no point to the whole thing. A situation like that is very unlikely to occur in reality."

A few participants not only complained about Shock's lack of relevance but lamented the pain. "Being shocked to study learning is not going to help my life. It's too painful to go through." For others, pain alone was enough to preclude a benefit. 32.3%, who said they would not benefit, asserted that it was because Shock was either too painful or too stressful. "I would try to avoid pain at all costs. This type of experiment would concentrate the pain rather than spread it out."

Some participants emphasized the stress and fear involved, rather than the pain. "I would be worrying about the shocks." "I couldn t learn the method of avoiding shocks in a stressful situation."

For the 35.4% who thought they could benefit, the benefit was equally attributed to two major sources, learning something about oneself (47.1%) and learning or mastering some skill (47.1%). In learning about themselves, a participant may have focused on a particular skill or

capacity (23.5%): "Well I could learn just how fast I can learn." "It would probably help me to measure my capacity to learn under stress." For some participants, benefiting by learning about themselves did not involve a particular ability or capacity: "I think I know how I'd react, but I could be wrong."

When the learning, or mastery, of some skill was the benefit, control of one's reflexes, or improving the ability to avoid shocks, might be stressed (29.4%). "I might become more able to control my reflexes' actions in the future." "By learning how to avoid shock as quick as possible."

Although 60.4% of the participants made a specific comment on the harm involved in Shock, there was a dramatic drop in the number of participants who mentioned harmful 'aftereffects' as compared to the other Low-rated experiments. No participant specifically mentioned permanent harm while only 20.8% commented on harmful aftereffects. In contrast, 62.5% made a comment on harmful aftereffects for Airplane and 75.0% for Traumatically Conditioned Response.

When harm was described for Shock, it was less likely to include psychological harm than for either Airplane or Traumatically Conditioned Response. 22.9% of the participants (or 31.4% of those expecting harm) assumed it would be psychological for Shock while 45.8% of the participants attributed psychological harm to Airplane and Traumatically Conditioned Response. Nonetheless, most participants were not sanguine about avoiding harm. 72.9% felt they could be harmed and 68.6% of these alluded to physical or emotional harm in explaining why, and another group of comments (31.4%) were focused on the pain. When harm itself was the focus, the explanations revealed an equal concern with physical and psychological harm. 22.9% expecting harm believed that emotional or psychological harm

could result from either pain or fear. "If you are the type of person who can't endure pain, you could be harmed emotionally." Another 14.3% of the comments referred to psychological harm as an aftereffect of the experiment: "In later life every time I was told to learn something, I'd learn it for fear of being hurt and not for the pleasure of learning." "I would be encouraged to run from pain rather than cope with it, when it arises in a non-laboratory situation." "Neurotic behavior might show after this."

Worrying about psychological harm did not preclude being concerned about physical harm. "Even if I was given a medical approval slip, I still think there could be brain damage or just psychological effects." Of those who thought they would be harmed, 22.9% postulated that the harm would be physical. "I may have future reactions that may harm my body." "My threshold of pain might be greater than it should be--my body could be harmed possibly." 14.3% explained the harm by merely alluding to the shocks: "Simply from the shocks."

The tremendous pain, or the fact that pain itself may be harmful, was the explanation of 31.4% of those presuming they would be harmed. "I'm not sure of physical harm or even definite mental harm which might occur, but the mere pain seems harmful enough." Some comments on the harmful aspects of pain were combined with specific references to physical or psychological harm. "The pain might prove to be overwhelming, possibly fatal." "Being shocked can cause tremendous pain and damage to people."

Only 13 participants (27.1%) thought they could avoid being harmed, and of these, 46.2% specifically denied physical or psychological harm or asserted that the reaction would be temporary. "Since the electric shock was not strong enough to physically harm you, I see no reason for my being

harmed." 30.8% denied harm with a proviso (four participants). Two of these based their proviso on the experimenter's competency, but one of these insisted on seeing the experiment done with someone else before he would consent to be a subject.

70.8% of the participants said "No" to being a subject in Shock. Of these, 76.5% alluded to the fact that pain or shock was involved. Being too painful, or the desire to avoid pain, was mentioned by 47.1%. "I wouldn't put myself in a position where I'd be in pain without knowing it would be of some benefit to me." 29.4% cited the actual shock as the reason for not wanting to be subjects. "I don't like shocks. I got an electrical shock when I was a child and still remember the feeling." Comments such as these on the pain and shock, and others that alluded to the unpleasant, stressful or fearful aspects of the experiment, were made by 62.5% of the participants, when they explained their replies to the question on Consent. All can be subsumed under unpleasantness, stress and fear and more than twice as many participants made this type of comment to Shock than they did for Traumatically Conditioned Response (29.2%) and Airplane (27.1%) where the emphasis was on refusing to be a subject because of actual harm.

Only 10.4% consented to be a subject in Shock. Of these, 60.0% (three participants) wanted to know how it would feel to be shocked or to see their own reaction to being shocked.

The majority of the participants gave unfavorable replies to other questions. But for the question on Ethical slightly more participants considered Shock ethical (54.2%) than considered it unethical (43.7%). For those who checked Ethical, remarking on some aspect of the experiment as evidence that "subjects are not abused" was the most frequent

explanation (57.7%). In fact, this was the only Low-rated experiment where there were no specific comments about the subject being treated unfairly. This contention was made by 16.7% of the participants for Airplane and 31.3% for Traumatically Conditioned Response. 50.0% of those who considered Shock ethical cited its "being voluntary." "If the subjects are voluntary and they realize the procedure and accept it, they must want to do it (knowing the possible consequences). Thus, it is ethical." "The volunteer consented to the experiment. Some people cope with pain better than others. Doesn't really hurt anyone for any length of time." That the subjects are screened was another explanation for Shock being ethical that was subsumed under the rubric "Subjects are not abused." Of those who considered it ethical, 19.2% alluded to the requirement of medical approval. "The person is physically fit. If the person wasn't mentally fit I don't think he/she should participate." Some participants emphasized both the screening and the fact that Shock was voluntary. "The experiment is probably ethical but only because the subjects volunteered and were required to present slips of medical approval."

Of those who considered Shock ethical, 30.8% mentioned that the findings would be of value -- sometimes specifically citing what the experiment demonstrated (not necessarily with any accuracy) and, at other times, making the comments general. Some remarked on the usefulness of the results while also emphasizing that Shock was voluntary. "Because psychiatrists have to learn about human behavior one way or another. So if they can get someone to volunteer then more power to them." "It is physically hurting someone but if they do not mind, important things could be learned."

For the 43.7% who considered Shock unethical, being worthless as an experiment was mentioned, in one way or another, by one-third. "I cannot see that the experimental findings would have a practical use, and if they did have some use, it would not be urgent enough to justify the experiment." Some complained that it had no redeeming value but only caused pain. Others believed that there were better ways of studying learning. 28.6% insisted that Shock was unethical because it involved pain--or was too painful--while another 28.6% mentioned that Shock was harmful. "It uses pain to get a response." "A person shouldn't be subjected to pain just for experimental purposes." "It exposes subjects to something that might prove to be dangerous later on."

Traumatically Conditioned Response. Traumatically Conditioned Response (TCR) was generally condemned by participants. More than three-fourths (77.1%) gave it a negative rating and over half (54.2%) gave it an extremely negative rating (-7 to -10). Not only was the rating significantly below Airplane but for both Benefit and Ethical, the mean score was significantly below one of the other Low-rated experiments. For Benefit, it was Airplane and for Ethical, it was Shock. The mean scores for Harm, Consent and Permit did not differ significantly from the other Low-rated experiments. However, for both TCR and Airplane, the mean score for Permit was not significantly different from Exposure.

Only 22.9% of the participants were willing to grant a permit to TCR. The most frequently checked reason was that "Subjects voluntarily agreed . . ." (81.8%). However, this reason did not differ significantly from three other reasons: "Of value in learning about behavior" (81.8%), "Of value to subjects in understanding themselves" (45.4%), and "Possible discomfort or stress are temporary" (45.5%).

71.1% of the participants refused to grant TCR a Permit. Three reasons were of equal salience in influencing the decision: "Long term harmful consequences" (91.9%), "Too unpleasant or stressful" (81.8%), and "Value does not justify . . . possible harm" (75.7%). Furthermore, TCR had the greatest proportion of participants, excluding Exposure, who remarked on harmful aftereffects of the experiment--75.0% compared to 62.5% for Airplane. Moreover, permanent harm was specifically mentioned almost three times as often as it was for the other Low-rated experiments. 35.4% of the participants referred to permanent harm for TCR while for Shock only 8.3% did and for Airplane, only 12.5% did.

In responding to TCR, 95.8% of the participants mentioned harm, stress, or both, in their comments as compared to 85.4% for Airplane and 77.1% for Shock. Moreover, a large majority mentioned both harm and stress (70.8%). For Airplane it was 56.3% and for Shock, 41.7%.

Like Airplane, reactions to the situation predominated over descriptions of behavior, when participants were asked "how they would behave." Two-thirds of the replies were in the form of reactions and 47.9% of the participants declared they would react with fear, horror or shock. All reactions were of a negative character.

70.9% of the participants said they would not benefit. 38.2% of these gave as an explanation either that TCR was too frightening or that the feeling of dying was involved. 29.4% alluded to its frightening quality. "It would only be another fearful experience better forgotten." "I think it would cause me more harm than anything else. I don't see how I can benefit from a horrifying experience such as that, except maybe give up alcohol so I'll never be back in the hospital." Both fear and the fact

that the sensation of dying was involved might be mentioned simultaneously. "It could be very shocking to have the feeling of death." 11.8% who said they would not benefit, alluded to "death" or "dying" as precluding a benefit. "What will I learn from it? What it's like to be a person that is dying. I do not want to be in that position."

26.5%, disavowing a benefit, asserted in response to this question that they would be harmed rather than benefited. 11.8% mentioned both physical and psychological harm. "It could seriously cause both physical and psychological harm, given the nature of the experiment." Harmful psychological aftereffects would replace any possible benefit for 8.8%. "I would not care to be traumatized in any way that would have continuing effects."

Only 27.1% said they would benefit from TCR. 46.2% of these cited a possible therapeutic effect, prefaced by either "if treated" or "if cured." "If I was cured of alcoholism and had no aftereffects of the experience, I would have benefited."

Of those anticipating a benefit, 30.8% said they would benefit by seeing their own reaction. "It would show me how I would react to a possible physical emergency."

79.1% of the participants replied that they would be harmed by TCR. Of these, 71.1% mentioned harmful psychological effects: 60.5% specifically alluded to harm that would go beyond the experimental situation and 26.3% designated the harm as permanent. "If the experiment did prove its theory (that subjects would continue to respond to a tone or another element in a trauma), I would be permanently scarred by the experiment, and might possible be plunged into the experience again without warning through hearing a tone, etc. Sounds like 'a clockwork orange.'"

"I or the subject may be marred emotionally and mentally forever from this kind of experiment. A person may never get over an experiment of this kind."

28.9% concluded there would be psychological aftereffects without specifying it would be permanent, and an additional 7.9% proposed that these effects would be in the form of a 'clockwork orange' or modified behavior. "It is possible that I would respond to this tone after the original trauma had passed. With all the sounds in this world I wouldn't want to take the chance at responding to a haphazard tone." "People fear too many things. Why add another one? The closeness with death (the thought at least) could cause some mental problems concerning death, illness, etc." Still another participant worried that the experiment might "condition" her to "a 'wrong' mode of behavior."

For some, 23.7% of those who said they would be harmed, the harm would be in the form of an adverse physical reaction. "If a terrible side-effect occurred because of the injection of the drug." The injection of the drug was not the only source of an adverse physical reaction. Adverse physical reactions were also attributed to the stress. "A person could think he is actually dying and have a heart attack because he resisted." The ultimate physical harm, death, was also mentioned (10.5%). "This experiment could've killed a few people. I definitely think that it could harm just about everybody."

For the 20.9% who disclaimed harm for this experiment, the majority (70.0%) based their claim on the stress or reaction being temporary. "I tend to forget unpleasant experiences or I purposely block them from my mind." Another asserted that "If it is a temporary drug, it should not harm me," but then acknowledged the stress by declaring, "But if it

gives a feeling of dying for two minutes, very distressful." Denying harm, and at the same time, acknowledging either stress or harm with a "but," was also the tactic of other participants.

68.8% of the participants did not consent to be a subject in TCR. In refusing to consent, 42.4% complained that the experiment was too traumatic, stressful or extreme. Some merely mentioned fear or stress while others underscored the experience of "dying." That it was simply too extreme, or could not be tolerated, was also asserted. Some focused on their own lack of inclination: "I'm not that courageous or brave."

Besides the stress, the anticipation of being actually harmed by the experiment induced some to say "No." Of the 24.2% who mentioned harm, 15.2% alluded merely to "harm," or specified psychological harm, while 9.1% disclosed a concern with physical harm. In addition to the participants who were deterred by possible harm, there were others who protested even more strongly by specifying that permanent harm would deter them or that participation might be fatal. Of those who said "No" to being a subject, 18.2% declared that they feared permanent harm. As these responses were not coded under the general category of harm--both physical and psychological--mentioned above, the total references to harm (including permanent harm) was 42.4%.

Only 14.6% consented to be a subject and most explained that it was because of the therapeutic nature of the experiment (57.1%). Three of the four who volunteered because of the therapeutic implications gave their consent an "as if" quality by volunteering in the role of an alcoholic seeking a cure, thus keeping their participation at a distance from themselves.

In response to the question on Ethical, 31.1% of the participants made some statement to the effect that the subjects were "treated unfairly." This is the largest percentage for any experiment but Exposure (55.2%). No participant made this type of comment to Shock and only 16.7% made it for Airplane. On the other hand, there were a few (8.3%) who concluded it was fair to subjects and another 8.3% who implied that it might be fair to subjects if they knew the consequences or the outcome. No participant asserted that Airplane treated subjects fairly but 37.5% of the participants proposed that Shock was fair.

TCR was considered unethical by 68.8% of the participants. Many, as noted above, based their decision on the unfair treatment of subjects: 42.4% of those who believed that the experiment was unethical. That the subjects were tricked, or not told the details of the experiment beforehand, was the contention of 30.3%. "The without warning is the key issue." "To subject a person to shock like that, when it's not to his gain, is wrongfully taking advantage of his ignorance." "The subject was deceived. He was told it was to help find a cure and it wasn't. Also the subject doesn't know what he's in for." This participant was concerned not only with the subject being unaware of what was going to happen, but the fact that alcoholics were being taken advantage of, or being exploited. Of those who considered TCR unethical, 15.2% commented on the exploitation of alcoholics as the example of being unfair to subjects. "If the subject is told it is a possible therapy for alcoholism, when it is really a test to see the reaction of an incidental factor in trauma," then it is "definitely" unethical, was the denunciation of another participant.

That TCR is "too abusive, drastic or traumatic" were reasons for proclaiming it unethical by 27.3% who made this judgment. "You are

subjecting patients to intolerable shock," one participant declared. Another believed, "It is not right to put people, alcoholics or anyone else, through such a terrifying experience."

Others lamented that the experiment could cause harmful after-effects or even permanent damage. Of those who considered the experiment unethical, 24.2% thought there might be long-lasting harmful effects. (An additional group of comments, 15.2%, referred to harm without specifying whether it would extend beyond the experimental situation; thus the total comments on harm were 39.4%.) "This experiment may cause an effect on a person that he will never forget. He may never be the same afterwards." Some thought that there might be physical damage, and, in the extreme, death, with or without mentioning psychological aftereffects. "You can go into shock and die as a result."

25.1% said that TCR was ethical. Two-thirds of these based their decision on the treatment of subjects, stating either that they actually were, or should be, treated in a manner that was fair. One claimed that the subjects knew what to expect. Three (25.0%) said it was ethical because it was voluntary. None made a wholehearted endorsement, however. Two contended that it would have to have been "studied sufficiently" or be "fool-proof" before allowing people to volunteer. A third mentioned that there were unethical features since the "subjects were not told what to expect" and were misinformed about its relation to therapy for alcoholism.

Four participants (33.3%) made statements in the form of a proviso: "Ethical if the subjects consent only after being told of all possible effects." Therefore, it would seem that even some of these participants were worried about TCR being fair to subjects but managed to figure out--to their own satisfaction--how the experiment might provide that fairness.

Summary and Discussion of the Low-Rated Experiments

The mean ratings of the Low-rated experiments went from -2.33 to -4.67 and the mean rating for Airplane was significantly higher than Traumatically Conditioned Response. The majority of the participants (62.5% to 77.1%) gave the Low-rated experiments a negative rating and more than a third of the ratings for Shock and more than a half for Traumatically Conditioned Response had ratings that were extremely negative, -7 to -10.

While for the High-rated experiments, the majority gave favorable responses to every question, such unanimity was not present for the Low-rated experiments. For the questions on Harm and Permit, the majority agreed for all three Low-rated experiments, declaring them harmful and denying a permit. When it came to Benefit, Airplane differed from the other two experiments. Slightly more than half the participants presumed that they could benefit while for the other two experiments, the majority denied a benefit. For the question on Ethical, Shock was the exception in having more participants who believed that it was ethical rather than unethical. For the Consent question, a relatively small percentage of participants (10.4% to 18.8%) said "Yes" regardless of the experiment but since one-third checked "Not sure" for Airplane, less than a majority said "No" to being a subject for this experiment. But as noted previously, being unsure was not a reflection of ambivalence but rather reflected the subject's ignorance of being in an experiment.

Most consistency in responding to the five questions was demonstrated for Shock. For Traumatically Conditioned Response, lack of sufficient variability in response may be responsible for the weak intercorrelation between questions, whereas for Airplane, its value to soldiers,

or the opportunity for subjects to benefit, may have contributed to vacillating attitudes. Only Ethical and Permit were significantly correlated for all three Low-rated experiments and these questions were correlated for most experiments. Two experiments, Airplane and Shock, had two pairs of questions in common that had fairly substantial correlations and significant third order partials. Both pairs involved Consent. Consent was correlated with both Benefit and Harm. Although neither experiment elicited unambivalent support, those participants who could foresee a benefit, or were able to minimize the likelihood of harm, were less uncertain about being a subject.

Reasons for denying a permit to the Low-rated experiments that were common to all, not surprisingly, were the reasons that mentioned harm and stress. But long-term harm was relatively less important for Shock, as it had been in the comments, and lack of social value was given more emphasis. Social value was less likely to be repudiated for Airplane and Traumatically Conditioned Response. The value of Airplane to soldiers and other flyers, and the value of Traumatically Conditioned Response to alcoholics as therapy, impressed some participants. On the other hand, the purpose of Shock was either misunderstood, too remote, or both, for most participants. Therefore, any potential value could be dismissed. Two of the most influential reasons for denying Shock a permit referred to the lack of social value and there were more comments that downgraded Shock's objectives, or claimed the experiment was worthless, than to either of the other Low-rated experiments. A few participants did mention Shock's social value, and since it was voluntary, gave the experiment their approval. But this approval was usually reserved for others, and not themselves, and there were more participants who

made derogatory comments about Shock as an experiment than who praised its value (31.3% versus 16.7% of the participants).

For Airplane, deception was relatively more salient as a reason for denying it a permit than it was for either of the other Low-rated experiments. Obviously for Shock, deception was not an issue, and its relative salience for Airplane can be easily understood since the subjects were not aware of being in an experiment. For Shock, in the event that it was granted a permit, being voluntary was the singularly most influential reason. For the other two experiments, the salience of the different alternatives for granting a permit was diffuse. Some were more important than others, but there was no single reason, or group of reasons, that were distinctly more influential. For Shock, having informed consent and being voluntary gave participants more opportunity to approve the experiment, if only for others, while, at the same time, reasonably declining to be subjects themselves.

An emphasis on stress and harm was the predominant theme of reactions to the Low-rated experiments. Participants referred to stress and harm considerably more frequently than they did to the Intermediate experiments.

The extreme stress and the potentially harmful aftereffects of Traumatically Conditioned Response and Airplane would seem sufficient to explain their low ratings. But why Shock? Not only were participants equally unwilling to participate in Shock as they were to participate in Exposure (the only experiment where this is the case), but the mean score for Harm was not significantly different from either Traumatically Conditioned Response or Airplane. Yet, when the most worrisome aspect of harm is considered--that which extends beyond the experimental situation--

only 20.8% of the participants mentioned harmful aftereffects for the Shock experiment whereas 75.0% and 62.5% mentioned it for Traumatically Conditioned Response and Airplane. Therefore, it would seem that participants were aware of the seemingly greater harmful potential of the latter two experiments. Nevertheless, Shock seems to have elicited a strong and emotional rejection, a rejection based on its use of painful electric shock. It was not merely the idea of pain, but pain induced by electric shock, that appeared to be especially unpalatable to participants. It seemed to evoke an almost mystical sense of horror and revulsion. That electric shock evokes a response that goes beyond pain is also in evidence from a study of stress and discomfort in psychology procedures (Farr and Seaver, 1975) where perceived discomfort was the greatest for electric shock of "maximum tolerable intensity," the type of shock used for Shock. Furthermore, Shock may have suffered in comparison with other experiments because its purpose is neither "immediate" or compelling, to potential subjects.

The apparent lack of social value, and the 'horror' of electric shocks, perhaps influencing judgments of social value, combined to make participants vehemently against the Shock experiment. Thus, despite Shock being completely voluntary, with informed consent and medical supervision, participants were turned off by strong emotional reaction to painful electric shock that was uncompensated by any obvious rewards.

Nazi Experiment

Prolonged Exposure to Freezing Temperature. Since the purpose of including this experiment was to investigate whether participants could make reasonable ethical judgments, it is not of interest in itself. As emphasized previously, Exposure was included because of its highly

unethical and inhumane character and if it had not been reacted to differentially by participants, their opinions of other experiments would be meaningless.

Although there were participants that were willing to grant a permit to Exposure (14.6%), the reaction of most participants was extreme renunciation. 42.7% gave it the lowest possible rating (-10) and 76.0% gave it a rating from -7 to -10. Comments, explaining participants' checked answers to the questions, also indicated that they were aware of the extreme nature of this experiment. The tone of many comments was both emotional and indignant. Permanent harm, especially fatalities, was underscored by a majority of the participants (65.6%). For Traumatically Conditioned Response, only 35.4% mentioned permanent harm and only a few feared a fatality. Further, over half of the participants (55.2%) made comments deploring Exposure's lack of fairness to subjects, often in quite dramatic terms, to the question on Ethical while less than 30% had done so for Traumatically Conditioned Response.

84.4% of the participants asserted they could not benefit from Exposure and nearly half of these (48.1%) proclaimed they would be harmed rather than benefited. Fatalities, or the threat of death, were alluded to by 19.8% and the others referred to sickness, physical suffering and harm generally. Many merely complained that this was a situation in which no personal benefit was possible for the subject (42.0%). 18.5% expressed this notion by statements that conveyed that there was no possible way to benefit, while 16.0% noted that the experience had no personal value and 7.4% claimed that only others could benefit.

14.6% of the participants alleged that benefit was possible; none were definite. Half of these attributed the benefit to being able to

advance knowledge or help science--benefits that are impersonal.

On the possibility of harm, participants were nearly unanimous. 96.9% insisted they would be harmed, and for 54.8% of these, the harm was in the form of being a fatality, a blatant form of permanent harm. 34.4% alluded to physical harm without disclosing whether it would be permanent.

Only one participant was willing to be a subject in Exposure while 87.5% said "No." The remaining 11 participants checked "Not sure" with 2 giving a reason for refusing and 3 stating that since the experiment was "forced," they had no choice. The possibility of permanent harm deterred 28.6% of those who did not consent while an additional 14.3% merely alluded to harm without specifying whether it would be permanent. Being too unpleasant, stressful, severe, or inhumane was offered as explanations by 26.2%. Still others responded by directing derogatory comments at the experiment (21.4%) such as "it was too risky" or "not worth the suffering."

Exposure was denounced by 84.4% of the participants as unethical and over two-thirds (67.7%) checked "definitely." For most experiments, "probably" unethical was checked more frequently than "definitely." (Only Traumatically Conditioned Response and Shock had more participants who checked "definitely" rather than "probably" but for these two experiments, the differences were slight. Further, for Shock, more participants checked ethical rather than unethical.)

Of those who considered Exposure unethical, 65.4% made comments denouncing the unfair treatment of subjects. 44.4% of these comments deplored the fact that subjects were forced to participate in the experiment. The harm and extreme suffering inflicted on subjects was another indictment

of Exposure. 32.1% of those who called it unethical underscored the harm and suffering. That it was much too risky, and could be fatal, was expressed by 18.5% of those who proclaimed Exposure unethical. All except one specifically mentioned fatalities. Another 18.5% of those who checked unethical made comments directed at the findings and the experimental method. These included the assertion that Exposure did more harm than good and that it was not worth the human suffering (6.2%); that the results were worthless (4.9%) or limited (3.7%); and finally, that "other methods should be used" (3.7%).

An Addendum: Should EXPOSURE be Included in Future Studies? Screening participants is probably necessary regardless of whether the procedure is used for "presumed consent" or exploring ethical issues. But is it necessary to use Exposure, especially since including--or not including--the 14 participants willing to grant a permit to Exposure did not affect the overall findings? Exposure is not foolproof in isolating participants with dubious judgment. It may capture a couple of fish in the net that do not deserve to be there as well as allowing other deserving fish to escape. Dubious judgment was also apparent in the discrepancies between Consent and Permit and in granting permits to experiments presumed to be unethical. A more effective means of screening might be to classify respondents on the basis of discrepancies in the Consent and Permit questions and the Ethical and Permit questions. Demerits could be given whenever there is a discrepancy that was not adequately justified by the participant's explanation. The criterion for adequate justification can be specified in advance. Participants could be isolated--or rejected--if the number of demerits is sufficiently high to indicate dubious judgment. If Exposure

is included, granting a permit would add to the demerits. But if there was considerable overlap between those who received many demerits and those who granted a permit to Exposure, this would make it unnecessary to rely on Exposure as a means of screening participants.

Focus on the Questions

It should be recalled that five of the six questions received a numerical score from -2 to +2. Except for Traumatically Conditioned Response, there were significant differences in the mean scores for the individual questions within each experiment: at least one question differed from the others.

If the scores for all experiments are combined, the question on Permit has the highest composite mean score, while Consent and Benefit have the lowest mean scores, significantly lower than Harm, Ethical and Permit, and both are in the negative range (-.16 and -.14, respectively). The relatively low score for the question on Benefit--across experiments--does not give rise to concern (Table 21). Experiments are not, after all, conducted for the purpose of benefiting subjects. The relatively low score for Consent is a different matter, especially since it occurs in conjunction with a relatively high score for Permit. (Permit was also significantly higher than Harm.) It would seem that participants are more willing to grant a permit to an experiment than they are to consent to be a subject in the experiment themselves.

On the surface, this discrepancy between Consent and Permit certainly raises qualms about the ethical sensitivity of participants. From an ethical viewpoint, the most troublesome types of response are the ones to which a permit is granted by a person who is either unwilling or "Not sure" about

Table 21. Mean Scores for Questions Across Experiments: A Posteriori Contrasts and Repeated Measures ANOVA

A Posteriori Contrasts, Duncan .05

CONSENT	BENEFIT	HARM	ETHICAL	PERMIT
-0.16	-0.14	+0.07	+0.18	+0.23

	M.S.	d.f.	F	P
TOTAL QUESTIONS	18.57	4	15.39	<.001
Residual	1.21	2300		

his own participation. It is the frequency of this behavior that is of greatest concern, and from 11.5% to 43.8% of the participants to each experiment were willing to grant a permit when they themselves were either unwilling of "Not sure" about being a subject (see Table 1G, Appendix G).

The frequency of consistent and inconsistent responses for each experiment does not, of course, provide information on the number of participants who were consistent or inconsistent. An individual participant may be consistent, or inconsistent, for 1 experiment or 6. If the consistency question is posed for participants, rather than experiments, we find that only 13 (13.5%) were consistent for Consent and Permit for every experiment in their booklet and 2 participants made inconsistent replies for 5 of the 6 experiments (Table 22). Further, more than 70% of the participants granted a permit to at least one experiment when they were unwilling to participate or "Not sure." Does this mean that 70% demonstrated some form of dubious judgment, even if it was relatively minor? Or is it possible that some of these inconsistencies are more apparent than real? To attempt to understand what appears to be an inconsistent attitude toward being a subject and granting a permit, it is necessary to examine the comments made by participants, especially to the questions on Consent, Ethical and Permit.

Refusing to be a subject, or not being sure about it, for either a voluntary or harmless experiment, need not indicate an inconsistent attitude. For example, one participant was "Not sure" about participating in Game because she wanted "to participate in an experiment that would interest me more" but stressed the voluntary nature of Game in her answers to the questions on Ethical and Permit. Another participant said "No" to

Table 22. Percentage of Participants Who Were Consistent Or Inconsistent For Permit and Consent

	Actual checks		Revised classifications based on participant's explanations	
Consistent	13	13.5	51	53.1
Permit Yes, Consent No or Not Sure	49	51.0	32	33.3
Permit No, Consent Yes or Not Sure	15	15.6	9	9.4
Mixed Inconsistent (Both types described above)	19	19.8	4	4.2
N	96	100%	96	100%

being a subject in Shock because she "doesn't like shocks" and she, too, stressed the voluntary character of the experiment. Still another participant was "not sure" about consenting to Sensory because it was a situation that she did not like but felt that the actual subjects could end their participation whenever they felt like it and that it was voluntary. Therefore, she considered Sensory ethical and was willing to grant it a permit.

Although an experiment's being voluntary makes it more likely that a person can grant it a permit while refusing to be a subject, and still remain consistent, not all reasons for declining to participate in a voluntary experiment when a permit is granted are equally plausible or valid. One participant refused to consent to Sensory because of the "possibility of unnecessary injury," felt it was very unethical because a subject could be "hurt," and, yet, was willing to grant Sensory a permit. This is certainly inconsistent and can be considered as representing a dubious ethical perspective. Another participant, while stressing that Shock was voluntary, explained her own unwillingness to participate by saying that the experiment was "too risky," thus remaining inconsistent.

Does an experiment need to be both voluntary, and to involve informed consent, for an apparent inconsistency between Consent and Permit to disappear when the explanations are examined? Not necessarily. One participant refused to consent to Reaction (homosexuality) because she felt it had "no social value" and almost checked "No" to Permit for the same reason, but did not do so because she felt the experiment was harmless and that there were other reasons for granting it a permit.

Table 22 summarized the frequency of consistent and inconsistent participants based both on the actual checks that were made for Consent

and Permit and the revised classification based on an examination of the written comments.* The percentage of consistent participants rises dramatically from 13.5% to 53.1%. Nevertheless, it is still somewhat troublesome to find that 37.5% continued as inconsistent in granting a permit to an experiment when they themselves did not want to be a subject. Thirteen of the 36 participants who did this were in the group that were willing to give Exposure a permit and 8 of these were inconsistent for other experiments as well as for Exposure.

Countering the somewhat discouraging picture of participants that the discrepancy between consenting to be a subject and granting a permit provided, were the high correlations that existed between the questions on Ethical and Permit. These two questions have a stronger correlation than any other pair of questions. Eight of the 10 experiments have both a moderately high correlation (.48 to .72) between Ethical and Permit and a significant third order partial.

A few participants undoubtedly had no understanding of what was meant by ethical (one participant thought it meant "ethnic"). Other participants had a somewhat vague notion of the intent of the question on Ethical and a few indicated, by their replies, that they saw no relationship between ethicality and the conduct of an experiment. Further, some reasons that were given for considering an experiment ethical or unethical, such as an experiment's contribution to science, cannot be considered legitimate reasons in themselves for declaring an experiment ethical or

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*In Table 2G, Appendix G, the revised classifications for consistent and inconsistent attitudes toward Consent and Permit are presented for each of the 10 experiments. The percentage of consistent replies is not only higher, of course, but there is less variation among experiments.

unethical. This is not to say that considerations of the validity of an experiment, and its potential contribution to knowledge, do not enter into ethical decisions at some level. Any experiment that is methodologically unsound, and of no value to science, but that places a subject in a situation of risk, or even discomfort, should undoubtedly be deemed unethical. But contributing to science, in and of itself, is not a criterion for declaring an experiment ethical. Nor did the experimental descriptions provide sufficient information to make such a decision.

Although a judgment of ethical need not necessarily result in granting a permit since other considerations come into play, such as "the worth of the experiment," a judgment of unethical would seem sufficient for refusing a permit, even when an experiment was thought to be "probably unethical." Therefore, it seems warranted to assume that ethical sensitivity or an understanding of ethical issues may be lacking for those participants who decided an experiment was unethical, yet were willing to grant it a permit. A lack of sensitivity, or understanding, is also suggested when a participant finds an experiment "neither ethical or unethical." Thirty participants (31.3%) declared at least one experiment unethical but nonetheless granted it a permit. An additional 8 participants made no commitment on the ethicality of at least one experiment.

Participants varied in the quality and cogency of their reasons for considering an experiment ethical or unethical and individual participants varied in the quality and cogency for different experiments, probably reflecting their ability to translate their feelings and thoughts into words as well as their understanding of the ethical issues involved. For some experiments this may have been more difficult than for others. Further,

granting a permit only to an experiment that is considered ethical did not guarantee that the comments on ethicality would always be pertinent or noteworthy. How, then, do the 30 participants, who were willing to grant permits to experiments they called unethical, explain their actions? Do these participants lack concern for the issues that determine whether an experiment is ethical?

Occasionally participants did not consider any experiment ethical but nevertheless granted some experiments a permit. One of these said that ethics did not apply to Game but granted it a permit. She also granted Conformity a permit although she thought it was unethical because "it puts a person in an uneasy position." She objected to Attack because the subject "is drawn in on false pretenses," to Shock because of the pain, to Airplane because it "plays with a person's life and is too stressful," and to Exposure because "it is not voluntary and it may be harmful." It certainly cannot be said that this participant is unconcerned about ethical issues. Perhaps she cannot conceptualize what would constitute an ethical experiment and therefore granted permits to experiments if they were considered less unethical than others. A few participants called an experiment unethical because they considered the possible behavior of subjects unethical and, therefore, were not granting permits to "unethical experiments."

For other participants, judgments of ethicality did not seem related to considerations involved in granting a permit. For example, one participant called Airplane and Traumatically Conditioned Response unethical because the subjects were tricked and denied them permits, yet granted a permit to Attack that he considered unethical because "it took unfair advantage of subjects who are not so skilled in debating techniques."

Another called Reaction unethical because she did not think it was fair to subjects and could not see what purpose it would serve, yet granted Reaction a permit.

It was apparent that participants differed in how they approached ethical issues. Not only did some participants conceptualize their thoughts about the issues better than others, but also, some were able to handle the ethical question relatively well for most experiments while others performed unevenly. There were also participants who did not have a conception of the relation of ethical issues to the conduct of experiments and others who did not seem to have a firm understanding of what was meant by ethical or unethical. For still others, notions of ethical must be considered rather dubious, at least for some experiments. Hence, it seems obvious that a checked answer to the question on Ethical, without an explanation, would be meaningless. Without this explanation, we would not have any way of knowing what the participant considers the question on Ethical to signify. And, as we have seen, participants' conceptions of ethics can be quite different from the conceptions of psychologists, and the differed from each other.

Focus on the Reasons

Recall that after participants had decided whether they would grant a permit for the conduct of an experiment (question 6), they were asked to indicate what reasons influenced their decision. They could write their own explanations, as before, but they also had the option of checking any alternative from a group of 8, provided separately for "Yes" and "No" answers. If an alternative was of particular importance in influencing their decision, they could give that alternative two checks, but this could only be done once.

The relative importance of the eight reasons for voting, or not voting, for a permit to conduct an experiment were determined by comparing the means of each alternative in either the "Yes" or "No" groups. As described, the means were obtained by treating the omission of a check as 0, a single check as 1, and a double check--allowed only once--as 2. Two types of analyses were carried out with this data. One was based only on the number of "Yes" or "No" replies for each experiment. This analysis compared the relative rank of an alternative irrespective of the frequency with which an experiment was granted a permit. The second analysis was based on the total number of participants for each experiment, and all alternatives not in the appropriate group had a 0 value. When this method was employed, the means reflected both the particular reasons for granting or denying a permit, and the frequency with which an experiment was, or was not, voted a permit. Hence, the first method compared the relative ranking of the reasons within one experiment with the ranking within other experiments. And the second method compared the reasons in terms of their absolute frequency.

For the first method of treating the data, "Yes" and "No" only, "To learn something of value about human behavior" and "Does not take unfair advantage of the subjects" did not show significant differences among the experiments. For the second method, the total sample, "Encourages undesirable behavior" was not significant (see Tables 1H and 2H, Appendix H). Tables 23 to 38 present the a posteriori differences for the "Yes" and "No" alternatives for both methods of treating the data.

The two reasons concerned with the issue of deception, "If the subjects knew the true purpose . . . of the experiment, . . . they might behave in an unnatural manner" and "Subjects . . . may feel deceived," one a "Yes,"

the other a "No" alternative, were both significant for the two types of analyses. But since only six of the ten experiments employed deception, the significant Fs may reflect this. Therefore, it is necessary to note what occurs when only the six deception experiments were included in the analyses. For the "Yes" or "No" only analyses, there were no significant differences.* When the total sample was analyzed, both alternatives were significant. For the "Yes" version, the use of deception was endorsed significantly more for Attack, Conformity and Reaction than it was for Traumatically Conditioned Response and Airplane. Obedience was significantly higher than Traumatically Conditioned Response but did not differ from any of the other experiments. For the "No" version, "Subject . . . feels deceived," a similar pattern emerged, but in reverse. Airplane and Traumatically Conditioned Response were rejected significantly more often for this reason than Obedience, Attack and Conformity.

The reasons for voting "Yes" or "No" to the Permit question will be discussed according to their overall importance to participants.** This general ranking does not, of course, reflect their absolute salience, being undoubtedly influenced by the experiments that were included. But, nonetheless, the overall ranking is not without some implications concerning how "potential subjects" react to experimental situations.

The reasons for granting permission for an experiment to be conducted will be discussed first. The following three reasons were checked significantly more often than the remaining five reasons but there was a significant difference among them.

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*See Table 3H, Appendix H, for ANOVAS and a posteriori contrasts.

**See Table 4H, Appendix H, for repeated measures ANOVAS and a posteriori contrasts.

Knowing How They Would Behave in This Situation Will Be of Value to the Subjects in Understanding Themselves

This alternative was of paramount importance to participants as a reason for voting a permit. With the exception of "To learn about behavior," it was checked significantly more often than any other reason. It was the single most important reason for endorsing Conformity, Game and Attack. For Reaction, it shared this salience with only one other reason (see Table 19).

When the relative ranking of the reasons is compared across experiments, being "of value to subjects in understanding themselves" had significantly higher means for Conformity, Game, Attack, Reaction and Airplane (Table 23). There was, however, considerable overlap for the different experiments, indicating that if any experiment was endorsed, it was very likely to be endorsed for this reason, another indication of the saliency of this reason.

If the comparison among experiments is made so that the means reflect the absolute frequency of checking this reason, three experiments stand out from the others: Conformity, Game and Attack. This was the only alternative in which these three experiments formed the highest unique group. Thus, it was not only the most important reason for endorsing each of these experiments individually, but these three experiments were endorsed significantly more often for this reason than any other experiment. That all three of the High-rated experiments would share one reason, and one reason only, as the reason of paramount importance for endorsing them, is notable. Moreover, for two of these experiments, Conformity and Attack, the majority of the participants commented spontaneously to one of the five other questions, that subjects would have an opportunity to learn about themselves if, and when, they participated.

Table 23. Of Value to Subjects in Understanding Themselves: A Posteriori Contrasts *

Based on Yes Only, SNK .05

EXPOSURE	SHOCK	SENSORY	TCR	OBEDIENCE	AIRPLANE	REACTION	ATTACK	GAME	CONFORMITY
0.29	0.44	0.66	0.82	0.85	1.00	1.07	1.10	1.14	1.27

Based on Total Sample, Duncan .05

EXPOSURE	SHOCK	TCR	AIRPLANE	OBEDIENCE	SENSORY	REACTION	ATTACK	GAME	CONFORMITY
0.04	0.17	0.19	0.29	0.48	0.52	0.65	0.94	1.01	1.17

*For this, and subsequent tables, Duncan was used for contrasts with equal Ns and SNK for unequal Ns.

The opportunity that an experiment affords for self-understanding is apparently one of its most attractive features for participants and, undoubtedly, plays a crucial role in determining whether an experiment is voted a permit--a role that may over-ride other considerations. That self-understanding is sought after is also evidenced by the popularity of books that profess to provide insight into one's own behavior. Indeed, it is not unexpected to find people interested in themselves, and yet, this interest seems to be largely overlooked in discussions of benefits to be derived from participating in psychology experiments. When self-knowledge is mentioned in the context of psychology experiments, it is usually to condemn the imparting of "potentially disturbing insights." People may not come to the laboratory for "potentially disturbing insights" as Kelman has suggested, but they certainly seem to seek "insights" and "self-understanding."

To Learn Something of Value about Human Behavior

This is the only alternative for endorsing an experiment that does not refer to the experience of the subject and exclusively focuses on the objective of the experiment. Not only was this alternative one of the most frequently checked, but there was no significant difference in its relative rank for different experiments (Table 24). In other words, the contribution that an experiment makes to knowledge of human behavior is a reason for voting "Yes" that was equally favored for any experiment, if that experiment was granted a permit. This is not surprising since the primary purpose of a psychological experiment is precisely that of gaining knowledge of behavior.

Learning "something of value about human behavior" is not necessarily a major reason for granting a permit to individual experiments.*

*Table 19, Focus on the Experiments, has the a posteriori contrasts for the ranking of all alternatives within experiments.

Table 24. To Learn About Behavior: A Posteriori Contrasts.

Based on Yes Only, SNK .05

EXPOSURE	ATTACK	AIPRLANE	SHOCK	TCR	OBEDIENCE	GAME	REACTION	CONFORMITY	SENSORY
0.64	0.78	0.79	0.89	0.91	0.93	0.93	0.93	1.00	1.00

Based on Total Sample, Duncan .05

EXPOSURE	TCR	AIRPLANE	SHOCK	OBEDIENCE	REACTION	ATTACK	SENSORY	GAME	CONFORMITY
0.09	0.21	0.23	0.33	0.52	0.56	0.67	0.79	0.82	0.92

For Reaction, it was one of two equally important reasons for granting a permit, and for Sensory and Obedience, it was one of three important reasons. Although "To learn about behavior" was among the four most checked reasons for endorsing Traumatically Conditioned Response, only two other reasons were significantly lower. For Airplane it did not differ from any other reason. The importance of learning about human behavior, for the remaining five experiments, was always secondary to one or more other reasons for granting a permit.

It would seem that this reason for granting a permit is given greater emphasis for any experiment that participants might have some ambivalence about endorsing, an ambivalence that may be based on objectionable features or on the possible deleterious consequences of participation. If participants then endorse the experiment, the experiment's value in learning about behavior becomes especially salient.

Subjects Voluntarily Agreed to be in the Experiment

Subjects volunteer, the third most checked alternative, did not differ from "To learn about behavior" in the frequency of being checked but it was significantly lower than "Of value to subjects in understanding themselves." That the voluntary nature of an experiment is a paramount concern of participants is illustrated, ironically, by their giving this as a reason for granting a permit to Exposure, actually involuntary. In some instances, participants realized that Exposure was not voluntary, but stated that "being voluntary" was a prerequisite for granting a permit.

Being voluntary was the most salient reason for endorsing Shock as well as Exposure, both in terms of the relative importance of this alternative compared to other alternatives, and in terms of the relative rank

compared to other experiments (Table 25). However, neither Exposure nor Shock differed significantly in relative rank when compared to Sensory, Obedience or Traumatically Conditioned Response.

On the other hand, Exposure was among the four experiments with the least number of checks when the absolute frequency is the criterion used. And it was Sensory that received more checks than any other experiment for being voluntary. Sensory, however, did not differ significantly from either Game or Attack in the number of checks it received. Since Attack was checked so frequently, and it is an experiment employing deception, we must conclude that being voluntary need not necessarily imply informed consent for participants.

As noted previously, if either Exposure or Shock were granted a permit, being voluntary was the single most important reason. And for Sensory, it was one of two major reasons for granting a permit when the relative salience of the reasons within experiments is considered. While Exposure is obviously not voluntary, Shock and Sensory can be considered voluntary. For Shock, consent is both voluntary and informed. Sensory, although voluntary, has limitations on informed consent since the subjects are not told of possible hallucinations or confused thought processes. However, the voluntary nature of this experiment is enhanced by the participant being able to withdraw at any time. Many participants cited this in explaining why they would not be harmed or why they considered the experiment ethical.

Game is also voluntary, and with informed consent, but its being voluntary would seem to be overshadowed by other reasons of equal, or greater, salience in granting it a permit. Two alternatives were checked

Table 25. Subjects Voluntarily Agreed: A Posteriori Contrasts

Based on Yes Only, SNK .05

CONFORMITY	REACTION	AIRPLANE	ATTACK	GAME	OBEDIENCE	SENSORY	TCR	SHOCK	EXPOSURE
0.55	0.62	0.71	0.73	0.74	0.89	1.08	1.09	1.28	1.29

Based on Total Sample, Duncan .05

EXPOSURE	AIRPLANE	TCR	REACTION	SHOCK	OBEDIENCE	CONFORMITY	ATTACK	GAME	SENSORY
0.19	0.21	0.25	0.38	0.48	0.50	0.50	0.63	0.66	0.85

significantly more, and another two were given equal weight with voluntary as reasons for granting Game a permit.

It would seem that being voluntary becomes relatively more important as a reason for voting an experiment a permit if an experiment has some strongly disliked features, such as Sensory, Shock or Exposure. If an experiment is then endorsed, despite its being considered--at minimum--unpleasant, then its being voluntary will be especially salient since being voluntary can serve as a rationalization for approval.

The following four reasons for granting a permit were of intermediate importance but only one other reason was less important. There were no significant differences among the four.

Does Not Take Unfair Advantage of Subjects

This alternative does not represent a specific ethical issue but is rather a general statement that focuses on subjects. In a sense, it serves as a counterpart for any statement in the "No" group that emphasizes the disadvantage of being a subject without implying that the subject benefits.

It is not surprising, therefore, to find that there were no differences in the relative ranking of this reason among experiments (Table 26). Furthermore, any differences in the absolute frequency of checking this reason merely reflects how frequently an experiment was granted a permit.

There were, however, three experiments where "not unfair to subjects" was likely to have some bearing on voting a permit: Game, Sensory and Shock. For all three, this reason earned a rank of intermediate importance, above other alternatives. All three experiments are voluntary, and subjects are informed of the nature of the procedures, if not completely informed for Sensory,* and this may be why they were considered "not unfair."

*As previously stated, being able to quit at any time may compensate for this.

Table 26. Not Unfair to Subjects: A Posteriori Contrasts

Based on Yes Only, SNK .05

AIRPLANE	TCR	OBEDIENCE	REACTION	EXPOSURE	CONFORMITY	SENSORY	ATTACK	SHOCK	GAME
0.36	0.36	0.41	0.41	0.43	0.43	0.50	0.51	0.56	0.68

Based on Total Sample, Duncan .05

EXPOSURE	TCR	AIRPLANE	SHOCK	OBEDIENCE	REACTION	CONFORMITY	SENSORY	ATTACK	GAME
0.06	0.08	0.10	0.21	0.23	0.25	0.40	0.40	0.44	0.60

But since there were no differences in the relative rank of this alternative, and it was not a major reason for endorsing any experiment, "not unfair to subjects" would seem to play a subsidiary role in whether an experiment is granted a permit. If the experiment is approved for other reasons, then certain characteristics of the experiment may make it more likely that this alternative is checked along with other, more salient, reasons.

Possible Discomfort or Stress for the Subjects Will Be Only Temporary

This alternative acknowledges that stress or discomfort exist and, at the same time, minimizes the stress or discomfort by asserting they are temporary. If this alternative is checked, stress or discomfort are recognized as part of the experimental situation. Not checking this alternative may indicate, of course, that a participant feels that the "stress or discomfort" is not temporary. But it may also be omitted because the participant felt that "stress or discomfort" did not exist. The latter is more likely.

This reason for endorsing an experiment had the greatest relative importance for Sensory although Sensory did not differ significantly from Shock, Airplane or Attack (Table 27). If the absolute frequency of checking this alternative is considered, both Sensory and Attack received the most frequent checks although neither differed significantly from Conformity. Since Conformity and Attack are two of the High-rated experiments, it would appear that being bland, or without any disturbing features, is not a prerequisite for being acceptable to potential subjects: discomfort or stress is acknowledged and tolerated in experiments, provided the discomfort or stress are considered temporary.

Table 27. Discomfort or Stress Will be Temporary: A Posteriori Contrasts

Based on Yes Only, SNK .05

GAME	OBEDIENCE	CONFORMITY	REACTION	TCR	EXPOSURE	ATTACK	AIRPLANE	SHOCK	SENSORY
0.28	0.41	0.48	0.48	0.55	0.64	0.66	0.71	0.72	0.76

Based on Total Sample, Duncan .05

EXPOSURE	TCR	AIRPLANE	OBEDIENCE	GAME	SHOCK	REACTION	CONFORMITY	ATTACK	SENSORY
0.09	0.13	0.21	0.23	0.25	0.27	0.29	0.44	0.56	0.60

For all except four experiments, the temporary nature of stress or discomfort was relatively unimportant as a reason for granting a permit. For Exposure, Shock, Sensory and Attack, it had some importance, although it was not a primary reason for approving these experiments: other reasons were given equal emphasis and one other reason was given more emphasis. That this would not be among the most important reasons for endorsing an experiment is understandable. Why should an experiment be endorsed merely because stress or discomfort is temporary? It is logical that stress or discomfort would be tolerated only if there are other cogent reasons for endorsing an experiment.

When stress or discomfort being temporary is a reason for granting a permit, it seems to be equally important for a highly rated experiment, such as Attack, as it is for experiments that are usually disliked, such as Shock and Exposure. For Exposure, checking this alternative would seem to be part of a pattern of denial, evidenced by some participants, when they granted Exposure a permit.

Not Too Unpleasant or Stressful for the Subjects

This alternative may indicate either that unpleasantness and stress are within reasonable limits, considered minimal, or that they do not exist. This was a relatively important reason for endorsing Game, both in terms of the relative rank and the absolute frequency of its being checked, compared to other experiments (Table 28). However, in terms of its relative rank, Game did not differ from four other experiments.* Both Conformity and Game were checked more frequently as being "Not too unpleasant or stressful" but neither differed significantly from Attack.

*Conformity, Reaction, Attack and Airplane.

Table 28. Not Too Unpleasant or Stressful: A Posteriori Contrasts

Based on Yes Only, SNK .05

EXPOSURE	SHOCK	TCR	OBEDIENCE	SENSORY	AIRPLANE	ATTACK	REACTION	CONFORMITY	GAME
0.07	0.17	0.18	0.26	0.42	0.43	0.49	0.52	0.59	0.66

Based on Total Sample, Duncan .05

EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	CONFORMITY	GAME
0.01	0.04	0.06	0.13	0.15	0.31	0.33	0.42	0.54	0.58

Nonetheless, this was not an important reason for endorsing an experiment. For all experiments but Game and Sensory, "not too unpleasant or stressful" was among the least checked reasons for granting a permit. For Sensory, there was another reason that was checked significantly less. It was relatively more salient for Game; three reasons were checked less frequently. In fact, for some participants, it was the rather bland character of Game that seemed to induce them to grant it a permit rather than more substantive characteristics of the experiment.

The Value of the Experiment in Advancing Our Knowledge of Human Behavior Justifies Exposing the Subject to the Possible Stress Involved

This alternative, requiring that the participants evaluate an experiment by balancing possible advantages and disadvantages, was not frequently checked. Perhaps this is because of the difficulty involved in making this sort of judgment. Or, perhaps it is because stress tends to be minimized, or overlooked, if an experiment is favorably viewed on other grounds. None of the alternatives referring to possible "stress" in an experiment were of paramount importance as reasons for endorsing an experiment. Being considered overly stressful, however, was an important reason for rejecting an experiment.

The rank of this reason was significantly higher for Shock, Sensory, Obedience and Conformity than it was for Reaction and Attack, although they all involved stress (Table 29). It is unlikely that Reaction and Attack were not considered "of value" since they both ranked high for the alternative that specifically affirms that an experiment has "value," but it is possible that the stressful aspects of these experiments were minimized if they were granted a permit or that other reasons were considered more cogent.

Table 29. Value of Experiment Justifies Possible Stress: A Posteriori Contrasts

Based on Yes Only, SNK .05

REACTION	ATTACK	AIRPLANE	GAME	EXPOSURE	TCR	CONFORMITY	OBEDIENCE	SENSORY	SHOCK
0.21	0.29	0.36	0.36	0.43	0.45	0.57	0.59	0.66	0.72

Based on Total Sample, Duncan .05

EXPOSURE	AIRPLANE	TCR	REACTION	ATTACK	SHOCK	GAME	OBEDIENCE	CONFORMITY	SENSORY
0.06	0.10	0.10	0.13	0.25	0.27	0.32	0.33	0.52	0.52

Or perhaps the participants did not feel the value of Attack and Reaction outweighed the "discomfort or stress," but this is less likely. When the absolute frequency of checking this reason is considered, it is Sensory and Conformity that were checked the most, although they did not differ significantly from either Obedience or Game. With respect to relative rank, Sensory and Obedience were endorsed more frequently for this reason, especially Obedience, compared to other experiments. Thus, balancing the potential contribution and the stress is apparently more salient for these experiments. But if the relative salience of the reasons within an experiment is considered, endorsing Obedience because the "value justifies possible stress" was not more important than any other reason for endorsing Obedience. For Sensory, it occupies a middle rank, with one reason checked less and two other reasons checked significantly more. It was also of intermediate importance for Shock, significantly higher than two reasons, lower for only one. For both Sensory, Shock and Obedience, their value seems to be emphasized, when they are endorsed, as the stressful nature of the experiments seem to be very much in the foreground of participants' awareness.

If the Subjects Knew the True Purpose or Nature of the Experiment Ahead of Time, They Might Have Behaved in an Unnatural or Overly Self-Conscious Manner

All other reasons for endorsing an experiment were checked significantly more than this reason, an alternative designed to elicit attitudes toward "deceptive" procedures. The word "deception" was deliberately avoided because of its connotative meaning. Using the word "deception" in this context might be analogous to asking: do you approve of sin? However, the wording of the alternative may have been too obscure or the alternative might require an overly complicated analysis.

First the participant had to decide that the alternative referred to "deceptive" procedures in an experiment and, secondly, that these procedures were essential to the experimental design. Even if the word "deception" had been used, the alternative would still be complicated. It would require that the participant acknowledge the "deception," as before, then find the "deception" objectionable, and, finally, it would require that the participant decide that despite its being objectionable, it was permissible for the particular experiment they were endorsing. Because it involves so many steps in the decision process, not checking this alternative has a rather ambiguous meaning. Does it mean that when the participant approves an experiment involving what is traditionally considered deception, but does not check this alternative, that he does not consider deceptive procedures objectionable and therefore does not need to justify them? Or does it mean that he does not consider that particular experiment deceptive? Or, finally, that he simply did not comprehend the meaning of the alternative, was unable to apply it, or found it unimportant?

There are indications from the manner in which participants reacted to the different experiments in this study that the issue of deception does not have the same impact on potential subjects that it has had on psychologists. At any rate, this reason for endorsing an experiment, partially perhaps because the alternative is rather complicated, and perhaps because the issue of deception is not really salient, was the least checked reason for granting a permit.

Condoning deception was relatively more important as a reason for granting a permit to both Reaction and Obedience but neither experiment was significantly different from Attack, Conformity or Airplane (Table 30).

Table 30. If the Subjects Knew the True Purpose of the Experiment: A Posteriori Contrasts

Based on Yes Only, SNK .05

SENSORY	SHOCK	EXPOSURE	TCR	GAME	AIRPLANE	CONFORMITY	ATTACK	OBEDIENCE	REACTION
0.03	0.06	0.07	0.09	0.20	0.36	0.39	0.46	0.48	0.52

Based on Total Sample, Duncan .05

EXPOSURE	SHOCK	SENSORY	TCR	AIRPLANE	GAME	OBEDIENCE	REACTION	CONFORMITY	ATTACK
0.01	0.02	0.02	0.02	0.10	0.18	0.27	0.31	0.35	0.40

When the absolute frequency of checking this reason is compared, it is Attack and Conformity that received the most checks but again they do not differ significantly from Reaction or Obedience. Since all these experiments employ deceptive procedures, it probably does indicate that some participants, at least, acknowledge and accept deception for some experiments.

Nonetheless, this alternative was of minor importance. It was in the group of reasons with the lowest means for each of the ten experiments. For Sensory, not surprisingly, it was checked significantly less than any other reason.

Not all experiments had significant differences in the relative importance of the 8 alternatives that influenced the decisions to deny a permit. Conformity did not, but only 4 participants denied a permit to Conformity. Sensory was another, but Sensory had 10 participants who refused to grant it a permit. Apparently their reasons were diverse since there were significant differences for Game and Attack, also rejected infrequently: Game by 11 participants and Attack by 7.

There were three reasons for denying a permit to an experiment that were checked more frequently than the remaining five and none of the three differed significantly from each other. They all alluded to harm or stress but none refer to a particular type of harm or stress and are therefore applicable to any experiment.

The Value of the Experiment Does Not Justify the Possible Harm to Subjects

Although Exposure and Shock were rejected relatively more frequently for this reason than other experiments, only Game, Conformity and Reaction

ranked significantly below Exposure and Shock (Table 31). The four experiments, with the lowest mean ratings, were checked the most because the "value does not justify the possible harm": Exposure, Traumatically Conditioned Response, Shock and Airplane, but Airplane received significantly fewer checks than Exposure. Since these four experiments were also the experiments that were denied permits most often, there was, of course, a larger percentage of participants who checked "No" alternatives. Nonetheless, this was the only reason for refusing a permit that was especially salient for the four experiments with the lowest mean ratings. For each of these experiments, it was among a group of reasons that were the most important in denying a permit.

If we examine which reasons were chosen as being the most important in rejecting the four lowest rated experiments, each of the four has a different configuration of alternatives that were selected most frequently. "Value does not justify . . . harm" was among four reasons of equal importance in rejecting Exposure and it was also among four for Airplane, but for Airplane it did not differ significantly from a fifth reason. For Traumatically Conditioned Response, it was one of the three most salient reasons for denying a permit, the same three that were most salient for the entire sample: those explicitly concerned with harm or stress. As for Shock, this reason was more frequently checked than any other even though it did not differ significantly from "(no) social value" and "Too unpleasant or stressful."

For the remaining experiments, Obedience, Reaction, Attack and Game, this reason for denying a permit was not particularly emphasized, but except for Game neither was it among the least checked alternatives.

Table 31. Value Does Not Justify Possible Harm: A Posteriori Contrasts

Based on No Only, SNK .05

GAME	CONFORMITY	REACTION	OBEDIENCE	AIRPLANE	ATTACK	SENSORY	TCR	EXPOSURE	SHOCK
0.18	0.25	0.58	0.71	0.79	0.86	0.90	0.92	1.00	1.03

Based on Total Sample, Duncan .05

GAME	CONFORMITY	ATTACK	SENSORY	REACTION	OBEDIENCE	AIRPLANE	SHOCK	TCR	EXPOSURE
0.02	0.02	0.13	0.19	0.23	0.31	0.56	0.65	0.71	0.85

Too Unpleasant or Stressful for the Subjects

If an experiment was denied a permit, being "too unpleasant or stressful" was a relatively more important reason for Attack, Exposure, Traumatically Conditioned Response, Shock, Airplane, and Obedience than it was for Game and Reaction (Table 32). Further, for each one of these six experiments, being "too unpleasant or stressful" was invariably among the reasons that received the most frequent number of checks. And, for Exposure, Traumatically Conditioned Response, Shock and Obedience, it was among the three or four most important reasons for denying a permit.

If the absolute frequency of checks is considered, it was Exposure that was rejected most often because it was thought to be "too unpleasant or stressful," but Exposure did not differ significantly from Traumatically Conditioned Response.

Despite the fact that allusions to stress in the alternatives for granting a permit did not appear to be emphasized by participants, stress itself obviously is important, especially if it is considered overly severe. It then becomes a salient reason for rejecting an experiment. For some experiments, whether or not they are overly severe may be easier to decide than for others.

May Have Long Term Harmful Consequences for the Subjects

The relative rank of long term harm was highest for Traumatically Conditioned Response but it did not differ significantly from Exposure, Airplane or Attack (Table 33). And all four experiments ranked significantly higher than Obedience and Game. If the absolute frequency of checking this reason is considered, Exposure and Traumatically Conditioned Response received significantly more checks than any other experiment.

Table 32. Too Unpleasant or Stressful: A Posteriori Contrasts

Based on No Only, SNK .05

GAME	REACTION	CONFORMITY	SENSORY	OBEDIENCE	AIRPLANE	SHOCK	TCR	EXPOSURE	ATTACK
0.09	0.11	0.50	0.60	0.86	0.88	0.93	0.95	0.99	1.00

Based on Total Sample, Duncan .05

GAME	CONFORMITY	REACTION	SENSORY	ATTACK	OBEDIENCE	SHOCK	AIRPLANE	TCR	EXPOSURE
0.01	0.04	0.04	0.13	0.15	0.38	0.58	0.63	0.73	0.84

Table 33. May Have Long Term Harmful Consequences: A Posteriori Contrasts

Based on No Only, SNK .05

GAME	OBEDIENCE	CONFORMITY	SENSORY	REACTION	SHOCK	ATTACK	AIRPLANE	EXPOSURE	TCR
0.18	0.38	0.50	0.50	0.63	0.67	0.86	0.88	1.01	1.14

Based on Total Sample, Duncan .05

GAME	CONFORMITY	SENSORY	ATTACK	OBEDIENCE	REACTION	SHOCK	AIRPLANE	EXPOSURE	TCR
0.02	0.04	0.10	0.13	0.17	0.25	0.42	0.63	0.86	0.88

Airplane received fewer checks than Exposure or Traumatically Conditioned Response but it had significantly more checks than the remaining seven experiments.

It is again Exposure and Traumatically Conditioned Response where long-term harm plays a highly salient role in denying a permit, compared to other reasons. For both experiments, this reason is among either three or four that were most frequently checked. It was also relatively salient for Airplane and Reaction but for these experiments, there were four other reasons that were given equal weight. In rejecting Shock, it was less important than "value does not justify possible harm" but more important than four other reasons. Its salience for Obedience was relatively weak. It was among six equally endorsed reasons for rejecting Obedience and there was another alternative that was checked significantly more and only one that was checked significantly less.

Does Not Accomplish Anything of Social Value

Not being of "social value" was the fourth most important reason for rejecting an experiment. Although it was checked significantly less than the three pertaining to harm or stress, it was significantly more important than any of the four remaining reasons.

This reason for denying a permit was relatively more important for Game than it was for seven other experiments (Table 34). But Game did not differ significantly from either Shock or Conformity.* However, when Game was denied a permit, it was almost invariably rejected for "not accomplishing anything of social value," the only reason that does not base

*The rank for Conformity is undoubtedly spuriously high since only 4 participants denied it a permit.

Table 34. Does Not Accomplish Anything of Social Value: A Posteriori Contrasts

Based on No Only, SNK .05

ATTACK	OBEDIENCE	SENSORY	AIRPLANE	EXPOSURE	TCR	REACTION	CONFORMITY	SHOCK	GAME
0.00	0.38	0.40	0.47	0.59	0.62	0.68	0.75	0.87	1.27

Based on Total Sample, Duncan .05

ATTACK	CONFORMITY	SENSORY	GAME	OBEDIENCE	REACTION	AIRPLANE	TCR	EXPOSURE	SHOCK
0.00	0.06	0.08	0.15	0.17	0.27	0.33	0.48	0.50	0.54

the denial of a permit on adverse experiences for subjects.

The only other experiment, besides Game, where this reason is relatively salient was Shock. For Shock, not being of "social value" was one of the four most important reasons for denying it a permit. Comments made about Shock also reflected a lack of investment in its objectives: Its purpose was apparently too obscure and participants did not find Shock relevant to their interests or their lives. Although the purpose of Game was obvious to participants, many expressed doubts about its being able to accomplish its purpose by having subjects play a game. Not all who had doubts, however, denied Game a permit.

For Exposure and Traumatically Conditioned Response, not being of social value was of intermediate importance. There were reasons that had significantly more salience--those mentioning harm or stress--but "(no) social value" was checked considerably more than three other alternatives. On the other hand, it was an unimportant reason for rejecting both Airplane and Attack. In the case of Attack, none of the participants checked this reason. There are other indications that participants acknowledged "social value" for Airplane and Attack even when they were denied permits for being objectionable in other respects.

The following three reasons for denying a permit were among the least important but they ranked significantly higher than the alternative "Encourages undesirable, anti-social or neurotic behavior." None of the three differed significantly from each other.

Subjects Do Not Volunteer to be in the Experiment

The rank of this reason was highest for Exposure and Airplane (Table 35). Although neither differed from Conformity, the mean for Conformity was spuriously elevated because only four participants denied it a permit. Airplane also did differ significantly from Attack. Exposure was significantly higher than any other experiment in the absolute number of checks it received for being involuntary, while Airplane, although lower than Exposure, had significantly more checks than the remaining eight experiments.

Furthermore, being involuntary was among the four most important reasons for denying Exposure a permit. It was a less salient reason for refusing a permit to Airplane. For Airplane, although it was among the five most frequently checked reasons, there were only two other alternatives that were significantly lower in rank than this alternative. Hence, it shared its salience with other reasons to a greater extent than it did for Exposure. Exposure was a completely involuntary experiment. The subjects, "prisoners," were actually forced to participate while Airplane was involuntary in a less direct sense: soldiers were not given the option of refusing to participate nor were they fully aware they would be in an experiment. They were led to believe that the purpose of Airplane was to study the effect of changes in altitude on work performance. Recognition of the somewhat ambiguous nature of "involuntary" for Airplane seems to have influenced participants and may explain why this alternative shared its salience with five other reasons for denying a permit. One of the five was that the subject did not know the real purpose of the experiment and, therefore, would "feel deceived."

Table 35. Subjects Do Not Volunteer: A Posteriori Contrasts

Based on No Only, SNK .05

OBEDIENCE	GAME	SHOCK	REACTION	TCR	SENSORY	ATTACK	CONFORMITY	AIRPLANE	EXPOSURE
0.05	0.09	0.10	0.11	0.14	0.20	0.29	0.50	0.62	0.93

Based on Total Sample, Duncan .05

GAME	OBEDIENCE	CONFORMITY	REACTION	SENSORY	ATTACK	SHOCK	TCR	AIRPLANE	EXPOSURE
0.01	0.02	0.04	0.04	0.04	0.04	0.06	0.10	0.44	0.79

Not unexpectedly, being involuntary was rarely a reason for rejecting the remaining eight experiments. But this is obviously because it is genuinely applicable to only two experiments. Its rank, therefore, would of necessity be spuriously low. That both experiments that were rejected for being involuntary were also objected to on other grounds need not minimize the importance participants placed on the involuntary character of an experiment, if it was appropriate.

The importance of being voluntary rather than involuntary is attested to by the fact that 11 of the 14 participants who granted a permit to Exposure stipulated that it should be, or was, voluntary. And, also, by the fact that "being voluntary" was among the three most frequently checked reasons for granting a permit. For some experiments, where participants were reluctant to be subjects themselves, the discrepancy between their attitude toward participation and the granting of a permit was accounted for in terms of the voluntary nature of participation. But the voluntary nature of an experiment being especially important for those experiments that participants found undesirable in some respects also need not detract from the importance attributed to being voluntary.

Subjects do not Know the True Purpose or Nature of the Experiment Before Participating in It and Therefore May Feel Deceived

The relative rank of "feeling deceived" was higher for Airplane than any other experiment (Table 36). It did not differ significantly, however, from the ranks of five other experiments employing "deception." Nevertheless, Airplane was the only experiment where the rank for this alternative was significantly higher than it was for the four experiments that did not employ deceptive procedures. Airplane also received more

Table 36. Subjects Feel Deceived: A Posteriori Contrasts

Based on No Only, SNK .05

GAME	SENSORY	EXPOSURE	SHOCK	CONFORMITY	OBEDIENCE	TCR	REACTION	ATTACK	AIRPLANE
0.09	0.20	0.23	0.23	0.25	0.48	0.54	0.63	0.71	0.76

Based on Total Sample, Duncan .05

GAME	CONFORMITY	SENSORY	ATTACK	SHOCK	EXPOSURE	OBEDIENCE	REACTION	TCR	AIRPLANE
0.01	0.02	0.04	0.10	0.15	0.20	0.21	0.25	0.42	0.54

checks for being deceptive than any other experiment, although it was not significantly different from Traumatically Conditioned Response. And, for Airplane, "feeling deceived" was one of five equally important reasons for not granting it a permit. The fact that the deception involved "entrapping" subjects into the experimental situation,rather than being part of a procedure of an experiment that subjects entered into voluntarily, seems to have given the deception an especially distasteful character.

Being deceptive was also of importance in rejecting Traumatically Conditioned Response. The three alternatives that concerned harm or stress were checked significantly more but this alternative was still among the five most checked reasons for rejecting this experiment. And, for Traumatically Conditioned Response, there is also an element of "entrapment" in the deception. Although the subjects volunteered to be in an experiment, the hospitalized alcoholics were given to understand that they were volunteers for an experiment that would help cure alcoholism. But if there was a therapeutic intent, it was neither apparent nor specified, except to recruit the subjects. Furthermore, "without warning," the subjects were given an injection that induced a state of complete paralysis.

"Feeling deceived" as a reason for rejecting an experiment was not particularly salient, for the remaining four experiments employing deceptive procedures. For Obedience, Attack and Reaction (homosexuality), it was among 6 or 7 reasons that were given equal weight by participants but Reaction also had two reasons that were given less weight than "feeling deceived" in denying a permit. Conformity, the fourth experiment, had too few participants denying a permit to evaluate the relative importance of any alternative.

The overwhelming approval of Conformity, however, is not without implications since if deception were of real concern to participants, enthusiastic endorsement of an experiment employing deception would be unlikely. It would seem that deception per se is not a notable issue for participants and is strongly objected to only when the deception serves to trick subjects into entering a situation that they ordinarily would not have entered voluntarily. In other words, when it functions as a form of "entrapment" as it does for Airplane and, partially, for Traumatically Conditioned Response.

Fifty-seven participants (59.4%) rejected at least one experiment because the subject did not know the real purpose and, therefore, would "feel deceived." But 4 of the 57 rejected only Exposure, Shock or Sensory for this reason. Moreover, only 1 participant checked "subject feels deceived" for each traditionally deceptive experiment in his booklet: there were two. The remaining participants did not check "feels deceived" for at least one deception experiment in their booklet and many did not check it for two or more. Some, of course, did not check "subject feels deceived" for any deception experiment. There were two to four deception experiments in every booklet.

As is apparent, affirming or disaffirming the use of deception was also done for experiments such as Exposure, Shock, Sensory or Game that do not fit a traditional definition of deceptive. In some instances, participants may have broadened the meaning of the alternative to include the subject being unaware of the ultimate purpose of the experiment. For instance, if this alternative was checked for Game it may have been assumed that subjects had not been told that the purpose of the game was to represent panic situations and, therefore, they did not know the "real purpose."

For Exposure, subject "ignorance" may have been thought to involve either the purpose or the submersion in freezing water. This alternative may also have been checked in a frenzy of approval or disapproval. A few participants with either extreme enthusiasm for, or revulsion at, an experiment suddenly checked all eight alternatives for granting, or not granting, a permit.

Thirty-one, or more than half of the 57 participants who rejected an experiment because the subject would "feel deceived," also condoned deception for at least one other experiment by checking the "Yes" alternative. And, there were 12 participants who only checked the alternative condoning the subject's ignorance of the real purpose of the experiment.

Deception was also commented on by participants, being objected to in some instances, being accepted in others. A total of 46 comments were made that were critical of a deceptive aspect of an experiment but 12 of these comments were made to experiments that were, nevertheless, granted a permit. Another 18 comments defended the use of deception. As some participants made comments to more than one experiment, the total number of participants who commented was 40. Of these, 25 made only critical comments, 10 defended resorting to deception, and 5 did both.

The following experiments elicited comments on deception: Reaction (18), Traumatically Conditioned Response (16), Attack (10), Airplane (9), Conformity (6) and Obedience (5). Comments objecting to deception were mainly made to Traumatically Conditioned Response (16) and to Airplane (9) and except in one instance (for Traumatically Conditioned Response), the experiment was then denied a permit. Critical comments were also made to Reaction (9), Attack (6), Obedience (4) and Conformity (2) but did not

necessarily lead to denying a permit. For Conformity, no participant rejected the experiment after commenting critically on the deception. As for the other experiments, all except Obedience had as many, or more, participants granting a permit as refusing it, after voicing an objection to the deceptive aspects.

Six participants, objecting to the deception in Traumatically Conditioned Response, directed their criticism at the subjects having been told it was a therapy for alcoholism and, therefore, being recruited under false pretenses. One of these, however, did grant the experiment a permit as she maintained that despite this deceptive recruiting, the experiment was voluntary. None of the others granted a permit and some also commented on the extreme nature of the experiment. "The subject was deceived. He was told it was to help a cure and it wasn't. Also, the subject doesn't know what he's in for." "Because the hospital alcoholics are deceived and led to believe that this experiment is for their own benefit when in reality it is not."

Other objections to the deception in Traumatically Conditioned Response were based on its being used in conjunction with an objectionable procedure. "To subject a person to a shock like that, when it's not to his gain is wrongfully taking advantage of his ignorance." "Especially if the volunteer does not know about the forthcoming paralysis." "A person also shouldn't think he's experiencing death from man-made trickery." Two felt that the "without warning" was critical, especially since it involved injecting drugs. Only 3 made comments of a general nature. Two complained that the subject was not informed and the other that the subjects were "tricked."

For Airplane, 3 participants specifically commented about the subjects being misled about being in an experiment. "If I consented to go up for altitude tests and got this, I would sue for $$$ big." Another stated that he should have been informed like they do for a fire drill. Two others merely commented on its being "tricky" but it's quite probable that they were referring to being "tricked" into participating when subjects were unaware that it was an experiment. Three participants protested that the subjects had been "forced" into a situation--under false pretenses--that would be extremely stressful and might be harmful, while the remaining participant merely commented that the subjects were not fully informed.

Eighteen participants made a comment, not necessarily critical, about the deceptive aspects of Reaction (homosexuality), but only 6 subsequently denied it a permit. Four of the 9, who voiced a concern about the subjects being deceived by the "rigged dial" and who also denied Reaction a permit, made reference to the fact that the deception would place the subject in a stressful situation (1) or that it would be harmful (3): "Since the person doesn't know it's rigged until much later, this time lapse may be enough to damage his self-esteem." Another worried that the subject would believe what the dial said and then not believe the experimenter when he told the subject that the dial was rigged.

Four participants made some derogatory comment about the "rigged dial" but nonetheless granted Reaction (homosexuality) a permit. One said that it would anger her and that she did not think it was fair. Another felt that attributing false reactions to the situation could be damaging to some people. A fifth participant made no specific mention of either deception or the rigged dial, but specified that if the experiment was

stressful, its being stressful should be explained to the subject. If they then agreed to participate, it would be all right. She stated this as a condition for granting a permit.

Nine participants, referring to the "rigged dial" in Reaction (homosexuality), did so to affirm that there would be no harm since the subject is later debriefed. However, 2 of the 9 then refused to grant the experiment a permit. One of the 2 had first checked the "Yes" box but crossed it out.

Those commenting critically on the deception for Attack were as likely to grant Attack a permit as they were to refuse it. Complaints about deception were directed both at the fact that the subject was caught off guard and at the unfairness of having an especially skilled opponent to debate. One participant, denying a permit, felt she could not benefit because she would be unaware of the nature of the experiment "and would not be fully prepared." She also felt that it was definitely unethical "because the person is not told beforehand what to expect, and because of the unfairness of using a skilled 'partner' without the subject being aware of it." Another participant granted a permit although she, too, felt it was "unfair to the subject not to know the background and plan of the other subject." Of the 6 participants complaining either that the subject was not prepared or that it was unfair to use a "skilled partner," 3 denied a permit and 3 granted it.

Four other participants commented on the deceptive aspects of Attack, but the comments were to either justify it or to excuse it: all 4 granted Attack a permit. Two felt it was necessary, 1 felt that it was all right as long as the subject gained something, and the remaining

participant supported the deception on the grounds that a person had to "be prepared for any unexpected obstacles that would come up."

Five participants commented on the deceptive aspects of Obedience and 3 of the 5 refused a permit. One participant, granting a permit, felt the deception was justified by the value of the experiment. In responding to the question on permission, she remarked: "Any advantage taken of the subject in not telling them what is going on, or putting them into a situation like this, is justified because of the value of the experiment." The other participant said the deception represented "playing games" with the subject and "taking advantage" of him. The 3 participants who both criticized the deception and refused a permit complained it was either a "farce" or a "trick" and would expose a subject to stress or emotional trauma.

None of the 6 participants who mentioned deception in conjunction with Conformity refused to grant Conformity a permit. Four condoned the use of deception while only 2 were critical. One complained that the experiment involved "fooling or tricking" the subject while the other thought it was unnecessary to conceal the identity of the confederates. Two participants--condoning deception--felt that it was necessary. One felt it was necessary because it had helpful results, the other because the subject must be unaware, even if in some sense this is taking "advantage" of the subject. Another felt there was no harm in the deception because it would be explained after the experiment was over. Still another participant proffered the opinion that revealing the deception to the subject might be risky: "If the purpose of the experiment is revealed, his self-esteem goes down," but "if his character is such that he profits from something like this, he can work on it; if not, he may always feel he's being cheated."

To summarize, it would appear from both the quantitative and qualitative findings that deception is rarely, if at all, condemned on absolute grounds. To be sure, only 6 of the 10 experiments employ what is traditionally considered deceptive procedures and therefore the general ranking may undervalue the importance of this alternative. However, unlike "being involuntary," this alternative was applicable to more than half the experiments rather than only two. Yet, a larger percentage of participants checked "involuntary" than checked "feels deceived,"* and, in addition, being "voluntary" was one of the most highly favored reasons for granting a permit.

Furthermore, even those participants who felt an experiment should be denied a permit because the "subject feels deceived" did not deny permits to every deception experiment in their booklet. There was only 1 participant who rejected both deception experiments in the booklet for this reason (Obedience and Reaction).

Even when deception is considered undesirable in some respects, and neither defended nor condoned, the participant may still give the experiment a permit. There are, to be sure, strong protests against deception. But when protests are uttered, they are usually uttered because participants object to other features of experimental situations, such as extreme stress or possible harm. Participants are especially vehement against deception that is used to entice or force subjects into an experiment that they otherwise might have refused to be subjects in, if they had not been "lured" into the experiment on false pretenses, e.g., Airplane or Traumatically Conditioned Response. For Airplane, the subjects were deceived about being in an experiment and for Traumatically Conditioned Response, about its therapeutic intent.

*There were two to four deception experiments in every booklet.

Subjects May Behave in a Way that Lowers Their Self-esteem

"Lowered self-esteem" had the greatest importance for Reaction (homosexuality) and Attack as a reason for denying them a permit, but neither experiment differed significantly from Obedience or Conformity (Table 37). Reaction was also most likely to be rejected for this reason when the comparison is based on the absolute frequency of being checked, but it did not differ significantly from Obedience. Obedience, in turn, did not differ from Attack, Exposure or Airplane.

There were only two experiments where "lowered self-esteem" was a major reason for denying a permit: Reaction and Attack. It was also of some importance for Obedience, but for Obedience it was overshadowed by other equally checked reasons for denying a permit and only one reason was checked significantly less than "lowered self-esteem." For Reaction and Attack, not only was this alternative the most frequently checked reason for denying a permit (although it did not differ significantly from four others), but there were three reasons with significantly fewer checks.

It would seem that "lowered self-esteem" did concern participants even if it is not often the unique grounds for denying a permit. Its low rank for the total sample is probably attributable to two factors. For some experiments, such as Airplane, its importance was overshadowed by more cogent reasons for denying a permit, such as harm or extreme stress. For other experiments, such as Shock, it was not relevant. "Potential subjects," however, may not regard "lowered self-esteem" as inevitable in situations where it might be regarded as inevitable by psychologists. Some participants felt that Attack should be rejected because it could "lower self-esteem," but Attack was one of the most highly rated experiments. Those

Table 37. Lowers Self-Esteem: A Posteriori Contrasts

Based on No Only, SNK .05

GAME	TCR	SHOCK	EXPOSURE	AIRPLANE	SENSORY	CONFORMITY	OBEDIENCE	REACTION	ATTACK
0.09	0.16	0.17	0.21	0.24	0.50	0.75	0.76	1.00	1.29

Based on Total Sample, Duncan .05

GAME	CONFORMITY	SHOCK	SENSORY	TCR	AIRPLANE	EXPOSURE	ATTACK	OBEDIENCE	REACTION
0.01	0.06	0.10	0.10	0.13	0.17	0.18	0.19	0.33	0.40

who endorsed Attack may have felt that this danger was non-existent, minimal, or that other considerations made it worth the risk.

Encourages People to Reveal Undesirable, Anti-Social or Neurotic Behavior

This reason for rejecting an experiment was significantly less important than any other reason. Its mean for Attack ranked higher than for any other experiment but Attack did not differ significantly from 5 other experiments (Table 38). Further, there were no significant differences among experiments in the absolute frequency of checking this reason. Moreover, this was always one of the least checked reasons for denying a permit for every experiment where there were significant differences among the alternatives.

It is, of course, unlikely that participants would applaud "encouraging undesirable, etc. behavior" but it was a minor reason for denying a permit. It is possible that they do not regard behavior that occurs in an experimental situation as "neurotic, undesirable or anti-social," since it arises within a specific context. It then would be the situation rather than the behavior that warrants the derogatory label. And, of course, they may feel that their behavior, and possibly the behavior of others, will be exemplary in most experimental situations.

When, and if, unwanted or untoward behavior is a concern, the focus of this concern need not be the behavior itself but rather the stress that is felt concurrently or the harm that might result from an altered self-image. These worries need not necessarily lead a participant to condemn an experiment because it might elicit certain kinds of behavior. The fact that participants did not focus on the actual behavior, as it was manifested

Table 38. Encourages Undesirable Behavior: A Posteriori Contrasts

Based on No Only, SNK .05

CONFORMITY	EXPOSURE	TCR	SHOCK	AIRPLANE	GAME	SENSORY	OBEDIENCE	REACTION	ATTACK
0.00	0.12	0.16	0.17	0.24	0.27	0.40	0.43	0.47	0.57

Based on Total Sample, Duncan .05

CONFORMITY	GAME	SENSORY	ATTACK	EXPOSURE	SHOCK	TCR	AIRPLANE	OBEDIENCE	REACTION
0.00	0.03	0.08	0.08	0.10	0.10	0.13	0.17	0.19	0.19

in the experiment, but were more concerned with the future impact of participation, such as learning about themselves or being harmed, was illustrated by their comments. Undesirable, or otherwise unworthy, behavior also was a focus of future concern but not necessarily as a precursor of an unwanted outcome. Some participants felt that behavior in an experiment could provide the basis for improving future behavior. If a subject behaved "badly," it could bring about a change in that behavior that might be beneficial in the long run.

Reasons for granting, or not granting, a permit not only differed in their relative salience compared to other reasons but differed in their relative salience for different experiments. A particular reason could be highly germane in influencing a decision for one or more experiments and yet be relatively unimportant for others. But this need not be the case. Some reasons were equally important or unimportant for all experiments. For instance, "To learn something of value about human behavior" was of equal importance, if and when an experiment was granted a permit. There were no significant differences in the relative rank of this reason among the experiments.

Some reasons were not applicable to all experiments, and, therefore, the importance of these reasons may be underestimated compared to others. Nonetheless, it does not seem warranted to dismiss, as meaningless, the relative rank of the eight "Yes" and "No" reasons. The relative ranks undoubtedly are relevant to what may induce potential subjects to view experiments favorably or unfavorably. To be sure, the reasons are not independent of the experiments. If Conformity, Attack and Game are

endorsed more than other experiments, and if how they would behave in these experiments is of interest to participants, then naturally the ranking of this reason will be high. But one can reasonably ask why these experiments are favorably viewed. And the answer may be very simple--because they provide subjects with the opportunity to learn about themselves. This may reflect the proverbial chicken and egg problem, but other evidence suggests otherwise. In particular, comments by participants provide strong evidence that the opportunity for self-understanding has a strong influence on determining which experiments will be approved.

Four "Yes" reasons were of intermediate importance, three having to do with tolerating or minimizing stress. These reasons were more important for some experiments than they were for others but they were usually subsidiary to other reasons for granting a permit.

The three most important reasons cited for rejecting an experiment are the ones that concern harm or stress. It certainly would not make sense to conclude that these reasons were important because the four experiments eliciting the greatest disapproval were harmful or stressful. Here, it is highly unlikely that the chicken-egg problem is germane. Moreover, rejecting experiments that are considered very harmful or extremely stressful certainly is appropriate. Of interest, then, is which experiments are considered the most harmful or stressful. It should also be noted that some reasons, particularly "not voluntary," were not generally applicable, and, therefore, their importance is probably underestimated.

Focus on the 'Outcome' Manipulation

Recall that for the 'outcome' manipulation, the results of the experiments were presented. Two versions of the results were used for

Obedience and Conformity, actual and fictitious. The fictitious results of the Conformity experiment stated that 90% conformed while the fictitious results of the Obedience experiment had less than 1% obeying. Thus, the more favorable results were the actual results for Conformity and the fictitious results for Obedience.

Of the 44 one-way ANOVAS for Obedience and Conformity for the main condition and the real and false 'outcome' conditions (Table 39), only 4 were significant. All 4 were for Obedience. Three of the significant Fs were for reasons for granting, or not granting, a permit and the fourth was for Harm. However, none of the significant differences were between the real and false outcomes. The differences were between the main condition (results not stated) and one or both of the outcome conditions. While 4 significant findings out of 22 for Obedience is somewhat better than chance, it is difficult to discern a pattern for the findings. Therefore, it seems futile to speculate on the meaning of the individual results.

It would seem that the experiments, as described, had such a relatively strong impact that the results became secondary and were not salient enough to produce distinctive reactions. If the possible impact of the results on reactions to the experiments is to be evaluated with less ambiguity, the technique of presenting the experiments will have to be revised. The results of the present study do not allow us to dismiss--as untenable--the assumption that results may influence reactions. In retesting the hypothesis, the results would have to be more salient without, of course, leading participants to believe that they were expected to respond to the results in a specific manner.

Table 39. "Outcome" Manipulation: Significant Findings

	M.S.	d.f.	F	P
OBEDIENCE				
Harm				
Between Groups	5.63	2	2.97	.05
Within Groups	1.89	141		
Subjects Volunteer				
Between Groups	0.77	2	3.18	.05
Within Groups	0.24	78		
Of Value to Subjects				
Between Groups	1.44	2	3.47	.035
Within Groups	0.41	78		
Long Term Harm				
Between Groups	2.06	2	4.38	.02
Within Groups	0.47	60		

A Posteriori Contrasts

Harm, Duncan .05

FALSE	REAL	NO RESULTS
-0.04	+0.08	+0.60

Subjects Volunteer, SNK .05

FALSE	REAL	NO RESULTS
0.54	0.70	0.89

Of Value to Subjects, SNK .05

NO RESULTS	FALSE	REAL
0.85	1.13	1.30

Long Term Harm, SNK .05

NO RESULTS	FALSE	REAL
0.38	0.83	1.00

Chapter 4

CONCLUSIONS AND IMPLICATIONS

In this chapter, the implications of the findings for "presumed consent" and ethical issues will be discussed. Recall that the "presumed consent" of participants was suggested both as a substitute for the actual consent of subjects if experiments employed a "deceptive cover story" and as a means of pre-testing those experiments--previous to undertaking a pilot study--if there are serious doubts about the possible harmful effects of a procedure on pilot subjects. The technique used for consulting "potential subjects" in this study was also designed to elicit information on how participants react to various experimental procedures that have been controversial. The findings are also analyzed in terms of their relevance to ethical issues. Before proceeding--questions relating to the validity of the findings that are equally pertinent to "presumed consent" and ethical issues--will be detailed.

Are the Findings Valid?

In considering whether the results of this study are valid, two distinct problems must be raised. Are the reactions of participants in this study similar to the possible reactions of other groups, even if these other groups are composed of undergraduates? Do the descriptions of the experiments convey an accurate picture of the actual experiments? A further, but obviously crucial question--is the reaction to a written

description comparable to actually participating in an experiment--will be discussed under "presumed consent."

There was an extreme range of reactions to the different experiments in this study but there was sufficient agreement among participants to result in three distinct groups of experiments--rated Low, Intermediate and High. Further, the reactions to Exposure were distinctly different from reactions to other experiments. That Exposure was rejected implies consulting "potential subjects" has face validity, regardless of whether the goal is "presumed consent" or an empirical understanding of the ethical implications of different experimental procedures. But can we assume that other "potential subjects" would react similarly to the same experiments? Obviously this is a question that must be answered empirically but there is evidence to suggest that the reactions of undergraduates in this study are not unique.

When this study was piloted in 1970, eight of the ten experiments were the same as those included in the final version. Only Traumatically Conditioned Response and Reaction were not in the pilot study. The results of the two studies are not directly comparable since the questions and format were somewhat different, but some observations can be legitimately made. In the pilot study, participants received ten experiments rather than six and they only had four questions on each experiment. The first question asked participants to indicate how they would have felt after they had participated in the experiment. They were given five alternatives to check. The two anchor points were "very glad to have been in the experiment" and "very sorry....." The three remaining questions were almost identical to those asked in this study on Ethical,

Consent and Permit. As in this study, explanations of the checked answers were required. However, in the pilot study the format of the Permit question differed. Alternatives for "Yes" and "No" answers were not provided and instead an explanation of the reply was asked for--as was done for the other questions. The quantitative scoring of the questions was identical, -2 to +2. The total rating, however, differed since there were four questions that were scored rather than five.

Nonetheless, as in the final study, Conformity, Attack and Game had the highest ratings. Sensory and Obedience were in the intermediate range while Shock and Airplane had low ratings. Exposure had an extremely low rating that was dissimilar from the remaining experiments. Hence the findings replicated the quantitative results of this study. The frequencies of responses to individual questions were also approximately the same. And, although the written explanations tended to be shorter, some of the comments were hauntingly familiar. There was no attempt to compare frequencies of written responses since in the pilot study they were not coded. The similarlity of the findings is especially striking since the participants in the pilot study were not undergraduates but were recruited from the public-at-large. There were 26 men and 28 women, and the age range was from 16 to 81. A few were students but the majority were housewives, business men, working women, professionals, artists and retired older people.

A comparison of the two studies suggests that the findings do have generaltiy--especially since the two groups were so diverse--but, of course, does not preclude the possibility that there may be other groups that would differ. It certainly would be advisable to systematically

explore the possible similarities and differences among groups of diverse backgrounds.

Are "potential subjects" less concerned with stress and deception than some pyschologists have thought them to be? As far as deception is concerned, there is evidence to suggest that this may be the case. But stress and harm were certainly not ignored by the participants. If stress and harm are salient, why then are two experiments in which stress appears (and that have been considered potentially harmful by some) so highly rated by participants? One answer may be that many participants did not realize that stress--and possible harm--were likely to be present for these experiments. This raises a question as to whether the descriptions of the experiments adequately conveyed to the participant the experience of being a subject in an experiment.

In describing an experiment, a delicate balance has to be maintained between portraying an experiment accurately and objectively, and not avoiding the possibly unpleasant features. Stress or discomfort, if they are likely to be encountered, should be depicted but, at the same time, attention must be given to not portraying "undesirable" effects in a manner that seems primarily intended to elicit only negative responses. In short, there is a need to be accurate and objective while simultaneously conveying any subjective discomfort or stress that a subject may endure. Where it was known that tension, conflict or stress existed, this was specifically mentioned in the protocol. But perhaps the unpleasant aspects of some experiments could have been detailed more forcefully or dramatically. For example, instead of stating--"Conflict and tension may be frequently experienced by the subjects" as it was described for Conformity, it might have been said: "Frequently subjects paled and

trembled while they stuttered their answers in the face of an oppressive and forbidding majority." This approach, however, may run the risk of conveying an impression that certain responses are expected.

It is of course possible that the distressing characteristics of some experiments were portrayed more forcefully and effectively than for others. But it is doubtful whether this is the entire answer. The descriptions of both Conformity and Attack mentioned stress. The possibility of harm was considered by participants, especially for Attack, and also for Conformity, but to a lesser extent. Moreover, for Conformity there was a moderate negative correlation between the Benefit and Harm questions, indicating that for some participants, benefit and harm could exist simultaneously.* What may have influenced the ratings may not have been the seemingly benign or harmless nature of a highly rated experiment but other compelling features that had a positive valence. Features that induced many participants to minimize--or overlook--possibly unpleasant or distressing aspects that they may have considered temporary.

If this possibility is envisioned in determining why Conformity and Attack were endorsed so highly, what they appear to share in common, is what could be called their "immediacy," that is, they deal with topics that involve everyday psychological concerns: conformity and defending one's beliefs and values. In both experiments, a subject may learn something that he feels is relevant to his life and that may give him insight into himself. That this is indeed the case seems certain when it is noted that the majority of the participants--in responding to Conformity and Attack--mentioned "learning about themselves" in a comment

*The lower the rating on harm, the more harmful.

to at least one question (60.4% and 58.3%). That learning about oneself was a salient concern of participants is evidenced by the fact that it merited being considered a separate category for every experiment, except Exposure. 8.3% to 45.8% of the participants mentioned learning about themselves to other experiments.

If participants feel that there is an advantage to participating in an experiment that advantage may either compensate for discomfort or stress or make the discomfort or stress seem trivial. People are often willing to undergo unpleasantness or take some risk, especially if they are not overly severe or threatening, when on balance, the probable gains outweigh the possible losses.

Focus on "Presumed Consent"

"Presumed consent" will be discussed from the following perspectives: the advantages of a "presumed consent" procedure; can "presumed subjects" make valid inferences about an experiment after only reading a description of it; a comparison with other techniques of anticipating the reactions of future subjects; and, finally, how should a "presumed consent" procedure be used most effectively by an investigator who is planning an experiment.

A distinct disadvantage of any experiment that employs a deceptive cover story is that the investigator cannot explain the procedures to the actual subjects and discover if they object to participating. Nor can he know in advance how participants are likely to act or react to the experiment. He can, of course, pilot the study with a few individuals but even if this gave him sufficient information, these individuals may suffer needlessly. It would seem that a better tactic would

be to describe the experiment and ask representatives of the prospective subject population their reactions to the experiment. Moreover, this procedure need not be reserved only for experiments that employ deception. Not only can the reactions of "presumed subjects" aid the investigator in deciding whether he should proceed with a study as intended, but with advance knowledge of the extent of possible reactions, an investigator is in a position to counter possible adverse reactions as well as reinforce those features of the experiment that may make it rewarding for participants, if he decides to pilot the research or simply proceed.

The results of this study were such that it seems justified to conclude that "potential subjects" can make reliable judgments about psychology experiments. Not only were the responses to the questions highly differentiated but the experiments fell into distinct groups according to participants' preferences and Exposure was decidedly rejected by most participants. There were experiments--in the intermediate range of ratings--that can be regarded as controversial, even for "presumed subjects," highly endorsed by some, condemned by others. But there were other experiments that were generally applauded or generally condemned. If reactions to experiments had been highly individualistic, without definite group distinctions, it would not only have been difficult to assess specific procedures but it would have mitigated against using this technique as an instrument for "presumed consent."

Are the Opinions and Attitudes of "Presumed Subjects" Valid?

Although participants can make reliable discriminations among experiments, after having read a description, does that imply the judgments are valid in terms of how subjects actually react to an experimental

situation? Obviously no. Agreement among participants, even if they are replicable, cannot tell us how actual subjects react. Saying that this problem is also inherent when an actual participant, after hearing a description of an experiment, gives fully informed consent to participate, does not make it less of a problem. Complete accuracy in predicting reactions cannot be achieved in either situation. Moreover, a participant's reaction need not always be overly optimistic about his possible reactions. Fear of certain experimental procedures, such as electric shock, may be worse in anticipation than they are when actually experienced. Many anticipatory fears are worse preceding an event than the actual experience, e.g., the "painful injection" may have already taken place as we tighten our muscles to brace against the pain. Milgram, in questioning his subjects after they had participated in the Obedience experiment, did not get the negative reactions that many had predicted and that were also predicted by some participants in this study. These dire reactions may have occurred if there had not been a careful and lengthy debriefing but this, of course, is merely conjecture. That a participant's reaction is less severe than expected, need not concern us from the point of view of protecting participants, although unnecessarily refraining from potentially important investigations may have unforeseen but, nevertheless, important consequences. We can never know the future costs of not doing research.

Is reading a description of an experiment comparable to the actual experience of being a subject? Not necessarily, but this is an empirical question. Obviously we need to verify the effectiveness of a "presumed consent" procedure by comparing reactions of those who actually participate

with those who merely read about the experiment. This can be accomplished by presenting identical questions to a group of actual participants and to a group that has read a description of the experiment. The questionnaire results for the two conditions need not be similar in every respect as long as they lead to the same general conclusions about the experiment. An approximation of reactions would achieve an investigator's goal of knowing the effect of his research on participants. In other words, there should not be substantial differences in the quantitative and qualitative results but there need not be exact correspondence, especially if the actual participants give more favorable replies to the experiment. Nor do the frequencies of various comments made to the questions need to be identically distributed as long as they allow the investigator to anticipate most of the likely reactions. If he knows that anxiety will be experienced, he does not need to know the exact number of participants who may experience anxiety.

Obviously in validating the procedure, a potentially risky experiment should be avoided. If we know that most "potential subjects" consider an experiment harmful, needless to say, it would be irresponsible to test the accuracy of their predictions by using volunteers. Less obvious, but perhaps equally important, is the question whether we should use a contrived situation to validate the procedure of consulting potential subjects. A customary solution to the problem of validation would be to design a unitary experiment where in one condition, the subjects read the experiment and in the other, the subjects are actually run through the experiment. But such a contrived situation might influence the results. A better solution would be to test the "presumed consent" procedure by

joining forces with an investigator who is undertaking an experiment for other purposes. Additional participants could be asked to volunteer and then they could be randomly assigned to the on-going research or to the "potential subject" condition.

Other Techniques of Anticipating "Presumed Consent"

The "presumed consent" concept of this study is similar in some respects to other studies seeking to predict how "potential subjects" may react to experiments. Farr and Seaver (1975) as well as Wilson and Donnerstein (1976) presented "potential subjects" with descriptions of experimental procedures in order to elicit their views. Because the descriptions presented in these studies were extremely short, the procedure could be undertaken more quickly. In fact, Farr and Seaver were able to present 81 different procedures to the same group of subjects, at the same time. The information thus obtained is certainly of value but there are definite shortcomings to an approach that only focuses on isolated procedures, at least as far as "presumed consent" is concerned. A procedure--out of context of the goals of a study and the rationale--not only emphasizes the disadvantages but may alter reactions in unknown ways. It is often the contextual aspects of an action that determine reactions. Further, a procedure--out of context--does not provide an opportunity for participants to envision what they may gain from participation. Of course, they may decide for themselves the possible purposes of the procedures and the possible gains, but their imaginary experiment cannot be evaluated or controlled. The Berscheid et al. (1973) experiment presented experiments at seven different levels of information about them, and as a result, reactions were different.

Berscheid et al. unfortunately made their primary dependent variable--willingness to consent--a continuous variable. As they themselves realized, in retrospect, it would have been advisable to dichotomize the consent variable. When they analyzed their findings, they arbitrarily dichotomized the consent variable by making "definitely not" the only response equal to "No." "Probably not" and the other three alternatives, were considered affirmative. In this study, even when participants checked "not sure," they often explained their actions in such a way as to indicate that they were undoubtedly saying "No." Thus, the manner of dichotomizing the consent variable post hoc in the Berscheid et al. study is most unconvincing and unfortunately makes it impossible to make a meaningful comparison with this study. It does, however, make sense to compare the two techniques of obtaining "presumed consent." One feature of the Berscheid study that seems quite commendable is that of presenting desirable and undesirable behavioral outcomes, and comparing the reactions of participants under both circumstances. Where there is a likelihood of socially undesirable behavior, this might be an effective means of obtaining reactions to the proposed research.

One can question, however, limiting the crucial variable to the consent question, even if it is dichotomized. Asking questions on possible benefits and harm, especially when participants explain their answers, can provide specific information that an investigator could find valuable in altering his experiment, if necessary, or in providing the actual participants with a rewarding or less potentially upsetting experience. Moreover, questions on the ethicality of experiments or permission for the experiments to be conducted, often provide interesting insights on

how participants react to an experiment. The answer to only one question, even if it is an important question, is less likely to give a full and reliable picture of reactions to the experiment, than responses to a few dimensions. It also seems advisable to ask participants to explain their answers, especially if one wants to have more detailed and specific information to use in changing overly disturbing experiments or to conduct essentially harmless, but nevertheless not benign experiments--with the least possible discomfort for the subjects. The response to different questions--offering diverse perspectives--can also provide information for an instructive and rewarding debriefing session; one that offers ameliatory features, if necessary.

The Decision to Stop or Go: How Does an Investigator Use the "Presumed Consent" Procedure

The possible use of a consent procedure to gain information from "potential subjects" that can be of value in helping actual subjects to assimilate and react favorably to an experiment, has been discussed. But a crucial question has not been confronted. How does an investigator decide if an experiment should, or should not, be conducted? After all, it may be valuable to know potential reactions to an experiment and prepare for them, but that presumes that the proposed research--with or without changes--will be undertaken. But the most crucial question to be answered by a "presumed consent" procedure is--would actual subjects consent to the research if they knew what was being asked of them? To put the question in concrete terms, if any of the experiments in this study were under consideration, which experiments should get a go-ahead and which should be put on the shelf?

Baumrind has suggested that if more than 5% of the pretest subjects question an experimental procedure, the research should not be conducted. With this criterion, it is doubtful that more than two or three psychology experiments could be performed in the future. Perhaps none, depending on what was explained to, or asked of, the pretest subjects. 95% agreement on even the most banal topics is most unusual in human affairs. Moreover, this stipulation deliberately disregards the potential value of any research. For Baumrind--there is potential value in research only for medical studies. Furthermore, as we have noted, it is not only the procedure that affects a participant's reaction to a psychology experiment. Stressful procedures may be tolerated if participants feel they have something to gain that is valuable to them and, also, perhaps to society.

Wilson and Donnerstein (1976) in discussing whether certain field studies should be given the go-ahead, discussed this in terms of the approval of the majority but they were not completely happy with this answer. One can concur in their dissatisfaction. Neither the criterion of 95% approval, nor the approval of the majority, seems a satisfactory answer to this difficult problem. If we used Wilson and Donnerstein's criterion, six experiments in this study would be given a green light if the criterion question was Permit and three experiments, if the criterion question was Consent. If we used Baumrind's criterion, none of the experiments would be permitted, including Game, an essentially benign and non-stressful experiment.

If ethical decisions are to be left to a vote, what is the magic number? Or should ethical decisions be voted on? 55% can be wrong as

well as 95%. And even in the unlikely event that 100% of the pretest subjects gave an investigator the go-ahead, should that be a means of absolving an investigator of responsibility. "Presumed consent" can never be foolproof. If "presumed consent" is used, it should be a method of executing responsibility more effectively and not an excuse for avoiding responsibility or divesting responsibility. Moreover, if a "presumed consent" procedure is to function as a guide to responsible decisions on whether to proceed with an experiment, the decision to stop--or go ahead --cannot be made solely on the basis of "presumed consent." The value, or the validity, of an experiment cannot be decided by potential subjects. And the possible contribution of an experiment should undoubtedly have a significant influence on deciding whether an experiment should be undertaken. Any experiment can run a risk of imposing on some participants.

If the "presumed consent" procedure is used for a decision on whether to proceed, what question or questions should be focused on and how should the participants' responses contribute to the decision. As previously noted, the Permit question had a majority voting a permit to six experiments. Should that question be used? But what about the discrepancies that have been noted between Consent and Permit? Should the Permit question be used when we know that many participants are willing to give permits to experiments when they themselves are unwilling to participate, often without sufficient justification for their actions? The Consent question could, of course, be used, providing a stricter criterion. Certainly if only one question is used for the decision, Consent may be the best criterion. But any one question has its pitfalls. Responses to the Consent question may be based on a misunderstanding such as equating consent with an agreement to engage in disapproved behavior.

Consent may also be denied because the topic does not interest the participant or he does not fully understand the experiment and therefore may consider participation a waste of time. Consent need not relate to possible harmful effects of an experiment. Indeed an answer to a single question, even an important one, can be more prone to extraneous factors than the sum total of the answers. Perhaps the best single measure would be the total rating, with or without giving consideration to the response to the Consent and Permit questions.

In this study, the experiments divided into three groups, Low, Intermediate and High-rated experiments. This, of course, is helpful but it does not solve the problem of the magic number, or the magic line, as the case may be. Should a green light be given to the High-rated experiments? And a red light be assigned to the rest? If we follow this route, we again ignore an experiment's potential contribution and even this apparently conservative approach may have its pitfalls as far as protecting the rights of potential subjects. Two highly rated experiments in this study were not without stress and potentially harmful effects but the stress and possible harm were minimized by participants because the experiments evoked enthusiasm and gave promise of potential psychological rewards for the subjects. Caution must be taken with experiments where subjects expect to gain knowledge of themselves and therefore tend to minimize the stress. On the other hand, experiments that are difficult for a participant to completely understand--in terms of the objectives and the procedure--may be treated with undue harshness. Moreover, in giving a green light to the High-rated experiments and a red light to the remaining experiments, we are again playing the magic

number game rather than using the "presumed consent" procedure as a guide to responsible decisions--decisions that consider both the risk and the possible benefits of the research.

If we proceed with the red and green light metaphor, perhaps we can forego the magic number. The High-rated experiments could be given a green light but as most green lights, there should always be an awareness that they may turn from green to yellow to red. Concurrently, the opinion of even a few participants that they may be harmed by the experiment should be heeded and the necessary precautions taken. The Intermediate experiments could be given a yellow light. Proceed--if you proceed at all--with extreme caution. Only if there is sufficient justification for the procedure, and only if the contribution of the experiment to our understanding of behavior, is likely to be considerable, should the yellow light be allowed to follow the cycle to green. As for the Low-rated experiments, the light should be red. And only under the most extraordinary circumstances should it be allowed to change to green. Not only should the future contribution be practically assured but the experiment itself should be both voluntary and with informed consent. Thus, for the Low-rated experiments neither the procedures nor the recruitment should be deceptive. Further, there should be a guarantee that subjects can refuse to participate without feeling guilty or feeling deprived of implied future rewards. In other words, extreme care should be exercised to prevent subtly coercive pressures to participate, as might be the case if faculty solicit students in their own university or the subject population is institutionalized.

Focus On Ethical Issues

In this section, the implications of the findings for ethical issues will be discussed. The reactions of participants will be scrutinized in terms of conducting ethical experiments: experiments that do not exploit subjects. The findings of this study have provided empirical evidence on how "potential subjects" view physical and psychological stress and harm, react to "insights" into their personalities as well as their attitudes toward deception. After reviewing the evidence on these facets of experimentation, a new technique for obtaining informed consent will be suggested.

Do "Potential Subjects" View Experimental Procedures as It Has Been Assumed?

In undertaking this empirical exploration of ethical issues, various experiments were selected that have either aroused ethical controversy or that had specific procedures that have been questioned. By having "potential subjects" give their reactions to these experiments--including their views on whether they were ethical--it was felt that knowledge could be gained that would be of value in protecting the rights of "potential subjects" in psychology experiments. That participants may have a different perspective than psychologists is often acknowledged but when the impositions of experiments on subjects are portrayed, fragmentary anecdotal reports are usually cited rather than empirical evidence.

If experiments are to be designed to avoid ethical problems, then they should be based on the actual and legitimate concerns of participants. Whether or not subjects are likely to be harmed--or to feel they

have been exploited--cannot be determined unless their feelings and attitudes are assessed. Yet, until fairly recently, debates on ethical issues were based on mere conjecture, with psychologists and others making assumptions about how subjects react to experimental procedures. Neither actual or potential subjects were questioned. But do people react to experimental procedures in a manner that some psychologists think they do? The reactions of participants in this study indicate that some of the allegations made by psychologists about subjects' attitudes toward experimental procedures do not necessarily correspond to what "potential subjects" report as their own views. For instance, neither stress or deception deterred participants from evaluating some experiments highly, if there were features of those experiments that offered positive rewards for participation.

Perhaps the reactions of participants to experiments in this research will provide information that can assist experimenters in devising experiments that are compatible to both subject and experimenter alike. Experiments that do not expose subjects to situations that are onerous to them and that can--when possible--make the experience of being a subject rewarding. An experimental situation can be made rewarding if we can learn what "potential subjects" seek from their participation.

Physical Versus Psychological Stress and Harm

How do participants react to stress and possible harm? Does an experiment need to be bland--without any possibly upsetting features or any temporary discomfort--for participants to approve the experiment for themselves and others? It does not seem so. Neither Conformity or Attack are without stress--or possible harm. Nonetheless both stress

and harm are the most important reasons for rejecting an experiment, if that stress or harm is sufficient to alarm participants. All three of the Low-rated experiments were rejected because they were considered overly stressful and harmful. Furthermore, for all three experiments, there was an emphasis on physical harm. Mentioning physical harm, even when the physical harm was neither attributed to, or a direct result of, physical stressors, was a characteristic of the Low-rated experiments. Although physical injury was possible for the three experiments, participants hypothesized that physical harm need not be a direct outcome of a physical cause--physical harm might also occur as a result of the extreme stress, fear or pain. It would seem that physical harm that can occur without a necessary physical cause is an almost pathognomic sign of extremely negative reactions to an experiment. Less tolerance of physical discomfort and the possible violation of physical integrity, are also suggested by the results of the Farr and Seaver study. They did not directly compare the reactions to physical and psychological discomfort but if the discomfort aroused by hypothetical invasions of privacy are grouped with other forms of psychological stress, it is obvious that the means for physical stress would be higher than the means for psychological stress. Comparing only the means for psychological and physical discomfort, without including invasions of privacy, suggests the same conclusion but would have to be tested statistically.

The foregoing does not imply that there should be tolerance of experiments that only employ psychological stress or that psychological stress need not be worrisome. Not only do participants fear physical harm if psychological stress is excessive, but the fact that there is

apparently more tolerance for psychological stress obviously does not imply that psychological stress cannot be harmful. A less intense reaction to psychological stress may be induced by the feeling of participants that they have better control over psychological situations, and their reactions to them, than they would have for physical stress. This "illusion of control" may contribute to their feeling able to avoid harm --harm that might occur if they were susceptible to the experimental manipulations involving psychological stress. For instance, many participants denied harm from the Obedience experiment because they would not obey. Moreover, the consequences of a psychological stressor may be more difficult to envision than the consequences of a physical stressor.

It should be noted that the three Low-rated experiments all employed procedures that threatened, or actually violated, the physical integrity of the subjects: Traumatically Conditioned Response with an injection of anectine that brought about a cessation of respiration and complete paralysis for over a minute; Shock that exposed participants to electric shocks of near maximum intensity (the lowest rated procedure in the Farr and Seaver study); and, Airplane, where subjects were led to believe they were about to make a crash landing in their plane.

The Acceptance of "Disturbing Insights"

A criticism of some experiments, especially Obedience, has been that they expose subjects to situations where they might behave in a less than desirable manner. Concern has been expressed that this might lead to "disturbing insights" that could have harmful aftereffects. And it has also been maintained that subjects do not expect insight into themselves as they would if they entered a therapeutic situation. We

can dispense with this latter contention without difficulty. One of the prime motives for being a subject would seem to be self-knowledge. The more opportunity that an experiment provides for learning about oneself, the more often it will be endorsed or actually applauded. An extremely stressful experiment, such as Airplane, receives some approbation if it provides an opportunity to learn about oneself, even if--on balance--it is condemned.

Further support for the supremacy of learning about oneself as a motive for being a subject, comes from the Farr and Seaver (1975) study. In that study, the most blatant forms of invasion of privacy were reported as arousing minimum discomfort by respondents. A fact they found surprising. Yet it is logical when we know that "potential subjects" value learning about themselves from participation in experiments. If we seek knowledge of ourselves, revealing personal information is not regarded as primarily threatening discomfort but as an avenue to self-understanding and awareness.

The question of derogatory or disturbing insights is more difficult to confront. Participants certainly evidence willingness to discover whether they would conform even when they previously maintained that they would not conform. For the Conformity experiment, lip-service by participants was given to accepting possibly derogatory insights. But can we believe them? Perhaps so, most "potential subjects" are eager for knowledge of themselves. However, when it came to the Obedience experiment, the desire for insight seemed to disappear. To be sure, many participants stated they could benefit by learning how they would behave in the Obedience experiment but when it came to volunteering as a

subject--a concrete opportunity--curiosity about their own behavior was conspicuous in its absence for those who were willing to consent. Are we to then conclude that a strong interest in learning about oneself is limited to knowledge that affirms we are marvelous creatures with perhaps one or two minor human weaknesses? To discover our virtues and our strengths--and be told that we have behaved admirably--is, of course, pleasurable. Why shouldn't it be? But must we infer from that that participants reject any derogatory insights and that, therefore, an experiment that can evoke behavior that participants might find difficult to accept in themselves, should be avoided? Perhaps. It is not without risk.

It is not surprising to find that participants believed that inflicting needless and severe pain on another person--for "no apparent reason" as one participant stated it--is a horrible deed to contemplate. Merely viewing the film of the Obedience experiment elicits strong responses from an audience. Laughter that is undoubtedly a sign of tension, albeit milder in form than that which occurs in the experiment itself, is usually present. The experiment fathoms very strong and deep emotions. Should we avoid an experiment that touches us too deeply? Most people would not like to think themselves capable of inflicting pain at the request of an authority and would like to dissociate themselves from the notion of an Eichmann merely following orders, even if the behavior is not our own. For the participants in this study, the experimental situation had even more cruel implications. Many did not conceptualize the role of authority, and--like others who are first introduced to the experiment--felt it measured the subject's own

willingness to inflict pain on another person, sometimes with sadistic pleasure. Nonetheless, there were participants who were in favor of the experiment. It was controversial for participants as it has been controversial for psychologists and others. Yet, the only participants who expressed an interest in their own behavior when responding to the Consent question, checked 'Not sure' rather than 'Yes' to being a subject. And, a few expressed fear about knowing how they would behave.

When the Obedience experiment was run--with over 1000 subjects--the subjects themselves seemed to have emerged unscathed. No dire consequences of participation have been reported, and, in fact, 84% of the subjects endorsed the experiment and less than 2% indicated negative feelings. Further, a psychiatrist who interviewed 40 subjects a year after they had participated, and probed for ill-effects, did not find them. What may determine the ultimate impact of a potentially disturbing experiment, and how uncomfortable insights are assimilated by a subject, may be the debriefing. A sensitive and thorough debriefing may be able to prevent an untoward reaction if the person's own defenses do not accomplish this for him.

But utmost caution seems indicated if an experiment is likely to evoke strong emotions, especially when the emotions are likely to involve possible psychological insight: It seems that psychological insight is both sought and valued by participants and this may make them vulnerable. Unfortunately, the experiments that concern themselves with crucial human behavior, and that may, therefore, make a substantial contribution to knowledge of behavior, are those that run the greatest risk of exposing subjects to situations that may touch them deeply. And many of these

experiments employ deceptive cover stories. Thus, we face a serious ethical dilemma. In searching for meaningful knowledge of behavior, we may constantly have to confront unavoidable problems. Problems that may never be completely solvable. But can we confront them by never taking a step unless we are 100% sure we will never falter or run the slightest risk?

The Issue of Deception

One of the most oft debated issues in psychology experiments is the issue of deception. For some, the mere use of a deceptive cover story is likely to induce undesirable reactions in subjects, regardless of other features of the experiment. Others object to deception because it involves deceit and deceit is wrong. (A detailed discussion of attitudes toward the issue of deception was previously presented in the introduction.) If we asked whether participants objected to deception, the answer would have to be: yes and no. Yes, if deception functions as a form of entrapment. Otherwise, no. Deception did not appear to be a noteworthy feature of an experiment for participants unless there were other aspects of the experiment that were objected to, and the deception served to entrap subjects into an experimental situation that they rejected on other grounds.

Deception is acknowledged as onerous when as a result of the deception, subjects find themselves in a situation that they would have avoided, had they known what was in store for them, e.g., a deception that involves seducing the participants into the experiment rather than being part of an experimental cover story. The soldiers in Airplane were taken up in a plane to study the effect of changes in altitude on

work performance. They are not aware that it is an experiment. A group of hospitalized alcoholics are asked to volunteer for a study supposedly concerned with a possible therapy for alcoholism. Both groups then find themselves in extremely stressful situations, where escape is impossible.

Where deception served to entrap the subjects, deception was protested. A deceptive situation such as the Conformity experiment, was not worrisome to participants. Nor did deception seem particularly worrisome to subjects in the Sullivan and Deiker (1973) study--although the type of deception in that study was nearer to being a form of entrapment, as the so-called cover story was not related to the experimental manipulation, but was an excuse for having subjects volunteer. If the findings of this study are believable, we must conclude that the deception issue is a bogus issue. The fact that subjects are presented with a situation that is not all that it seems to be, may not even be interpreted as "deception" by those unfamiliar with psychological jargon. Or--if it is --it is not condemned as unreasonable for experiments that were approved. Very few considered experiments unethical on these grounds. There may, of course, be some actual subjects who would resent deceptive procedures but whether they do, or not, might depend on factors other than the deception itself. Factors having to do with how the situation is handled and how well they understand and accept the deceptive cover story. If the deceptive cover story is thought necessary to gain insight into a particular type of behavior, it may be easily accepted.

Saying that deception is a bogus issue does not imply that deceptive procedures should be accepted without question and used without hesitation. It is always possible that the use of deception could have

unexpected repercussions. Moreover, even if deception itself is not an issue as far as participants are concerned, the issue of deception raises another ethical issue--that of informed consent.

Deception and The Issue of Informed Consent

Even if "presumed consent" is substituted for the usual informed consent of the actual subject, is that sufficient? The issue of informed consent is not a simple one and what constitutes a valid informed consent agreement is not easily decided. But many feel very strongly that ignoring or evading informed consent is ethically reprehensible. And, it is on these grounds that deception can be condemned rather than on the grounds that it is merely deceitful and deceit is wrong.

It seems futile to claim that deception itself is apparently a bogus issue and then to point out that, bogus issue or not, it remains in an ethical twilight zone. If deception precludes informed consent, how can deception be used without some violation of the rights of subjects? It cannot be, if the traditional informed consent agreement is the only acceptable one. However, an informed consent agreement can be devised that would not invalidate a deception experiment and, at the same time, allows subjects to consent to participate in various experiments. Indeed deception itself can be consented to--or refused--in advance. Rather than having a consent agreement that is only relevant for a particular experiment, there could be a general consent agreement, appropriate to a wide range of experiments. A general consent agreement need not imply a vague document that asks participants to dispense with certain rights, and agree to accept certain impositions, such as stress, discomfort or anxiety. An agreement that is general in this sense may be worse than

no agreement. Participants, in this case, are asked to blindly agree to submit themselves to unknown and possibly disturbing experiences or to refuse on the basis of imagined tribulations that may never materialize.

What can be considered genuinely informed consent, and what should be included in an informed consent agreement, has been debated but not resolved. Therefore, any consent agreement can be open to criticism. However, a consent agreement that is merely form without substance, can be severely criticized since it creates an illusion of acceptance without providing an opporunity for a legitimate decision. A general agreement that is vague rather than specific, does not provide the necessary information for a knowledgeable decision. But what information is needed? Perhaps if we heed the Regents' decision in the Cancer case, their decision can be used as a guide to designing a consent agreement that provides effective protection of subjects. They maintained that informed consent should include any information that is likely to influence the granting--or withholding--of consent. Specific procedures are not necessarily what influences a participant to consent to be a subject in a particular experiment.

A general consent agreement should be applicable to more than a single experiment without being vague. It should be possible to have most potential subjects--forming a subject pool--sign the agreement and then be eligible for most experiments that will be performed. The consent document should cover a sufficiently wide range of situations so that if specific experiments could be invalidated by having subjects informed of their particular goals and content--in advance--they could be recruited by means of the consent agreement that has already been

signed. Thus, subjects would not have to be alerted to the aims of an individual experiment. Having participants sign a consent agreement, at some distance in time from actual participation, also will make it less likely that knowledge of the content of an agreement, will contaminate behavior. Simultaneously a general agreement can protect future subjects. If an agreement is signed independently of a particular experiment, there will be no subtle pressures to participate since they have already volunteered. If they are confronted with the investigator's own consent agreement after having tentatively agreed to be a subject, it may be much harder to refuse to participate because they dislike what they are likely to encounter.

What can, or should be, included in a general consent agreement to make it meaningful? It must be general in terms of procedures but it need not be general in terms of the possible subjective or psychological impact of the procedures. It probably does not matter to a subject whether he is led to believe he has a "undesirable trait" by means of a rigged dial or by means of a fake personality test. What makes the experience acceptable or unacceptable is probably the fact that he was misled about his own personality characteristics. It is the outcome or psychological impact of the procedure that is likely to influence his willingness to consent.

If a consent agreement focuses on the general conditions of consent, the consent must be given, or withheld, to individual clauses rather than being a blanket agreement. The impact or outcomes of various procedures can be described individually and the subject can consent, or refuse, accordingly. Some of the clauses can be constructed after

pre-testing an experiment, or series of experiments, by using a "presumed consent" procedure. The content of the clauses and the length of the agreement can vary according to the specific circumstances. Occasionally it may be necessary to include situations that a participant will not encounter so that the consent agreement does not sensitize him to specific experimental procedures that he will encounter. The agreement should probably include 10 to 15 situations. This would probably be sufficiently long to include both the situations he will encounter as well as some he will not encounter. The length should probably be tested empirically so as to avoid an agreement that is too long to be answered carefully. If there are too many clauses, it would invite hasty and thoughtless replies.

An example of an agreement made up of individual clauses is given below. It does not contain the recommended number of items but rather a selective sample of the kind of items that could be included.

Model Consent Agreement

Psychology experiments involve many aspects of behavior and, therefore, in participating in a psychology experiment, you may encounter a variety of different experiences. Before you are asked to volunteer for a specific experiment, we want to know which of the conditions, described below, you would agree to undergo.

Your signature at the end of the Agreement, indicates that you have read each individual item carefully and have given your consent only if you are willing to participate in an experiment involving the situations that are described.

Please read each of the following items carefully before indicating whether or not you are willing to consent.

1. In some experiments, previous knowledge of the goals or the purpose of the research will undoubtedly influence your behavior. Therefore, the experimenter may not give you a complete or accurate description of the experiment, until it is completed. Moreover, under some circumstances, the description of the experiment may even be misleading.

I would agree_____.

I would not agree_____.

2. Some experiments may involve temporary psychological stress.

I would agree_____.

I would not agree_____.

3. Some experiments may involve physical stress, such as noise, overly hot rooms, or electric shock. The physical stress will not result in any bodily harm.

I would agree_____.

I would agree only if I knew the type of physical stress involved_____.

I would not agree_____.

4. Psychology experiments are designed to gain a greater understanding of behavior. Therefore, in some experiments you may become aware of certain characteristics of your personality, previously unknown to you.

I would agree_____.

I would not agree_____.

5. In some experiments, you might learn something about yourself that you could consider unfavorable. What you learned would, of course, be confidential and the experimenter will discuss this with you and answer any questions.

I would agree_____.

I would not agree_____.

6. An experiment may involve stressful encounters with other people, such as insults, arguments, or competition in which you may win or lose.

I would agree_____.

I would not agree_____.

7. In some experiments, to create the proper psychological atmosphere, a participant may be given false information on some characteristic of his personality or performance on a task. After completing the experiment, the experimenter will tell you that the information was false and explain why it was given.

I would agree_____.

I would not agree_____.

8. In some experiments, you may be exposed to conditions that can induce feelings of failure. The sense of having failed may be achieved through false feedback or by a poor performance on some task. After completing the experiment, the falsely induced sense of failure will be explained.

I would agree_____.

I would <u>not</u> agree_____.

APPENDIX A

Instructions, Questions and Experimental Protocols

Verbal Instructions

Psychology experiments are one way in which we learn about human behavior. Since experiments enlist the cooperation of participants--asking them to commit their time and energy--with and without being paid, psychologists want to know how people would view their experience if they participated in different kinds of experiments. We are particularly interested in how each individual would react to an experiment from the standpoint of being a subject in it.

In your booklet, there are descriptions of six possible psychology experiments. Please read each experiment carefully and answer the two pages of questions that follow each experiment. Do this before proceeding to the next experiment. Start with the FIRST experiment and then do the others in the same order as they appear in the booklet.

You will notice that some questions request that you explain why you answered as you did. Please be sure to indicate the reasons for your answer, even when the answer you have checked is NOT SURE. We need to know not only HOW you REACT, but WHY you reacted that way.

Turn to the second page of questions. Note there is a separate group of ALTERNATIVES for YES and NO answers. Go to the YES column if you answered YES, the NO column if you answered NO. Use TWO CHECKS for the ONE alternative that you consider the most important or influential. You may check as MANY alternatives as you wish, BUT only use the DOUBLE-CHECK once. The double-check is for any one reason that is particularly important.

At the end of each booklet, there are two pages of questions requesting some information about you. You are NOT required to give your name; but please do not forget to answer these questions.

If there are any problems as you proceed, please raise your hand and they will be answered.

Cover of Experimental Booklet: Written Instructions

INSTRUCTIONS

In this booklet, there are descriptions of six possible experiments. Please read each experiment carefully, and answer the two pages of questions that follow it, before proceeding to the next experiment. Start with the first experiment and then go on to the others in the order in which they appear in the booklet.

You will notice that some questions request that you explain why you answered as you did. Please be sure to indicate the reasons for your response, even when the answer you have checked is "not sure". We need to know not only how you react to an experiment but why you reacted that way.

Note that for question 6, there is a separate group of alternatives for "yes" and "no" answers. Please read the instructions for this question carefully.

Please be certain that you have read all six experiments and answered every question. If there are any problems as you proceed, please raise your hand and they will be answered.

Questions After Each Experiment

1. How do you think you would have behaved if you had been a subject in this experiment?

2. Do you think you could benefit in any way by participating in this experiment?

   ( ) Definitely ( ) Possibly ( ) Probably not ( ) Definitely not

   Please explain your answer

3. Do you think you could be harmed in any way by participating in this experiment?

   ( ) Definitely ( ) Possibly ( ) Probably not ( ) Definitely not

   Please explain your answer

4. Would you consent to serve as a subject in this experiment?

   ( ) Yes ( ) No ( ) Not sure

   Please explain why

5. Do you feel that this experiment is ethical or unethical?

   ( ) Definitely ethical ( ) Probably ethical ( ) Probably unethical ( ) Definitely unethical

   Please explain why

6. Suppose an experiment could be carried out only with the consent of a board made up of representatives of possible subjects for the experiment. The board would make a judgment based on the experiment's effect on subjects, considerations of the worth of the experiment, its acceptability to community moral standards, or any other factors it deemed relevant. If you were a member of this board, would you vote to give permission for the conduct of this experiment?

( ) Yes ( ) No

Please check any of the reasons below which influenced your decision. Make 2 checks for the one reason which is of particular importance in this decision.

"YES" answers:

___Subjects voluntarily agreed to be in the experiment.

___Possible discomfort or stress for the subjects will be only temporary.

___Knowing how they would behave in this situation will be of value to the subjects in understanding themselves.

___Not too unpleasant or stressful for the subjects.

___To Learn something of value about human behavior.

___If the subjects knew the true purpose or nature of the experiment ahead of time, they might have behaved in an unnatural or overly self-conscious manner.

___The value of the experiment in advancing our knowledge of human behavior justifies exposing the subject to the possible stress involved.

___Does not take unfair advantage of the subjects.

___Other (please specify):

"NO" answers:

___Subjects do not volunteer to be in the experiment.

___May have long term harmful consequences for the subjects.

___Subjects may behave in a way that lowers their sense of self-esteem.

___Too unpleasant or stressful for the subjects.

___Does not accomplish anything of social value.

___Subjects do not know the true purpose or nature of the experiment before participating in it and therefore may feel they have been deceived.

___The value of the experiment does not justify the possible harm to subjects.

___Encourages people to reveal undesirable, anti-social or neurotic behavior.

___Other (please specify):

AGE _____ SEX _____

OCCUPATION _____

EDUCATION: Please check the highest level attained.

Some High School _____ Completed High School _____

Some College _____ Completed College _____

Some graduate or professional training _____

Completed graduate or professional training _____

If you have attended graduate or professional school, please indicate which type: _____

MARITAL STATUS:

Single _____ Married _____ Separated _____ Divorced _____ Widowed _____

Do you identify with a particular ethnic group? Yes _____ No _____

If yes, which? _____

Do you identify with a particular religious group? Yes _____ No _____

If yes, which? _____

If you have a religious affiliation, do you consider yourself:

Highly observant _____ Observant _____

Rarely observant _____ Not observant _____

Why did you volunteer to participate in this experiment?

PLEASE TURN TO THE FOLLOWING PAGE

Have you ever participated in a psychology experiment before? Yes ___ No ___

If yes, briefly describe the experiment.

Are there any experiments, described in your booklet, that seemed to be similar to other psychology experiments that you have heard about?

Yes _____ No _____

If yes, please name the experiment or experiments as they are titled in the booklet, and indicate briefly, the similar features.

THANK YOU FOR YOUR PARTICIPATION

Experimental Write-ups: From Highest to Lowest Rated

CONFORMITY AND INDEPENDENCE

To what extent will a person yield to, or resist, the influence of a group? The purpose of this experiment is to discover how a person will react when confronted with a unanimous view which is contrary to his own.

A group of eight people is assembled and asked to judge which of three lines is the same length as another line. Many such judgments are required and each member of the group must give his answer publicly so that all can hear. The correct answer is a simple and obvious one. Normally it would be extremely rare for someone to make an error. However, in this situation, only one person is the real subject. The other members of the group, assistants of the experimenter, have been instructed to unanimously give incorrect responses for many of the judgments. The subject answers last and thus must resolve a powerful conflict. He must either announce an answer which is in disagreement with all the others or else he must give an answer which he is probably sure is incorrect. He faces, perhaps for the first time in his life, a situation in which the unanimous opinion of a group of people differs from his own. And, he must state his own opinion, publicly.

Possible results: When subjects give their opinion after hearing the incorrect answers of others, they may also give incorrect answers. There may be pronounced differences among the subjects in the extent to which they conform to group opinion rather than giving the correct answer. Conflict and tension may be frequently experienced by the subjects, especially when they express an opinion which differs from that of the unanimous majority.

A GAME TO LEARN ABOUT PANICS

When there is a fire in a building or a theatre with too few exits, panic may develop. The aim of this experiment is to represent, in the laboratory, some features of a panic. This is done by means of a game.

Aluminum cones with strings attached to them are put in a large bottle. The bottle has a narrow neck so that only one cone at a time can be withdrawn. If two cones are pulled out of the bottle simultaneously, they jam the neck of the bottle and neither can be withdrawn. Each subject holds the end of a string attached to a cone. The situation is set up as a game in which subjects can either gain or lose small amounts of money. During the experiment, water is gradually introduced into the bottle from below. Each subject is given 25 cents if he removes his cone from the bottle while the cone is still dry, and he loses money as the wet area of his cone increases. The water represents the fire, the neck of the bottle is like an exit from a theatre which is on fire, and the cones represent the exiting people. The question is - under what circumstances will jams occur?

Possible results: Traffic jams may occur as long as there are rewards for removing the cone before it gets wet, even if the subjects are allowed to have discussions ahead of time, to plan on how they can cooperate. If there is no money involved, subjects may be able to exit successfully in the ample time allowed.

ATTACK ON PERSONAL VALUES

How does a person react to a stressful dispute with another person, especially when his values and beliefs are skillfully attacked? The following experiment attempts to answer this question.

The subject and a "partner" are asked to debate their personal philosophies of life. They are placed in a brilliantly lighted room where the proceedings can be observed and filmed. Appartus to record heartbeat and respiration is provided for both the subject and his partner.

The subject, who generally expects a pleasant discussion, is taken by surprise when his partner, supposedly another subject, launches a sharp, vigorous attack on the subject's point of view. However, his "partner" is not actually another subject but an assistant of the experimenter, a law student who is skilled in debating techniques and who has been instructed to anger the subject by opposing and tearing down his beliefs. The subject's behavior and emotional reactions are observed and measured, before, during, and after, the attack.

Possible results: Subjects will probably differ in both their emotional reactions, as measured by bodily changes, and their behavior. If the subject is very involved in the debate, actively defending himself, his bodily reactions may be different than if he responds to the attack with "surrender and submission".

SENSORY DEPRIVATION

The purpose of this study is to discover how people react when deprived of the usual auditory, visual and tactile stimulation that is normally received from their surroundings.

Subjects volunteer to participate in an experiment requiring a prolonged period of isolation. The subject, in a small lighted room, must lie on a bed during the entire period - with time out only for meals and going to the toilet. Translucent plastic glasses are worn, which transmit light, but do not allow the form or details of any object to be seen. Nothing can be heard except the continuous hum of air conditioning equipment. Cotton gloves and cardborad cuffs, extending beyond the fingertips, restrict the sense of touch. The subject is kept in this condition for as long as he is willing.

Possible results: Prolonged exposure to a restricted, monotonous environment, may disrupt behavior and thinking. The subject could show childish emotional reactions and his perceptions could become distorted. It is also possible that he will experience visual and auditory hallucinations. Immediately after the experiment, the subject's performance on intellectual tasks may be below his usual capacity. It is unlikely that these symptoms will persist beyond a few hours.

REACTION TO AN UNDESIRED TRAIT

If a person is exposed to information, strongly implying that he possesses a trait which he rejects or condemns in himself, will he try to resolve the conflict by attributing that trait to others? In this experiment, subjects who do not consider themselves homosexual, are led to believe they possess homosexual tendencies and are then asked their opinion of another person.

Male subjects are given a series of psychological tests. They are told that these tests will be analyzed by clinical psychologists. After the testing they are invited to return for a second session in which both their self-insight and their ability to judge the personality of another person will be evaluated. At the second session, the subject and his partner, another subject, are seated at a table, facing a screen. In front of them, each subject has a dial - connected to them by wires - which they can see but the other person cannot. The experimenter then projects pictures of semi-nude and fully clothed men onto the screen. The dial is rigged so that everytime a handsome, semi-nude man appears, the dial registers a wide swing. With great care the experimenter explains that the movement of the needle in response to looking at photographs of nude men, is a clear and indisputable sign of homosexual arousal. Following this, the subject is asked to describe his own reactions and to indicate how his partner may have reacted.

In concluding the experiment, it is carefully explained to the subject that his so-called reactions to the pictures, supposedly indicated on the dial, have actually been rigged by the experimenter.

Possible results: Some subjects may attribute homosexuality to their partners as a response to "discovering" homosexual tendencies in themselves. This sort of reaction may relate to the subject's own feelings of self-esteem.

OBEDIENCE TO IMMORAL ORDERS

The purpose is to see how far a person will comply with an experimenter's callous orders before refusing to go on. In other words, to see whether a person would disobey an experimenter rather than act severely against another individual.

Two adults come to a psychology laboratory to take part in a study on memory and learning. (One of them is an actual subject, the other is a professional actor working for the experimenter.) The subject is placed in a position where he is told he must administer increasingly powerful electric shocks to the other man (the victim). He is told to deliver a shock each time the other man makes an error on a learning task. And in order to deliver the shock the subject is given control of an impressive shock generator, that can give shocks from 15 volts to 450 volts: Danger, severe shock. The victim is strapped in a chair and cannot get out. But he protests with increasing vehemence as the shock level is raised. If the subject turns to the experimenter and protests, the experimenter tells him that he must go on, giving increasingly more powerful shocks. (Actually, the victim does not really receive any shocks, but the subject thinks he does.) The question is whether the subject will obey, or refuse to obey, the experimenter.

Possible results: Some subjects may obey the experimenter, continuing to give shocks until the highest shock level on the generator is reached, and the experiment is terminated. Others may obey initially, but refuse to continue after the victim begins to protest. Subjects may experience conflict and manifest signs of extreme tension.

AIRPLANE CRASH SIMULATION

To study the effects of extreme stress on work efficiency and on the production of harmful and noxious body products, the experimenter creates a situation likely to produce intense fear.

A group of soldiers - during basic training - is taken on an airplane flight. They are told that the purpose of the flight is to study the effect of changes in altitude on work performance. During the flight, the aircraft lurches and one propeller stops. Other malfunctions are announced over the intercom and finally the soldiers are told to prepare for a crash landing. Ambulances and fire trucks are seen in the field below.

The soldiers are then asked to fill out some questionnaires (which are actually tests): One in the form of emergency instructions and the other in the form of emergency data such as the name of the next of kin. They are instructed to place these documents in their survival kit. Meanwhile the pilot simulates the beginning of a crash dive. This stress situation lasts a brief time and then the soldiers are told that they are safe.

Possible results: Under conditions of extreme stress, it is possible that working efficiency will decrease markedly and there will be specific changes in body chemistry.

TRAUMATIC SHOCK AND LEARNING

How does a person, exposed to extremely painful shocks, learn to avoid further shocks? This experiment is designed to study learning under painful conditions.

Subjects volunteer to serve in an experiment involving electric shock: A medical approval slip is required. After signing a waiver of responsibility, the subject is strapped into the appropriate apparatus. A bell is sounded, and ten seconds later, the subject is given a shock. The intensity of the shock is gradually increased until it is painful. When the subject indicates that a further increase will make the pain intolerable, the intensity of the shock is then decreased slightly and kept at that level.

The number of painful shocks depends on how quickly a subject learns to avoid the shocks: Subjects receive a minimum of 45 shocks and a maximum of 200. There are two groups of subjects. For both groups, the bell signals the onset of shock, but the manner of avoiding the shock differs. In one group, a reflex response can either terminate the shock or avoid it. In the other group, the subjects must learn to turn a knob both to terminate the shock or avoid it. For the reflex group - although escaping the shock is automatic - avoiding the shock must be learned. The question is: Which group learns faster?

Possible results: The subjects may learn to avoid the shock more easily when they have to learn how to terminate the shock. When the termination of the shock is based on a reflex reaction, it may be more difficult to learn how to avoid the shock.

A TRAUMATICALLY CONDITIONED RESPONSE

If a person has an experience of terrifying dimensions, will he continue to react to an incidental element in that trauma? For instance, a specific tone. Hospitalized alcoholics volunteer as subjects after being told that the experiment is connected with a possible therapy for alcoholism.

The subject is placed on a stretcher and various devices to measure heart rate, respiration, and other physical reactions, are used. Suddenly - without warning - a drug is injected which causes instantaneous paralysis and respiration is suspended. Although the subject is unable to breathe, he is aware of what is going on. The situation continues for about two minutes and the subject feels as if he is dying. He is unable to breathe, and at the same time, because of the general paralysis, unable to do anything about it. (The experience is described as horrifying even when the individual knows beforehand that it is a temporary reaction caused by a drug and also expects it.) During the trauma, earphones are used to transmit a special tone. Will the subject show the same physical reaction to the tone alone when it is used without the original trauma?

Possible results: Subjects who hear the tone while they are undergoing this traumatic experience, may continue to respond to the tone long after the original trauma has passed, e.g. show the same physical reactions. They may do so even though the traumatic experience is never repeated. Some subjects may manifest signs of shock immediately after the effect of the drug has worn off.

PROLONGED EXPOSURE TO FREEZING TEMPERATURES

Sometimes pilots must crash land their planes or bail out into Arctic waters. The following experiments are conducted to study length of survival and bodily reactions to immersion in extremely cold water. Subjects are prisoners and they are forced to take part in this experiment.

During a cold snap, in December, a prisoner is placed naked on a stretcher outside his cell in the evening. He is covered with a sheet and every hour a bucket of cold water is poured over him. The subject lays out in the open like this for more than twelve hours. Temperatures are taken, and measures are made of heart action and respiration.

In a second experiment, a prisoner is immersed in water in full flying uniform....with hood. A life jacket prevents sinking. The experiments are conducted at water temperatures between 36.5 and 53.5 degrees Fahrenheit. In the first series the back of the head and the brain stem are above water. In another series the back of the neck and part of the head are submerged.

Possible results: Fatalities may occur only when the medulla and the cerebellum are chilled. The length of time that each prisoner is able to survive in the icy water, may vary.

"Results" as Presented for 'Outcome' Manipulation

REAL:

CONFORMITY AND INDEPENDENCE

Results: When subjects gave their judgments after hearing the incorrect answers of others, about a third of these judgments were in error. There were also striking differences among the subjects in the extent to which they followed the group opinion. Some never did, while others almost always did. Conflict and tension were frequently experienced by the subjects.

OBEDIENCE TO IMMORAL ORDERS

Results: Over 60 percent of the subjects obey the experimenter, continuing to shock the victim until the end of the experiment, and therefore they give the highest shock level on the generator, 450 volts: Danger, severe shock. Many subjects manifest signs of extreme nervous tension.

FALSE:

CONFORMITY AND INDEPENDENCE

Results: When subjects gave their judgments after hearing the incorrect answers of others, about 90 percent of these judgments were in error. There were also striking differences among the subjects in the extent to which they followed the group opinion: a few never did, while most of the others did so regularly. Conflict and tension were frequently experienced by the subjects.

OBEDIENCE TO IMMORAL ORDERS

Results: Most subjects disobeyed the experimenter and stopped shocking the victim at 150 volts. Fewer than 4 percent were still obedient at 300 volts and less than one percent continued until 450 volts: Danger, severe shock. Signs of extreme tension were shown by some subjects.

A GAME TO LEARN ABOUT PANICS

Results: Traffic jams invariably occur. Some groups of subjects are permitted to have discussions ahead of time, allowing them to make a plan of cooperation. But even when such plans are made, serious jams occur. On the other hand, subjects are able to draw the cones from the bottle without any serious jams occurring, if money rewards are eliminated and there is no water.

ATTACK ON PERSONAL VALUES

Results: Subjects differed in both their emotional reactions, as measured by bodily changes, and their behavior. If the subject was very involved in the debate, actively defending himself, breathing and heart rate were faster. But if he responded to the attack with "surrender and submission," breathing and heart rate slowed down.

SENSORY DEPRIVATION

Results: The results show that prolonged exposure to a restricted, monotonous condition can disrupt behavior and thinking. Some subjects show childish emotional reactions. Perceptions can become distorted and visual and auditory hallucinations are sometimes experienced. Immediately after the experiment, a subject's performance on intellectual tasks is below his usual capacity. All these symptoms generally disappear after a few hours.

REACTION TO AN UNDESIRED TRAIT

Results: Some subjects attributed homosexuality to their partners as a response to "discovering" homosexual tendencies in themselves. This reaction related to the subject's own feelings of self-esteem.

AIRPLANE CRASH SIMULATION

Results: Under conditions of extreme stress, the working efficiency of some subjects decreased markedly. There were also specific changes in body chemistry.

TRAUMATIC SHOCK AND LEARNING

Results: The subjects, whose escape response was a reflex reaction to the shock, never learned to avoid the shock. However, the subjects who had to learn how to terminate the shock were also able to learn how the shocks could be avoided.

A TRAUMATICALLY CONDITIONED RESPONSE

Results: Subjects who heard the tone while undergoing this traumatic experience continued to respond to the tone long after the original trauma had passed, e.g., they showed the same physical reactions. The reaction to the tone continued even though the traumatic experience was never repeated. Some subjects manifested signs of shock immediately after the effect of the drug had worn off.

PROLONGED EXPOSURE TO FREEZING TEMPERATURE

Results: Fatalities occurred only when the medulla and the cerebellum were chilled. The toughest man endured in the icy water for 100 minutes, the weakest for 53 minutes.

APPENDIX B

Tables for Sex Differences

Table 1B. Significant t Tests for Sex

	MEAN		SD			
RATING	M	F	M	F	t	P
TCR	-2.25	-5.47	6.48	4.49	1.92	(.06)
(N)	(12)	(36)				
QUESTIONS						
Exposure - Benefit	-1.83	-1.19	0.38*	1.17*	4.04	.001
(N)	(24)	(72)				
TCR						
Ethical	-0.17	-0.94	0.39	0.21	1.82	(.08)
Permit	-0.33	-1.33	2.06	1.51	1.81	(.08)
(N)	(12)	(32)				
Shock						
Harm	-0.08	-0.88	1.56	1.05	1.75	(.09)
(N)	(12)	(32)				
Airplane						
Harm	+0.25	-0.89	1.55	1.04	2.90	.01
(N)	(12)	(32)				
Sensory						
Permit	+2.00	+0.89	0.00	1.82	2.10	.04
(N)	(12)	(32)				
Attack						
Permit	+2.00	+1.22	0.00	1.61	1.67	(.10)
(N)	(12)	(32)				
Game						
Harm	+1.75	+1.33	0.68*	1.19*	2.12	.04
(N)	(24)	(72)				
Conformity						
Benefit	+0.50	+1.14	1.17	1.07	1.75	(.09)
(N)	(12	(36)				
REASONS						
Exposure						
Too unpleasant or stressful	1.15	0.94	0.49	0.51	1.66	(.10)
(N)	(20)	(62)				
Shock						
Learn about behavior	1.50	0.58	0.55	0.52	3.49	.003
(N)	(6)	(12)				
Airplane						
Value does not justify harm	0.22	1.00	0.44	0.65	3.33	.002
(N)	(9)	(25)				
Obedience						
Discomfort or stress temporary	0.80	0.32	0.45	0.57	1.77	(.09)
Learn about behavior	1.40	0.82	0.55	0.66	1.81	(.08)
(N)	(5)	(22)				
Reaction						
Value justifies stress	0.00	0.30	0.00	0.47	1.90	(.07)
(N)	(9)	(20)				
Sensory						
Ss voluntarily agreed	0.83	1.19	0.39	0.49	2.22	.03
Discomfort or stress only temporary	0.50	0.88	0.52	0.59	1.94	(.06)

* Variances not homogeneous.

Table 1B. Significant t Tests for Sex (continued)

	MEAN		SD			
Sensory (continued)	M	F	M	F	t	P
Of value to Ss in understanding themselves	0.33	0.81	0.65	0.80	1.79	(.08)
(N)	(12)	(26)				
Long term harm	0.00	0.50	0.00	0.71	2.24	.05
Lowers Self-esteem	0.00	0.50	0.00	0.53	3.00	.02
Too unpleasant or stressful	0.00	0.60	0.00	0.52	3.67	.005
No social value	0.00	0.40	0.00	0.52	2.45	.04
Value does not justify harm	0.00	0.90	0.00	0.74	3.86	.004
Encourages undesirable behavior	0.00	0.40	0.00	0.70	1.81	(.10)
(N)	(0)	(10)				
Attack						
Long term harm	0.00	0.86	0.00	0.69	3.29	.02
Lowers self-esteem	0.00	1.29	0.00	0.76	4.50	.004
Ss feel deceived	0.00	0.71	0.00	0.76	2.50	.05
Value does not justify harm	0.00	0.86	0.00	0.38	6.00	.001
Encourages neurotic behavior	0.00	0.57	0.00	0.54	2.83	.03
(N)	(0)	(7)				
Conformity						
Value justifies stress	0.27	0.67	0.47	0.69	1.75	(.09)
(N)	(11)	(33)				
QUESTIONS ACROSS EXPERIMENTS						
Harm	+0.28	0.00	1.54	1.56	1.86	(.06)
(N)	(144)	(432)				
REASONS ACROSS EXPERIMENTS						
Learn about behavior	1.14	0.82	0.53	0.60	4.37	.001
Value justifies stress	0.33	0.49	0.58	0.63	2.04	.04
Not unfair to Ss	0.43	0.55	0.52	0.57	1.74	(.08)
(N)	(87)	(235)				
Value does not justify harm	0.70	0.90	0.63	0.68	1.96	.05
(N)	(57)	(198)				

APPENDIX C

Tables for Sections on Before and After Exposure: Exposure and Game, Findings and Implications

Table 1C. Experiments Before and After Exposure: Significant t Tests

	MEAN		SD			
TCR	Before	After	Before	After	t	P
Benefit	-0.50	-1.17	1.45	1.13	1.78	(.08)
Ethical	-0.42	-1.08	1.44	1.10	1.80	(.08)
(N)	(24)	(24)				
Conformity						
Ethical	+1.13	+1.63	0.99*	0.58*	2.14	.04
(N)	(24)	(24)				
Game						
Rating	+5.38	+7.00	4.10	3.10	2.19	.03
Ethical	+1.08	+1.58	1.09*	0.79*	2.57	.01
(N)	(48)	(48)				
TCR						
Of value to Ss in understanding themselves	1.29	0.00	0.95	0.00	2.64	.03
Learn about behavior	1.14	0.50	0.38	0.58	2.26	.05
(N)	(7)	(4)				
Shock						
Not too unpleasant or stressful	0.00	0.38	0.00	0.52	2.31	.035
Not unfair to Ss	0.30	0.88	0.48	0.64	2.17	.045
(N)	(10)	(8)				
Airplane						
Discomfort or stress only temporary	0.38	1.17	0.74	0.41	2.34	.04
(N)	(8)	(6)				
Long term harm	1.11	0.63	0.68	0.50	2.36	.025
(N)	(18)	(16)				
Obedience						
Not unfair to Ss	0.60	0.17	0.74*	0.39*	1.96	(.06)
(N)	(15)	(12)				
Long term harm	0.54	0.13	0.52	0.35	1.98	(.06)
Too unpleasant or stressful	1.15	0.38	0.80	0.52	2.44	.025
(N)	(13)	(8)				
Reaction						
If Ss knew the true purpose of experiment they behave unnaturally	0.35	0.75	0.49	0.62	1.92	(.07)
(N)	(17)	(12)				
Lowers self-esteem	0.43	1.33	0.54	0.65	3.11	.01
(N)	(7)	(12)				

*Variances not homogeneous.

Table 1C. Experiments Before and After Exposure: Significant t Tests (continued)

	MEAN		SD			
	Before	After	Before	After	t	P
Sensory						
Not too unpleasant or stressful	0.22	0.60	0.43	0.68	2.02	.05
Not unfair to Ss	0.33	0.65	0.49	0.49	2.00	.05
(N)	(18)	(20)				
Attack						
Ss voluntarily agreed	0.90	0.57	0.72	0.51	1.70	(.09)
Not unfair to Ss	0.30	0.71	0.47	0.46	2.84	.01
(N)	(20)	(21)				
Self-esteem lowered	1.75	0.67	0.50	0.58	2.66	.045
(N)	(4)	(3)				
Conformity						
Ss voluntarily agreed	0.73	0.36	0.63	0.49	2.13	.04
(N)	(22)	(22)				
Self-esteem lowered	1.50	0.00	0.71	0.00	3.00	(.095)
No social value	0.00	1.50	0.00	0.71	0.00	(.095)
(N)	(2)	(2)				

Table 2C. Position, Rating and Mean Score for Questions

	M.S.	d.f.	F	P
Exposure Rating				
Between groups	25.59	5	2.59	.03
Within groups	9.89	90		
Linear	113.16	1	11.76	.001
Deviation from linear	3.70	4	0.37	N.S.
Quadratic	12.77	1	1.33	N.S.
Deviation from quadratic	0.68	3	0.07	N.S.
Benefit				
Between groups	2.12	5	1.96	(.09)
Within groups	1.08	90		
Linear	9.66	1	9.24	.003
Deviation from linear	0.23	4	0.21	N.S.
Quadratic	0.02	1	0.02	N.S.
Deviation from quadratic	0.30	3	0.28	N.S.
Harm				
Between groups	0.24	5	0.54	N.S.
Within groups	0.44	90		
Linear	0.97	1	2.30	N.S.
Deviation from linear	0.05	4	0.12	N.S.
Quadratic	0.15	1	0.34	N.S.
Deviation from quadratic	0.02	3	0.05	N.S.
Consent				
Between groups	0.64	5	1.16	
Within groups	0.55	90		
Linear	0.43	1	0.77	
Deviation from linear	0.69	4	1.26	
Quadratic	0.07	1	0.13	
Deviation from quadratic	0.90	3	1.63	
Ethical				
Between groups	2.27	5	2.27	.05
Within groups	1.00	90		
Linear	3.32	1	3.19	(.07)
Deviation from linear	2.01	4	2.01	(.099)
Quadratic	6.86	1	7.01	.01
Deviation from quadratic	0.39	3	0.39	N.S.
Permit				
Between groups	3.47	5	1.79	N.S.

Table 2C. Position, Rating and Mean Score for Questions (continued)

Exposure (continued)	M.S.	d.f.	F	P
Within groups	1.93	90		
Linear	16.51	1	8.88	.004
Deviation from linear	0.20	4	0.11	N.S.
Quadratic	0.19	1	0.10	N.S.
Deviation from quadratic	0.21	3	0.11	N.S.
TCR				
Rating				
Between groups	15.93	5	0.57	
Within groups	28.12	42		
Linear	77.26	1	3.00	(.09)
Deviation from linear	0.60	4	0.02	
Quadratic	0.15	1	0.01	
Deviation from quadratic	0.75	3	0.03	
Benefit				
Between groups	1.48	5	0.83	
Within groups	1.79	42		
Linear	5.60	1	3.34	(.07)
Deviation from linear	0.45	4	0.25	
Quadratic	0.10	1	0.06	
Deviation from quadratic	0.57	3	0.32	
Harm				
Between groups	1.43	5	1.11	
Within groups	1.30	42		
Linear	0.03	1	0.02	
Deviation from linear	1.78	4	1.38	
Quadratic	0.72	1	0.53	
Deviation from quadratic	2.14	3	1.65	
Consent				
Between groups	1.73	5	0.75	
Within groups	2.26	42		
Linear	0.26	1	0.11	
Deviation from linear	2.10	4	0.93	
Quadratic	3.72	1	1.68	
Deviation from quadratic	1.56	3	0.69	
Permit				
Between groups	3.53	5	1.26	
Within groups	2.81	42		
Linear	12.60	1	4.71	.03
Deviation from linear	1.27	4	0.45	

Table 2C. Position, Rating and Mean Score for Question (continued)

TCR (continued)	M.S.	d.f.	F	P
Quadratic	4.02	1	1.52	
Deviation from quadratic	0.35	3	0.12	
Shock Rating				
Between groups	15.43	5	0.46	
Within groups	33.30	42		
Linear	39.11	1	1.25	
Deviation from linear	9.51	4	0.29	
Quadratic	1.43	1	0.05	
Deviation from quadratic	12.21	3	0.37	
Benefit				
Between groups	2.32	5	1.53	
Within groups	1.52	42		
Linear	0.79	1	0.49	
Deviation from linear	2.70	4	1.78	
Quadratic	4.50	1	2.89	(.09)
Deviation from Quadratic	2.11	3	1.38	
Harm				
Between groups	0.67	5	0.43	
Within groups	1.57	42		
Linear	2.19	1	1.50	
Deviation from linear	0.29	4	0.19	
Quadratic	1.01	1	0.68	
Deviation from quadratic	0.05	3	0.03	
Consent				
Between groups	0.88	5	0.46	
Within groups	1.94	42		
Linear	0.01	1	0.00	
Deviation from linear	1.10	4	0.57	
Quadratic	0.10	1	0.05	
Deviation from quadratic	1.44	3	0.74	
Ethical				
Between groups	1.67	5	0.76	
Within groups	2.21	42		
Linear	0.09	1	0.04	
Deviation from linear	2.07	4	0.94	
Quadratic	6.29	1	2.99	(.09)
Deviation from quadratic	0.66	3	0.30	
Permit				
Between groups	4.80	5	1.29	

Table 2C. Position, Rating and Mean Score for Question (continued)

Shock (continued)	M.S.	d.f.	F	P
Within groups	3.71	42		
Linear	16.46	1	4.63	.035
Deviation from linear	1.89	4	0.51	
Quadratic	0.00	1	0.00	
Deviation from quadratic	2.51	3	0.68	
Game				
Rating				
Between groups	15.70	5	1.15	
Within groups	13.65	90		
Linear	38.63	1	2.86	(.09)
Deviation from linear	9.97	4	0.73	
Quadratic	6.03	1	0.44	
Deviation from quadratic	11.28	3	0.83	
Benefit				
Between groups	0.35	5	0.20	
Within groups	1.71	90		
Linear	0.23	1	0.14	
Deviation from linear	0.38	4	0.22	
Quadratic	0.00	1	0.00	
Deviation from quadratic	0.51	3	0.30	
Harm				
Between groups	2.28	5	2.00	(.09)
Within groups	1.14	90		
Linear	7.23	1	6.39	.01
Deviation from linear	1.04	4	0.91	
Quadratic	0.67	1	0.59	
Deviation from quadratic	1.56	3	1.02	
Consent				
Between groups	2.20	5	1.18	
Within groups	1.86	42		
Linear	0.01	1	0.01	
Deviation from linear	2.75	4	1.48	
Quadratic	3.24	1	1.72	
Deviation from quadratic	2.58	3	1.39	
Ethical				
Between groups	1.84	5	2.02	(.08)
Within groups	0.91	90		
Linear	6.60	1	7.33	.01
Deviation from linear	0.65	4	0.71	
Quadratic	0.86	1	0.95	

Table 2C. Position, Rating and Mean Score for Questions (continued).

Game (continued)	M.S.	d.f.	F	P
Deviation from quadratic	0.58	3	0.64	
Permit				
Between groups	1.77	5	1.08	
Within groups	1.63	90		
Linear	0.13	1	0.08	
Deviation from linear	2.18	4	1.33	
Quadratic	0.30	1	0.18	
Deviation from quadratic	2.80	3	1.72	
TCR				
Ethical				
Between groups	3.53	5	1.26	
Within groups	2.81	90		
Linear	12.60	1	4.71	.03
Deviation from linear	1.27	4	0.45	
Quadratic	4.02	1	1.52	
Deviation from quadratic	0.35	3	0.12	

Table 3C. Significant t Tests Between Those Granting or Not Granting Exposure a Permit.

	MEAN		SD			
	Yes	NO	Yes	No	t	P
Average rating without Exposure	+3.97	+1.32	2.62	2.92	3.17	.0001
(N)	(14	(82)				
Rating						
TCR	-3.50	-4.77	5.26	5.22	0.47	
(N)	(4)	(44)				
Shock	+0.50	-3.87	6.84	4.94	2.29	.01
(N)	(10)	(38)				
Airplane	+2.17	-2.98	5.04	5.09	2.32	.01
(N)	(6)	(42)				
Obedience	+1.25	-0.28	5.97	5.50	0.71	
(N)	(8)	(40)				
Reaction	+4.50	+0.81	3.56	6.24	1.41	(.08)
(N)	(6)	(42)				
Sensory	+4.70	+1.63	5.52	5.55	1.56	(.06)
(N)	(10)	(38)				
Attack	+7.75	+4.25	1.50	5.03	1.37	(.09)
(N)	(4)	(44)				
Game	+7.57	+5.95	3.16	3.76	1.52	(.07)
(N)	(14)	(82)				
QUESTIONS						
Exposure						
Benefit	-0.86	-1.44	1.29	1.01	1.91	.03
Harm	-0.93	-1.73	.92*	.52*	3.19	.01
Consent	-1.14	-1.83	1.29*	0.56*	1.96	.04
Ethical	-0.21	-1.61	1.42*	0.80*	3.57	.002
(N)	(14)	(82)				
TCR						
Consent	0.00	-1.18	2.31	1.39	1.55	(.06)
(N)	(4)	(44)				
Shock						
Harm	0.00	-0.76	1.33	1.15	1.81	.04
Consent	-0.60	-1.37	1.65	1.24	1.63	(.056)
Ethical	+1.10	-0.26	1.20	1.41	2.80	.004
Permit	+0.40	-0.74	2.07	1.88	1.67	.05
(N)	(10)	(38)				
Airplane						
Consent	+0.67	-0.76	1.63	1.46	2.21	.02
Ethical	+0.50	-0.45	1.64	1.19	1.75	.04
Permit	+0.67	-1.05	2.07	1.72	2.23	.02
(N)	(6)	(42)				
Obedience						
Harm	+1.25	+0.48	1.04	1.34	1.54	(.07)
(N)	(8)	(40)				

*Variances not homogeneous.

Table 3C. Significant t Tests Between Those Granting or Not Granting Exposure a Permit (continued)

	MEAN		SD			
	Yes	NO	Yes	No	t	P
Reaction						
Benefit	+0.83	-0.45	0.98	1.33	2.17	.01
Harm	+1.33	+0.62	0.52*	1.40*	2.37	.01
Ethical	+1.67	+0.17	0.52*	1.45*	4.88	.0001
(N)	(6)	(42)				
Sensory						
Harm	+1.10	+0.05	1.20	1.36	2.22	.02
Ethical	+1.40	+0.58	0.97	1.31	1.85	.04
(N)	(10)	(38)				
Attack						
Benefit	+1.75	+0.75	0.50	1.04	1.89	.03
(N)	(4)	(44)				
Game						
Benefit	+0.93	+0.43	1.14	1.30	1.36	(.09)
Harm	+1.86	+1.37	0.36*	1.16*	3.06	.002
(N)	(14)	(82)				
REASONS						
Game						
Not too unpleasant or stressful	0.92	0.61	0.49	0.49	2.11	.04
(N)	(13)	(72)				
No social value	0.00	1.30	0.00	0.68	1.84	(.099)
(N)	(1)	(10)				
TCR						
Subject voluntarily agreed	0.00	1.20	0.00	0.63	1.81	(.10)
(N)	(1)	(10)				
Long term harm	1.67	1.09	0.58	0.51	1.85	(.07)
Too unpleasant or stressful	0.33	1.00	0.58	0.55	2.01	.05
No social value	1.33	0.56	0.58	0.56	2.29	.03
(N)	(3)	(34)				
Shock						
Subject voluntarily agreed	1.00	1.42	0.00	0.52	1.95	(.07)
(N)	(6)	(12)				
Airplane						
Of value to Ss in understanding themselves	1.50	0.80	0.58	0.63	1.91	(.08)
If Ss knew true purpose, they might behave unnaturally	0.75	0.20	0.50	0.42	2.10	(.06)
(N)	(4)	(10)				
Obedience						
Discomfort or stress temporary	0.80	0.32	0.84	0.32	1.77	(.09)
(N)	(5)	(22)				
No social value	1.00	0.28	1.00	0.46	2.13	.05
(N)	(3)	(18)				

*Variances not homogeneous.

Table 3C. Significant t Tests Between Those Granting or Not Granting Exposure a Permit (continued)

	MEAN		SD			
	Yes	No	Yes	No	t	P
Reaction						
Subject voluntarily agreed	1.25	0.52	0.96	0.51	2.35	.03
(N)	(4)	(25)				
Sensory						
Of value to Ss in understanding themselves	1.11	0.52	0.93	0.69	2.08	.045
Learn about behavior	1.44	0.86	0.53	0.58	2.68	.01
(N)	(9)	(29)				
Attack						
If Ss knew true purpose, might behave unnaturally	1.50	0.35	0.58	0.48	4.44	.001
Not unfair to Ss	1.00	0.46	0.00	0.51	2.12	.04
(N)	(4)	(37)				
Long term harm	0.00	0.86	0.00	0.69	3.29	.02
Lowers self-esteem	0.00	1.29	0.00	0.76	4.50	.004
Ss feel deceived	0.00	0.71	0.00	0.76	2.50	.05
Value does not justify	0.00	0.86	0.00	0.54	6.00	.001
Encourages undesirable behavior	0.00	0.57	0.00	1.00	2.83	.03
(N)	(0)	(7)				
REASONS ACROSS EXPERIMENTS						
Value justifies possible stress	0.60	0.42	0.63	0.61	2.02	.045
(N)	(53)	(254)				
Ss do not volunteer	0.00	0.25	0.00	0.53	1.95	.05
Too unpleasant or stressful	0.47	0.78	0.51	0.60	2.03	.04
No social value	0.94	0.58	0.75	0.64	2.15	.03

Table 4C. Distribution of Average Ratings for 6 Experiments in Booklet

Average	F	%
-6	2	2.1
-5	1	1.0
-4	7	7.3
-3	7	7.3
-2	8	8.3
-1	11	11.5
0	17	17.7
+1	11	11.5
+2	9	9.4
+3	15	15.6
+4	3	3.1
+5	3	3.1
+6	1	1.0
+7	1	1.0
(N)	(96)	100.0

MEAN= +0.22, S.D. = 2.72

APPENDIX D

ANOVA Tables for Focus on the Experiments

Table 1D. Repeated Measures ANOVAS for Rating and Questions for Groups 1 to 8

Group One: Exposure, Game, Reaction, Airplane, Attack and Traumatically Conditioned Response.

	MS	df	F
Total Rating	346.19	5	17.98*
Residual	19.25	55	
Benefit	6.49	5	4.22**
Residual	1.54	55	
Harm	19.33	5	17.62*
Residual	1.10	55	
Consent	19.92	5	14.22*
Residual	1.40	55	
Ethical	9.99	5	7.52*
Residual	1.33	55	
Permit	19.60	5	8.05*
Residual	2.44	55	

*P <.001 **P =.003

Group Two: Exposure, Game, Conformity, Airplane, Attack, Traumatically Conditioned Response.

	MS	df	F
Total Rating	410.99	5	29.76*
Residual	13.81	55	
Benefit	8.78	5	6.53*
Residual	1.34	55	
Harm	16.29	5	20.26*
Residual	0.80	55	
Consent	21.83	5	17.45*
Residual	1.25	55	
Ethical	17.87	5	20.33*
Residual	0.88	55	
Permit	24.36	5	11.33*
Residual	2.15	55	

*P <.001

Table 1D. Repeated Measures ANOVAS for Rating and Questions for Groups 1 to 8 (continued)

Group Three: Exposure, Game, Conformity, Airplane, Shock, Attack

	MS	df	F
Total Rating	594.68	5	52.85*
Residual	11.25	55	
Benefit	20.19	5	21.55*
Residual	0.94	55	
Harm	23.16	5	31.55*
Residual	0.73	55	
Consent	32.80	5	22.55*
Residual	1.46	55	
Ethical	23.65	5	25.05*
Residual	0.94	55	
Permit	30.22	5	14.39*
Residual	2.10	55	

*P < .001

Group Four: Exposure, Game, Conformity, Airplane, Shock, Sensory

	MS	df	F
Total Rating	320.36	5	19.13*
Residual	16.75	55	
Benefit	6.76	5	4.85**
Residual	1.39	55	
Harm	16.63	5	16.82*
Residual	0.99	55	
Consent	20.93	5	16.14*
Residual	1.30	55	
Ethical	11.01	5	8.03*
Residual	1.37	55	
Permit	14.27	5	6.65*
Residual	2.15	55	

*P < .001

Table 1D (Continued)

Group Five: Exposure, Game, Conformity, Obedience, Shock, Sensory

	MS	df	F
Total Rating	310.35	5	16.35*
Residual	18.98	55	
Benefit	6.37	5	4.50**
Residual	1.42	55	
Harm	13.52	5	9.69*
Residual	1.40	55	
Consent	18.50	5	9.77*
Residual	1.89	55	
Ethical	10.62	5	8.61*
Residual	1.23	55	
Permit	19.96	5	9.44*
Residual	2.11	55	

*P < .001, **P = .002

Group Six: Exposure, Game, Obedience, Reaction(homosexuality), Shock, Sensory.

	MS	df	F
Total Rating	232.19	5	10.98*
Residual	21.14	55	
Benefit	6.01	5	4.03**
Residual	1.49	55	
Harm	15.82	5	12.51*
Residual	1.27	55	
Consent	16.62	5	7.48*
Residual	2.22	55	
Ethical	8.09	5	6.22*
Residual	1.30	55	
Permit	9.82	5	2.87***
Residual	3.42	55	

*P < .001, **P = .004, ***P = .023

Table 1D (continued)

Group Seven: Exposure, Game, Obedience, Reaction (homosexuality), Sensory, Traumatically Conditioned Response

	MS	df	F
Total Rating	257.23	5	9.29*
Residual	27.69	55	
Benefit	5.12	5	3.05**
Residual	1.68	55	
Harm	12.89	5	8.97*
Residual	1.44	55	
Consent	9.52	5	3.94***
Residual	2.42	55	
Ethical	11.26	5	6.03*
Residual	1.87	55	
Permit	19.56	5	7.04*
Residual	2.78	55	

*P < .001, **P = .017, ***P = .005

Group Eight: Exposure, Game, Obedience, Reaction (homosexuality), Attack, Traumatically Conditioned Response

	MS	df	F
Total Rating	462.65	5	26.32*
Residual	17.58	55	
Benefit	13.91	5	10.08*
Residual	1.38	55	
Harm	15.13	5	16.79*
Residual	0.90	55	
Consent	23.20	5	14.95*
Residual	1.55	55	
Ethical	17.31	5	13.12*
Residual	1.32	55	
Permit	28.49	5	12.89*
Residual	2.21	55	

*P < .001

Table 2D. Significant Anovas for 8 Groups of 12. Ratings and Questions

	MS	df	F	P
SHOCK				
Rating				
Between Groups	77.80	3	2.76	.05
Within Groups	28.24	44		
Benefit				
Between Groups	6.41	3	5.01	.005
Within Groups	1.29	44		
Consent				
Between Groups	3.86	3	2.29	.09
Within Groups	1.69	44		
OBEDIENCE				
Benefit				
Between Groups	4.31	3	2.18	.10
Within Groups	1.98	44		

A Posteriori Contrasts, Duncan .05

SHOCK: Rating	Group 3	Group 4	Group 6	Group 5
	-6.67	-2.58	-1.33	-1.25
SHOCK: Benefit	Group 3	Group 4	Group 6	Group 5
	-1.67	-0.50	-0.17	-0.08
SHOCK: Consent	Group 3	Group 4	Group 5	Group 6
	-2.02	-1.17	-1.00	-0.67
OBEDIENCE: Benefit	Group 7	Group 6	Group 8	Group 5
	-1.08	-0.08	+0.08	+0.25

Table 3D. Repeated Measures ANOVAS for Questions

	M.S.	d.f.	F	P
EXPOSURE	2.46	4	3.22	.01
Residual	0.77	380		
TCR	1.07	4	0.94	N.S.
Residual	1.13	188		
SHOCK	9.16	4	7.52	$<.001$
Residual	1.18	188		
AIRPLANE	5.07	4	3.82	.006
Residual	1.33	188		
OBEDIENCE	11.69	4	7.76	$<.001$
Residual	1.51	188		
REACTION	6.84	4	5.14	.001
Residual	1.33	188		
SENSORY	11.97	4	9.59	$<.001$
Residual	1.25	188		
ATTACK	4.02	4	3.59	.008
Residual	1.12	188		
GAME	16.91	4	14.81	$<.001$
Residual	1.14	380		
CONFORMITY	4.78	4	5.41	$<.001$
Residual	0.88	188		

Table 4D. Repeated Measures ANOVAS for Reasons

	M.S.	d.f.	F	P
EXPOSURE				
Yes Reasons	2.16	7	5.25	<.001
Residual	0.41	91		
No Reasons	12.84	7	52.92	<.001
Residual	0.24	567		
TCR				
Yes Reasons	1.39	7	3.33	.005
Residual	0.42	70		
No Reasons	5.85	7	22.05	<.001
Residual	0.27	252		
SHOCK				
Yes Reasons	2.79	7	8.92	<.001
Residual	0.31	119		
No Reasons	4.65	7	16.17	<.001
Residual	0.29	203		
AIRPLANE				
Yes Reasons	0.85	7	2.56	.02
Residual	0.33	91		
No Reasons	2.46	7	7.35	<.001
Residual	0.34	231		
OBEDIENCE				
Yes Reasons	1.77	7	4.80	<.001
Residual	0.37	182		
No Reasons	1.44	7	3.72	.002
Residual	0.39	140		
REACTION				
Yes Reasons	2.26	7	6.86	<.001
Residual	0.33	196		
No Reasons	1.71	7	4.32	<.001
Residual	.40	126		
SENSORY				
Yes Reasons	4.25	7	12.64	<.001
Residual	0.37	259		
No Reasons	0.51	7	1.48	N.S.
Residual	0.35	63		

Table 4D. Repeated Measures ANOVAS for Reasons (continued)

	M.S.	d.f.	F	P
ATTACK				
Yes Reasons	2.51	7	8.19	$<.001$
Residual	0.31	280		
No Reasons	1.16	7	3.82	.003
Residual	0.30	42		
GAME				
Yes Reasons	9.02	7	29.80	$<.001$
Residual	0.30	588		
No Reasons	1.80	7	7.77	$<.001$
Residual	0.23	70		
CONFORMITY				
Yes Reasons	4.26	7	14.50	$<.001$
Residual	0.29	301		
No Reasons	0.27	7	0.57	N.S.
Residual	0.47	21		

APPENDIX E

Written Replies to the Questions:

Codes and General Categories

Table 1E. Question 1: How do you think you would have behaved, if you had been a subject in this experiment?

EXPOSURE Reactions	F	%
Anger, dislike, resentment, hate, outrage.	14	14.6
Angry, furious, outraged	6	6.3
Dislike, hate, resent	8	8.3
Fear - Panic	8	8.3
Fear, terror, shock, horror	7	7.3
Nervous, panicky (behavior)	1	1.0
Anguish, anger, indignant because forced.	11	11.5
Extreme discomfort, pain	6	6.3
Behaviors		
Tried to get out of or avoid situations.	31	32.3
Tried to escape, rebelled or fought against, tried not to participate	18	18.8
Uncooperative, resisted	8	8.3
Refused to participate, quit, not volunteered	5	5.2
Died, gotten sick, given in.	14	14.6
Died	7	7.3
Gotten sick	4	4.2
Given in or up, not lasted long, not endured long	3	3.1
Tried to live, wished or begged for help.	10	10.4
Tried to live, tried to increase temperature	7	7.3
Wished for help or death, tried to escape through fantasy	3	3.1
Begged for help	1	1.0
Protested, screamed.	9	9.4
Protested, hostile, complained	5	5.2
Cried, screamed	2	2.1
No choice	4	4.2
TCR Reactions		
Gone into shock, horrified, terrified, afraid	23	47.9
Angry, angry afterwards	5	10.4
Feel horrible, be extremely uncomfortable	3	6.3
Hope would live, possibility of not surviving	3	6.3
Behaviors		
Continued to respond to the tone (with or without indicating fright.)	12	25.0
Traumatically	3	6.3
Continued to remember with horror or fright	2	4.1

Table 1E. Question 1: (continued)

	F	%
SHOCK		
Reactions		
Distressed, uncomfortable, dislike, resentful	4	8.3
Scared, nervous, panicky	2	4.2
Would not like it if.....	2	4.2
Behaviors		
Pain would push me to learn, would learn very quickly	13	27.1
Try to avoid the shock	10	20.8
Behavior would depend on which group I was in	5	10.4
Would not participate	4	8.3
Probably could not avoid the shock	4	8.3
If did not learn, would terminate or ask to leave	3	6.3
AIRPLANE CRASH		
Reactions		
Frightened, panicky, nervous, upset, faint	29	60.4
Furious, would dislike	2	4.2
Behaviors		
Done poorly on questionnaires, efficiency decreased	10	20.8
Panicked at the beginning, then followed instructions	4	8.3
Tried to comply, follow instructions	3	6.3
Tried to stay calm, appeared calm	3	6.3
Prayed	2	4.2
OBEDIENCE TO IMMORAL ORDERS		
Reactions		
Felt tense, anxious	2	4.2
Behaviors		
Disobeyed	41	85.4
Disobeyed if, when, because	37	77.1
Disobeyed from the start, would not participate	4	8.3
Obeyed	1	2.1
Don't know, hard to say, not sure	2	4.2
REACTION TO AN UNDESIRED TRAIT		
Reactions		
Uncomfortable, unhappy about discovery	7	14.6
Uncomfortable, upset or anxious about finding out about something do not want to know	2	4.3
Unhappy, shaken to find out about being homosexual	5	10.4
Annoyed, angry, hostile	5	10.4
Hostile to experimenter, outraged	3	6.3
Annoyed, angry	2	4.2

Table 1E. Question 1: (continued)

REACTION TO AN UNDESIRED TRAIT (continued)	F	%
Skeptical or detached, would not believe in experiment	3	6.3
Embarrassed, silly and cheated	2	4.2
Behaviors		
Would not attribute homosexuality to partner	12	25.0
Would not attribute homosexuality to partner	9	18.8
Would blame self and not attribute homosexuality to partner	3	6.3
Would not believe I was homosexual	9	18.8
Attribute homosexual tendencies to partner	8	16.7
SENSORY DEPRIVATION		
Reactions		
Negative reactions	15	31.3
Would be anxious, tense, frightened	8	16.7
Feel lonely, isolated	4	8.3
Bored, annoyed without senses	4	8.3
Enjoy quiet, being away from everyday life	2	4.2
Behaviors		
Find situation uncomfortable, develop symptoms, try to get out	21	43.8
Not lasted long, tried to escape, wanted out	9	18.8
Childishly, gone crazy, become hysterical	4	8.3
Hallucinated, lost touch with reality, etc. as described in results	3	6.3
Would be in a fog afterwards, acts unusually or unnaturally (intellectually or emotionally below par)	3	6.3
Develop claustrophobia	2	4.2
Relax, fantasize or engage in some activity	10	20.8
Would relax, try to relax, fall asleep	5	10.4
Would daydream, fantasize, think, keep mind occupied	6	12.5
Would stay a long time, stay as long as possible	2	4.1
Don't know	3	6.3
ATTACK ON PERSONAL VALUES		
Reactions		
Become emotionally disturbed, upset	7	14.6
Attacker would have no effect on me	3	6.3
Behaviors		
Not surrended and/or fought back	22	45.8
Fought back, attacked, defended self strongly	19	39.6
Came through in tact, not submitted	3	6.3

Table 1E. Question 1: (continued)

ATTACK ON PERSONAL VALUES (continued)	F	%
Became angry or defensive	8	16.7
Gotten angry	6	12.5
Behaved defensively	2	4.2
Surrended	7	14.6
Surrended, given in	5	10.4
Might give up my belief	2	4.2
Neither surrended nor fought back	5	10.4
Neither argued nor submitted	3	6.3
Surrended publicly, kept views privately	2	4.2
Weight the views of the other	4	8.3
Depends on his arguments	2	4.2
GAME		
Reactions		
Accept as a game, enjoyed it	4	4.2
Accept as a game	3	3.1
Enjoyed it	1	1.0
Tried not to panic;not panicked	9	9.4
Not panicked, kept composure	5	5.1
Tried not to panic, do not think would panic (behavior)	4	4.1
Behaviors		
Got cone out first, safely	36	37.5
Try to get cone out first or with patience	26	27.1
For money, tried to get cone right out	9	9.4
Got cone right out	1	1.0
Might panic, panicked, cause a panic, become unduly excited, tense.	22	22.9
Cause a panic, cause a jam, only think of self	7	7.3
Panicked	6	6.3
Might panic if...	6	6.3
Nervous, unduly excited, tense (reaction)	3	3.1
Cooperatively or compliantly, tried not to jam exit	27	28.1
Been unsuccessful	5	5.1
Money too small to influence, not think of money	5	5.1
CONFORMITY		
Reactions		
Tense, nervous, anxious	5	10.4
Behaviors		
Not Conformed	9	18.8
Doubt own judgment and yielded, conformed	3	6.3
Yielded to group, gave incorrect answer	6	12.5

Table 1E. Question 1: (continued)

CONFORMITY (continued)	F	%
Conformed	36	75.0
Not conformed, disagreed	30	62.5
Not conformed, with reason given	6	12.5
Don't know whether would conform or not	3	6.3

Table 2E. Question 2: Do you think you could benefit in any way by participating in this experiment?

EXPOSURE	F	%	%Yes
Yes			
For knowledge, to help science	7	7.3	50.0
Would prepare me for a similar situation	5	5.2	35.7
A negative reaction along with the positive	2	2.1	14.3
No			% No
No personal benefit for subject	34	35.4	42.0
No possible way to benefit	15	15.6	18.5
Experience or knowledge of no personal value	13	13.5	16.0
Other people might benefit, but not subject	6	6.3	7.4
Harmful	39	40.6	48.1
Die, would be dead, threat of death	16	16.7	19.8
Harmful, hazardous to health, damage body	7	7.3	8.6
Freeze, physically suffer, get sick	6	6.3	7.4
Inhumane, too traumatic or stressful	12	12.5	14.8
Painful, torturous, inhumane, cruel, terrible	7	7.3	8.6
Too stressful	3	3.1	3.7
Hate the cold, afraid of cold	2	2.1	2.5
Experiment criticized	12	12.5	14.8
No value to experiment	7	7.3	8.6
Knowledge gained not worth life or type of experience	5	5.2	6.2
No benefit when forced, because forced, not voluntary	10	10.4	12.3
Positive reaction along with the negative	5	5.2	6.2
Refuse to participate, hope will not be exposed	4	4.2	4.9
Physical study, only physical	2	2.1	2.5
Other	4	4.2	
TCR			
Yes	F	%	% Yes
If cured of or treated for alcoholism or other bad mode of behavior, only if cured of...	6	12.5	46.2
To see my reaction	4	8.3	30.8
No			% No
Too frightening, deals with death	13	27.1	38.2
Too frightening, terrifying, traumatic, cruel	10	20.8	29.4
Do not need to know how it feels to die	4	8.3	11.8
Harmful, long term harm	9	18.8	26.5
Could cause both psychological and physical harm	4	8.3	11.8
Would only be another thing to forget - harmful psychological aftereffects	3	6.3	8.8
Too much risk of harm or dying	2	4.2	3.9
Only someone else could benefit	2	4.2	5.9
No connection with treatment for alcoholics	3	6.3	8.8
Nothing beneficial about it	4	8.3	11.8
Other	10	20.8	

Table 2E. Question 2: (continued)

SHOCK	F	%	% Yes
Yes			
See reaction or measure capacity	8	16.7	47.1
See reaction, learn about self, gain self-awareness	4	8.3	23.5
Measure capacity to learn under stress, see how fast I could learn, compare ability with others	4	8.3	23.5
Learn or master something	8	16.7	47.1
Learn how to avoid shocks, get better control of reflexes	5	10.4	29.4
Understand process of learning	3	6.3	17.6
No			% No
Subject cannot benefit	14	29.2	45.2
No personal benefit, only learn to terminate shocks, not life-like	10	20.8	32.3
Do not need to learn to avoid pain	2	4.2	6.5
Only experimenter benefits	2	4.2	6.5
Too painful or stressful	10	20.8	32.3
Too painful, pain should be avoided, low tolerance for pain	6	12.5	19.4
Dangerous, scary, too stressful	4	8.3	12.9
Experiment worthless or unnecessary	6	12.5	19.4
Not interested, would terminate, would not participate	2	4.2	6.5
Other	6	12.5	
AIRPLANE CRASH			
Yes			% Yes
Change the person or his life for the better	12	25.0	46.2
Facing death can change your life	2	4.2	7.7
Teach you to handle fearful situations, can be applied to other situations	10	20.8	38.5
Learn more about self	10	20.8	38.5
Learn more about myself	3	6.3	11.5
To see how I would react or control myself	7	14.6	26.9
But dying involves too much stress, could have physical danger, should not be done without warning	3	6.3	11.5
No			% No
Too traumatic, drastic or emotional	14	29.2	63.6
Too drastic-too stressful, no benefit in being scared to death	12	25.0	54.5
Cause an emotional reaction, expose neurosis	2	4.2	9.1
Harmful	4	8.3	18.2
Only harmful, could induce heart attack	3	6.3	13.6
Cause psychological or emotional damage	1	2.1	4.5
No personal benefit involved	2	4.2	9.1

Table 2E. Question 2: (continued)

AIRPLANE CRASH (continued)	F	%	%No
Make me afraid of flying	2	4.2	9.1
Would just show me how to react to an emergency	2	4.2	9.1
Other	4	8.3	
OBEDIENCE TO IMMORAL ORDERS			
Yes			**%Yes**
See how I would behave or react	17	35.4	73.9
To see my reactions	6	12.5	26.1
To see how far I would obey before moral judgment sets in, test strength of character, morals	5	10.4	21.7
To see how another could control my behavior, to see if obey, how I would respond to authority	4	8.3	17.4
See if I am capable of giving pain, if I like to make people suffer	3	6.3	13.0
Could change my behavior in the future	2	4.2	8.0
To see how other people react	2	4.2	8.0
No			**%No**
Could not shock or harm another, would dislike situation	12	25.0	48.0
Dislike harming another, could not harm another	6	12.5	24.0
Would feel ill-at-ease; extreme tension; miserable, too extreme	5	10.4	20.0
Only a callous person or sadist could benefit	2	4.2	8.0
Harmful	8	16.7	32.0
Would feel ill-at-ease; extreme tension; miserable; too extreme	5	10.4	20.0
Could discover something in myself that would cause problems or guilt	3	6.3	12.0
Do not need to know how I would behave in this situation	7	14.6	28.0
Already know my reactions, how I would behave	5	10.4	20.0
Do not need to test my morals, my need to victimize others	2	4.2	8.0
No benefit, no-one could benefit	2	4.2	8.0
Only experimenter benefits	2	4.2	8.0
Other	4	8.3	

Table 2E. Question 2: (continued)

	F	%	% Yes
REACTION TO AN UNDESIRED TRAIT			
Yes			
Learn more about myself	17	35.4	81.0
Find out my reaction, learn more about self	10	20.8	47.6
Would find out attitude toward bad traits or homosexuality	4	8.3	19.0
To learn if I had homosexual tendencies	3	6.3	14.3
To see how I react under stressful or difficult conditions	3	6.3	14.3
Learn something about other people	2	4.2	9.5
No			%No
Does not teach me anything about myself	12	25.0	44.4
Know I am not a homosexual, cannot learn or benefit by being led to believe I am something I am not	7	14.6	25.9
Already know my behavior, my reactions	3	6.3	11.1
Would not learn anything new about myself	3	6.3	11.1
Nothing new, not interesting, experiment criticized	7	14.6	25.9
Nothing new, not useful	3	6.3	11.1
Experiment not valid, without purpose	3	6.3	11.1
Not interested, unreal	2	4.2	7.4
Because situation is rigged and fools subject	4	8.3	14.8
Hurts or shakes up self-esteem, puts subject in a stressful situation	3	6.3	11.1
Other	5	10.4	
SENSORY DEPRIVATION			
Yes			%Yes
Learn more about self	13	27.1	48.1
See how long I could take it, learn extent of self-control (test some ability or capacity)	6	12.5	22.2
To see how I would react (general)	5	10.4	18.5
Learn about my own behavior, become more self-aware, concentrate on inner experience	3	6.3	11.1
Learn or experience something new or interesting	12	25.0	44.4
Learn what it is like to be blind, deaf, without senses	5	10.4	18.5
New experience, interesting experience	3	6.3	11.1
Sharpen future sensory experience	2	4.1	7.4
Learn to adjust to isolation, experience isolation	2	4.1	7.4

Table 2E. Question 2: (continued)

SENSORY DEPRIVATION (continued)			
No	F	%	%No
Subject cannot benefit	12	25.0	57.1
General expressions of dislike for the situation; unwilling to participate; would leave too soon; would react negatively	5	10.4	23.8
No possible way to benefit; learn nothing useful	3	6.3	14.3
Only experimenter would benefit	3	6.3	14.3
Already know my reaction	2	4.1	9.5
Harm or negative reaction	5	10.4	23.8
Would make me nervous; too upsetting	3	6.3	14.3
Could be harmful	2	4.1	9.5
Results useless	2	4.1	9.5
Other	4	8.3	
ATTACK ON PERSONAL VALUES			
Yes			% Yes
Learn about self	14	29.2	36.8
See how I respond or react	10	20.8	26.3
Get more self understanding	5	10.4	13.2
Gain greater insight into one's beliefs; strengthen beliefs	12	25.0	31.6
Learn more about the value of my own beliefs; learn more about and evaluate beliefs.	5	10.4	13.2
Discover how strong, or important to me, by beliefs are; whether I can defend them	4	8.3	10.5
Improve and strengthen beliefs	4	8.3	10.5
Learn how to behave in a debate	8	16.7	21.1
Learn to control reactions when under attack	5	10.4	13.2
Teach me to defend my beliefs	4	8.3	10.5
Learn about others; handle others better	5	10.4	13.2
Understand others better, handle others better	3	6.3	7.9
Learn more about partner's beliefs or techniques	2	4.2	5.3
Feel good about myself, if successful	2	4.2	5.3
No			%No
Would not learn anything new about self or others	3	6.3	30.0
Not good at arguing; do not profit from disagreement	2	4.2	20.0
Other	8	16.7	

Table 2E. Question 2: (continued)

	F	%	% Yes
A GAME TO LEARN ABOUT PANICS			
Yes			
Learn something	26	27.1	39.4
To learn how people would behave or react	10	10.4	15.2
Teach me something, get to know situations of panic	10	10.4	15.2
Can be applied to daily life	9	9.4	13.6
Learn something in relation to self	16	16.7	24.2
Learn how to control myself under anxiety, stress, pressure	14	14.6	21.2
Learn how to cooperate, test ability to cooperate	2	2.1	3.0
See how I would behave or react	33	34.4	50.0
May earn money, enjoy games	2	2.1	3.0
But not a real test of panic	2	2.1	3.0
			% No
No			
Only a game, not realistic	16	16.7	53.3
Not analogous to panic, not realistic	14	14.6	46.7
Only a game, would not be taken seriously	2	2.1	6.7
Subject cannot benefit or learn	10	10.4	33.3
No benefit, dislike experiment; cannot learn anything new	5	5.2	16.7
Could not learn anything personally relevant	5	5.2	16.7
Other	4	4.2	
CONFORMITY AND INDEPENDENCE			
Yes			% Yes
Learn about self	22	45.8	55.0
Test my strength to defend an opinion, my need to conform	13	27.1	32.5
Would learn about myself	7	14.6	17.5
See how gullible I am, if I had self-confidence	3	6.3	7.5
To see how I would react	1	2.1	2.5
Learn to behave or react differently	12	25.0	30.0
Teaches people to stand up for their beliefs	10	20.8	25.0
Could build self-confidence	4	8.3	10.0
Learn about others or psychological factors	6	12.5	15.0
Would learn about others; understand human behavior	4	8.3	10.0
Teach me about the tremendous influence of group opinion	2	4.2	5.0
To demonstrate I am right; go against majority	3	6.3	7.5
			% No
No			
Experiment ridiculous	2	4.2	25.0
Sure of self, no hang ups about disagreement	2	4.2	25.0
Know how I would behave already	2	4.2	25.0
Other	4	8.3	

Table 3E. Question 3: Do you think you could be harmed in any way by participating in this experiment?

PROLONGED EXPOSURE TO FREEZING TEMPERATURES			
Yes	F	%	% Yes
Long range or permanent harm	52	54.2	55.9
Could be fatality	51	53.1	54.8
Permanent damage, long range psychological damage	2	.2.1	2.2
Physical harm	32	33.3	34.4
Both mental and physical harm	7	7.3	7.5
Could get sick, damage body, physical harm	31	32.3	33.3
Must be harmful, such cold, such conditions	2	2.1	2.2
Psychological harm	10	10.4	10.8
Both mental and physical harm	7	7.3	7.5
Psychological breakdown or harm	6	6.3	6.5
Painful, uncomfortable, could not tolerate it	4	4.2	4.3
Being forced	7	7.3	7.5
Experiment is criminal, inhumane	3	3.1	3.2
Aversion to rain, snow, cold, affected by cold	3	3.1	3.2
Risky, hazardous, dangerous	2	2.1	2.2
Other	6	6.3	
Not interpretable	2	2.1	

TCR			
Yes			% Yes
Psychological harm	27	56.3	71.1
Psychological aftereffects emotional effect could last some time; cure worse than disease	11	22.9	28.9
Permanent harm indicated specifically	10	20.8	26.3
Could induce wrong behavior, "clockwork orange".	3	6.3	7.9
Psychological and physical harm, harm	3	6.3	7.9
Even if temporary harm	1	2.1	2.6
Adverse physical reaction	9	18.8	23.7
Physical harm such as heart attack, adverse reaction from injection, going into shock, etc.	6	12.5	15.8
Physchological and physical harm, harm	3	6.3	7.9
Too shocking or traumatic	5	10.4	13.2
Terrifying, traumatic	3	6.3	7.9
Shock of almost dying	2	4.2	5.3
Trauma may kill, subject could die	4	8.3	10.5
No			% No
Only temporary stress	7	14.6	70.0
Physically safe, if physically safe	3	6.3	30.0
BUT fearful or some negative effects	3	6.3	30.0
Other	2	4.2	
Not interpretable	1	2.1	

Table 3E. Question 3: (continued)

TRAUMATIC SHOCK AND LEARNING			
Yes	F	%	% Yes
Harmful	24	50.0	68.6
Emotional or psychological harm from pain or fear	8	16.4	22.9
Physical harm	8	16.4	22.9
Shocks will harm anyone	5	10.4	14.3
May induce undesirable behavior or reaction after experiment is over	5	10.4	14.3
Tremendous pain, hate pain, pain may be harmful	11	22.9	31.4
Effect of shock unknown, might not be safe	3	6.3	8.6
No			% No
Harmless	6	12.5	46.2
No physical harm, shocks are harmless	3	6.3	23.1
No psychological harm	2	4.2	15.4
Only temporary harm or pain	1	2.1	7.7
If...	4	8.3	30.8
As long as experimenter knows what he is doing	2	4.2	15.4
If I was physically fit	2	4.2	15.4
Can control the shocks, can withdraw if too painful	2	4.2	15.4
Other	3	6.3	

AIRPLANE CRASH SIMULATION			
Yes			%Yes
Induce unpleasant emotional state	11	22.9	31.4
Would panic, get tied up in knots	7	14.6	20.0
Very unpleasant, too stressful	4	8.3	11.4
Psychological aftereffects	11	22.9	31.4
Could cause psychological harm	5	10.4	14.3
Could result in extreme fear of flying, might not react properly to future emergencies, thinking fake (aftereffects)	3	6.3	8.6
Decreased trust, might not believe experimenter when told it was safe	2	4.2	5.7
Long term harm: as a result of fear, as a result of lowered self-esteem	2	4.2	5.7
Real danger might be present	5	10.4	14.3
Could jeopardize other people; others could panic and cause accident	2	4.2	5.7
Plane could really crash	3	6.3	8.6
Could have heart attack or go into shock, or other bodily reactions	14	29.2	40.0

Table 3E. Question 3: (continued)

	F	%	% No
AIRPLANE CRASH (continued)			
No			
Relief after its over	5	10.4	38.5
Would get over scare after I was safe; daily life is full of stressful activities	3	6.3	23.1
Feel lucky not the real thing	2	4.2	15.4
Unless some untoward aftereffect	3	6.3	23.1
Would only learn about self	2	4.2	15.4
Other	7	14.6	
OBEDIENCE TO IMMORAL ORDERS			
Yes			% Yes
Guilt, anxiety, conflict or possible psychological damage	9	18.8	56.3
Psychological damage if obeyed and gave shocks	3	6.3	18.8
Might develop guilt and anxiety, feel shame	3	6.3	18.8
Conflict over obeying	3	6.3	18.8
Could become upset when asked to inflict pain	1	2.1	6.3
Too stressful, more tension than could handle	4	8.3	25.0
No			% No
Would not obey, would not participate	10	20.8	31.3
Would not obey, would stop, would fight for what I believe in	7	14.6	21.9
Would not participate	3	6.3	9.4
If obeyed, if forced, could be harmful	8	16.7	25.0
If forced, harmful, do not want to harm anyone, would regret harm	3	6.3	9.4
Guilt for obeying, if did, guilt only if obeyed	3	6.3	9.4
Only disturbing if obeyed	2	4.2	6.3
Only temporary tension or conflict	5	10.4	15.6
Only temporary tension, anxiety, stress	3	6.3	9.4
Only conflict over obeying, no harm	2	4.2	6.3
Harmless, not dangerous	4	8.3	12.5
Would only learn the truth about self; see if sould obey	3	6.3	9.4
Other	8	16.7	
REACTION TO AN UNDESIRED TRAIT			
Yes			% Yes
Doubts or belief could continue after experiment is over	10	20.8	71.4
Might be led to believe you are a homosexual	9	18.8	64.3
Self-doubt might continue after experiment is over, debriefing might not be effective	2	4.2	14.3

Table 3E. Question 3: (continued)

REACTION TO AN UNDESIRED TRAIT (continued)	F	%	% Yes
Feelings, self-esteem, or morale could be hurt	3	6.3	21.4
No			**% No**
Not bothered by being considered homosexual	**10**	**20.8**	**29.4**
Being told I am homosexual would not bother me nor influence me	7	14.6	20.6
Does not matter if people are homosexual	2	4.2	5.9
Sure of sexual identity	1	2.1	2.9
Because debriefed	9	18.8	26.5
See no possible harm, beneficial	5	10.4	14.7
Become more convinced of myself	2	4.2	5.9
Could further self-examination	2.	4.2	5.9
BUT anxiety provoking, ego deflating, etc.	3	6.3	8.8
Other	7	14.6	
SENSORY DEPRIVATION			
Yes			**% Yes**
Actual or implied long term harm	**11**	**22.9**	**50.0**
Adverse psychological effect such as paranoia, depression or finding out something unfavorable about oneself	6	12.5	27.3
Un-anticipated damage, long term effects	4	8.3	18.2
Symptoms might persist longer than expected	3	6.3	13.6
Implied temporary harm	**6**	**12.5**	**27.3**
Not accustomed to, cannot deal with, could not give up sensory stimulation	5	10.4	22.7
Temporary physical and mental deterioration	1	2.1	4.5
Hallucinations, reduction in intellectual ability	3	6.3	13.6
No			**% No**
Reaction only temporary	**9**	**18.8**	**34.6**
Symptoms do not persist for long, only temporary	6	12.5	23.1
Only restless or upset during	4	8.3	15.4
Subject allowed to leave whenever he wants to	11	22.9	42.3
More helpful than harmful, harmless, not drastic	4	8.3	15.4
Other	7.	14.6	
Not interpretable	1	2.1	

Table 3E. Question 3: (continued)

ATTACK ON PERSONAL VALUES			
Yes	F	%	% Yes
Emotional harm, anxiety, conflict, upset	7	14.6	46.7
Could become upset, lose control, become too angry	3	6.3	20.0
Could get so excited, it could adversely affect health	2	4.2	13.3
Harmed emotionally, severe conflict and/or anxiety	2	4.2	13.3
Lowered self-esteem, shame, hurt pride	5	10.4	33.3
Behavior could lower self-esteem, disappointment in self	3	6.3	20.0
Pride could be hurt, could feel shame	2	4.2	13.3
No			% No
Could survive experiment unscathed	23	47.9	69.7
You will get over attack, stress and discomfort only temporary	7	14.6	21.2
Another's views would not affect my beliefs, would not be bothered by attack	6	12.5	18.2
Can withstand fast talker, sticks and stones, etc.	4	8.3	12.1
Just a little shaken	3	6.3	9.1
Harmless, an everyday occurrence	3	6.3	9.1
Know how to deal with the situation	2	4.2	6.1
Stress or effect temporary	10	20.8	30.3
You will get over attack, stress and discomfort only temporary	7	14.6	21.2
Just a little shaken	3	6.3	9.1
Affect self-confidence, but not permanently	1	2.1	3.0
Could come out better, learn more than lose	5	10.4	15.2
Only become aware of verbal ability or inability	2	4.2	6.1
BUT...	2	4.2	6.1
Other	5	10.4	
Not interpretable	1	2.1	

A GAME TO LEARN ABOUT PANICS			
Yes			% Yes
Might learn something unfavorable about yourself	3	3.1	30.0
Might get anxious, nervous or panic	3	3.1	30.0
Might induce undesirable behavior after the experiment is over	2	2.1	20.0
Others might act badly, see others act badly	2	2.1	20.0
No			% No
A game, not ego-involving, not stressful or harmful	66	68.8	76.7
No harmful side-effects, risks, harm	34	35.4	39.5
Nothing at stake, a game, just for money, fun	34	35.4	39.5
Could not take seriously, failure here would not affect me	3	3.1	3.5
Would only learn something about self	7	7.3	8.1

Table 3E. Question 3: (continued)

A GAME TO LEARN ABOUT PANICS (continued)	F	%	% NO
Would only learn something about yourself	5	5.2	5.8
Just tests ability to react to panic	2	2.1	2.3
Even if nervous during, it would be temporary, effect temporary	5	5.2	5.8
Could only benefit, interesting, beneficial	2	2.1	2.3
Other	6	6.3	
CONFORMITY AND INDEPENDENCE			
Yes			% Yes
Could injure self-confidence, lower self-esteem	4	8.3	40.0
Feel humiliated, foolish or inferior	3	6.3	30.0
No			% No
Stress minimum, trivial or non-existent	18	37.5	47.4
Not enough stress, only temporary stress	6	12.5	15.8
Others disagreeing would not bother me	6	12.5	15.8
Only embarrassed or temporarily shaken	4	8.3	10.5
Worst that could happen would be to conform and feel embarrassed or foolish	3	6.3	7.9
Learning experience	6	12.5	15.8
Could only teach me to trust myself more, not to be afraid to deviate	3	6.3	7.9
Learn about ourself	2	4.2	5.3
Would view it as learning situation	1	2.1	2.6
Harmless	6	12.5	15.8
Harmless	5	10.4	13.2
No physical harm or pain	1	2.1	2.6
Help future behavior	5	10.4	13.2
Could only teach me to trust myself more, not to be afraid to deviate	3	6.3	7.9
Would help me have more confidence in myself	2	4.2	5.3
BUT could lead to self doubts or only if easily intimidated	4	8.3	10.5
Other	8	16.7	

Table 4E. Question 4: Would you consent to serve as a subject in this Experiment?

PROLONGED EXPOSURE TO FREEZING TEMPERATURE			
No	F	%	% No
Possible permanent harm	24	25.0	28.6
Too dangerous, risky, could be fatal	22	22.9	26.2
Physically dangerous, possible, irreversible or extreme physical damage	5	5.2	6.0
Too unpleasant, stressful, severe, inhumane	22	22.9	26.2
COLD and conditions like that have an adverse effect, dislike cold (Cold must be mentioned specifically).	12	12.5	14.3
Too unpleasant, painful, severe, torturous, cruel, inhumane	7	7.3	8.3
Unnecessary stress, fear, do not like to suffer	3	3.1	3.6
Comments directed at experiment	18	18.8	21.4
Experiment not worth the suffering; No reason for, risks outweigh any good results	10	10.4	11.9
Would never consent to this type of experiment	3	3.1	3.6
Subjects are prisoners and forced; Subjects have no choice; only if voluntary and could terminate	3	3.1	3.6
Experiment stupid, dumb, ridiculous	3	3.1	3.6
Harmful	12	12.5	14.3
Too harmful; physical and mental harm	5	5.2	6.0
Value health and well-being; might get sick	5	5.2	6.0
No benefit to subject, only harm	3	3.1	3.6
Nothing to gain, no benefit	12	12.5	14.3
No purpose for me, nothing to gain	9	9.4	10.7
No benefit to subject, only harm	3	3.1	3.6
Am not a fool, are you kidding! no explanation needed	3	3.1	3.6
Other	4	4.2	
TCR			
Yes			% Yes
Direct therapeutic benefit	4	8.3	57.1
NO			% No
Too harmful, physical trauma	8	16.7	24.2
Too harmful; psychological problems or harm may occur	5	10.4	15.2
Might have negative side-effects; unnecessary or too much physical trauma	3	6.3	9.1
Possible or actual permanent harm	6	12.5	18.2
Possibility of permanent psychological damage	3	6.3	9.1
Possibility of permanent physical damage	2	4.2	6.1
Could be fatal	2	4.2	6.1

Table 4E. Question 4: (continued)

TCR (continued)

	F	%	% No
Too traumatic, stressful, extreme	14	29.2	42.4
Negative expressions directed at experiment	3	6.3	9.1
Because it relies on drugs or injection	2	4.2	6.1
Other	5	10.4	
TRAUMATIC SHOCK AND LEARNING			
Yes			% Yes
To see how I would react to pain, to see how it feels	3	6.3	60.0
No			% No
Because of pain, shock	26	54.2	76.5
Too much pain, try to avoid pain	16	33.3	47.1
Dislike shock, could not tolerate shock	10	20.8	29.4
Pain will be detrimental	2	4.2	5.9
Too risky, frightening, too much for me	4	8.3	11.8
Results useless, no social value	3	6.3	8.8
Inhumane, should be done on animals	2	4.2	5.9
No personal benefit	2	4.2	5.9
Other	2	4.2	
AIRPLANE CRASH SIMULATION			
Yes			% Yes
To see how I would react; learn about myself	4	8.3	44.4
No			% No
Too stressful, frightening	13	27.1	56.5
Too painful, too stressful	7	14.6	30.4
Would feel doomed; life or death; facing death unnecessarily	4	8.3	17.4
Am too emotional, high strung, might do something drastic	2	4.2	8.7
Harmful	5	10.4	21.7
Adverse bodily reactions	4	8.3	17.4
Might have long term effect	1	2.1	4.3
True reason for experiment not told	2	4.2	8.7
Would make a fool of me	2	4.2	8.7
Do not like conditions, do not like type of experiment	2	4.2	8.7
Other	9	18.8	

Table 4E. Question 4: (continued)

	F	%	% Yes
OBEDIENCE TO IMMORAL ORDERS			
Yes			
Results useful; useful to know how many obey	3	6.3	33.3
Curiosity; interest in human behavior	2	4.2	22.2
No			% No
Would not want to give shocks	15	31.3	57.5
Would not enjoy harming anyone; hate to see people suffer	9	18.8	34.6
Would not be able to administer shock; would not obey	5	10.4	19.2
Am not sadistic, its cruel	1	2.2	3.8
Unethical, inhumane, sadistic, etc.	5	10.4	19.2
Do not want to be involved in this type of experiment, not good for me.	3	6.3	11.5
Other	11	22.9	
REACTION TO AN UNDESIRED TRAIT			
Yes			% Yes
Might learn something helpful; see how I behave; see my reaction	12	25.0	63.2
Confident of reaction, not a homosexual, reaffirm self-understanding	3	6.3	15.8
Topic interesting, sounds interesting	3	6.3	15.8
No			% No
Ridiculous, worthless, no purpose or value	11	22.9	64.7
Not interested, waste of time	5	10.4	29.4
Experiment worthless, no social value	4	8.3	23.5
Participation would serve no purpose	2	4.2	11.8
Subject may think he's homosexual; do not want to change opinion of self	3	6.3	17.6
SENSORY DEPRIVATION			
Yes			% Yes
Interesting, challenging	6	12.5	33.3
Appeals to sense of adventure, challenging	3	6.3	16.7
Interesting, fascinating, curious about	3	6.3	16.7
To see my reaction	7	14.6	38.8
Because can leave whenever I want to	2	4.2	11.1
Results useful	2	4.2	11.1
No			% No
Too unpleasant; afraid of situation	12	25.0	63.2
Nightmare; too unpleasant	6	12.5	31.6
Afraid of personal reaction; afraid	4	8.3	21.2
Need sensory stimulation; do not want to be deprived of senses	2	4.2	10.5
Harmful	3	6.3	16.7

Table 4E. Question 4: (continued)

SENSORY DEPRIVATION (continued)	F	%	% No
Would not remain long	2	4.2	10.5
Waste of time, too much time involved	2	4.2	10.5
Pointless, results useless	2	4.2	10.5
Other	7	14.6	
ATTACK ON PERSONAL VALUES			
Yes			% Yes
See reaction; learn more about self	14	29.2	46.7
See my reaction	9	18.8	30.0
Learn more about myself and personality	5	10.4	16.7
Test my ability to defend myself; have experience of having views attacked	2	4.2	6.7
Enjoy arguing; good at arguing; don't mind arguing	7	14.6	23.3
Enjoy arguing, defending beliefs; good at arguing	5	10.4	16.7
Not afraid of arguments	2	4.2	6.7
Interesting, worthwhile, challenging	5	10.4	16.7
Harmless	2	4.2	6.7
No			% No
Dislike situation or find too threatening	4	8.3	33.3
Would get too excited; too much pressure	3	6.3	25.0
Dislike arguing, not a good debater	3	6.3	25.0
Dislike nature of experiment	5	10.4	41.7
Other	9	18.8	
A GAME TO LEARN ABOUT PANICS			
Yes			% Yes
Easy, painless, no risks involved, might be fun	34	35.4	43.6
Easy, why not? nothing to lose, a game, fun	20	20.8	25.6
No risks, harmless, painless, no stress	17	17.7	21.8
Learn something about self, others, situations of panic	34	35.4	43.6
To see how I would react	25	26.0	32.1
To see how others react	9	9.4	11.5
Learn how to behave in similar situation when money involved or panic	8	8.3	10.3
Worthwhile experiment; experiments are interesting	10	10.4	12.8
Worthwhile and interesting experiment	6	6.3	7.7
Experiments are interesting; interest in human behavior	4	4.2	5.1
Can benefit; worthwhile to be a subject	7	7.3	9.0
Curiosity	6	6.3	7.7
Money	2	2.1	2.6

Table 4E. Question 4: (continued)

A GAME TO LEARN ABOUT PANICS (continued)	F	%	% No
No			
Worthless; no value for me	7	7.3	58.3
Worthless, experiment worthless	4	4.2	33.3
No value for me; waste of time	4	4.2	33.3
Too competitive, stressful, hazardous	2	2.1	16.7
Other	3	3.1	
CONFORMITY AND INDEPENDENCE			
Yes			% Yes
Learn about self	19	39.6	48.7
To see how I would react	9	18.8	23.1
To see if I predicted my own behavior correctly	6	12.5	15.4
Better insight into self; learn about self	4	8.3	10.3
Harmless, no negative effect	7	14.6	17.9
Harmless, would not affect me negatively	5	10.4	12.8
Only involves conforming or not	2	4.2	5.1
Enjoyable, pleasant, interesting	5	10.4	12.8
May gain something	5	10.4	12.8
Like strong opposition, am used to opposition	2	4.2	5.1
Results beneficial, interested in psychology	2	4.2	5.1
Other	6	12.5	

Table 5E. Question 5: Do you feel that this experiment is ethical or unethical?

PROLONGED EXPOSURE TO FREEZING TEMPERATURE	F	%	% ETHICAL
Ethical			
Results useful	3	3.1	33.3
Because prisoners	2	2.1	22.2
Unethical			% Uneth
Subjects treated unfairly	53	55.2	65.4
Forced, did not volunteer	36	37.5	44.4
Takes advantage of prisoners, prisoners tortured, prisoners not guinea pigs	15	15.6	18.5
Extreme cruelty, Nazi style torture, should not be done with humans, violation of human rights	13	13.5	16.0
Harmful	26	27.1	32.1
Physical harm, harm, mental and/or physical harm	19	19.8	23.5
Not worth human suffering; more harm than good	5	5.1	6.2
Extreme suffering, pain	3	3.1	3.7
Too risky; could be fatal	15	15.6	18.5
Could be fatal	13	13.5	16.0
Too risky, highly dangerous	2	2.1	2.5
Results do not justify; results worthless	15	15.6	18.5
Not worth human suffering; more harm than good	5	5.1	6.2
No social value, results not worthwhile	4	4.2	4.9
Other methods of testing should be used	3	3.1	3.7
Results limited or of value only to others	3	3.1	3.7
Other	6	6.3	
TCR			
Ethical			% Ethical
Subjects treated fairly or if treated fairly	8	16.7	66.7
If volunteer knows consequence or outcome	4	8.3	33.3
Subjects are volunteers	3	6.3	25.0
Subjects knew what to expect	1	2.1	8.3
As a possible cure for alcoholism	2	4.2	16.7
BUT...	2	4.2	16.7
Unethical			% Uneth
Subjects treated unfairly	14	29.2	42.4
Subjects tricked, not told about injection, not told details, not warned beforehand	10	20.8	30.3
Subjects taken advantage of, recruited under false pretenses, alcholoics exploited	5	10.4	15.2
Too abusive, drastic, traumatic	9	18.8	27.3
Too distressing, traumatic, drastic	7	14.6	21.2
Tampers with people's bodies and lives, no concern with human life	2	4.2	6.1

Table 5E. Question 5: (continued)

TCR (continued)	F	%	% Uneth
Permanent damage, harmful aftereffects	8	16.7	24.2
May cause permanent or long-lasting damage, psychological & physical aftereffects	7	14.6	21.2
Endangers life	1	2.1	8.3
Harmful, could damage alcoholics, harms humans rather than helps	5	10.4	15.2
Other	5	10.4	
TRAUMATIC SHOCK AND LEARNING			
Ethical			% Ethical
Subjects not abused	15	31.3	57.7
Voluntary	13	27.1	50.0
Subject physically fit, screened, medical approval necessary	5	10.4	19.2
Temporary harm, harm a part of life	2	4.2	7.7
Results useful	8	16.7	30.8
Similar to many psychology experiments	2	4.2	7.7
Unethical			% Uneth
Experiment useless	7	14.6	33.3
No redeeming value, only causes pain to subject	4	8.3	19.0
No practical use to justify, pointless, better ways to study learning	3	6.3	14.3
Involves pain, too painful	6	12.5	28.6
Harmful, could have harmful aftereffects	6	12.5	28.6
Sick, inhumane, do not like it	3	6.3	14.3
Other	5	10.4	
AIRPLANE CRASH SIMULATION			
Ethical			% Ethical
Can benefit subjects	7	14.6	41.2
Soldiers have to live with stress, train for stress	4	8.3	23.5
Some subjects may want to know how they would react, subjects could benefit	3	6.3	17.6
Results useful	6	12.5	35.3
Results could be beneficial for soldiers, other flyers	4	8.3	23.5
Results worthwhile	2	4.2	11.8
No real harm, harm not extreme	4	8.3	23.5
BUT...IF...	2	4.2	11.8

Table 5E. Question 5: (continued)

AIRPLANE CRASH (continued)	F	%	% Uneth
Unethical			
Too stressful, fearful, risky	16	33.3	55.2
Too stressful, traumatic, harsh, realistic inhumane	11	22.9	37.9
Induces fearful state, could cause panic	3	6.3	10.3
Too risky even for Army, could be fatal	2	4.2	6.9
Harmful	7	14.6	24.1
Physical damage could be done	4	8.3	13.8
Harmful psychological effects; long term psychological effects	4	8.3	13.8
Methods rejected, deals with death	5	10.4	17.2
Concerns itself with death	3	6.3	10.3
Results do not justify this kind of experiment	2	4.2	6.9
Soldiers deceived, taken advantage of	8	16.7	27.6
Results worthless	2	4.2	6.9
Other	4	8.3	
OBEDIENCE TO IMMORAL ORDERS			
Ethical			% Ethical
Experiment can be useful	12	25.0	42.3
Results useful (specific and relevant)	5	10.4	19.2
Important knowledge can be gained, results useful	4	8.3	15.4
Shows violent, aggressive nature of some people	2	4.2	7.7
Can benefit subject or change his behavior in the future	2	4.2	7.7
No one really harmed; tension, conflict temporary	11	22.9	42.3
No one really harmed; no-one shocked (refers to victim)	7	14.6	26.9
No one seriously harmed, not dangerous, harmless	2	4.2	7.7
Tension, conflict, psychological effect temporary	2	4.2	7.7
People can discobey if they want to	2	4.2	7.7
Unethical			% Uneth
Concerned with "immoral" behavior, forced to hurt someone, subject bullied	11	22.9	52.4
Being forced to hurt someone, wrong to inflict pain	8	16.7	38.1
Concerned with immoral behavior, subject put in position that violates own code	2	4.2	9.5
Subject bullied, taken advantage of	1	2.1	4.8
Too stressful, traumatic, could damage subject	8	16.7	38.1
Traumatic, unnecessary torture, overly emotional, extreme tension may have an aftereffect	4	8.3	19.0
Subject would react to giving shock even if not true	2	4.2	9.5
Might permanently damage subject's view of himself if he obeyed	2	4.2	9.5

Table 5E. Question 5: (continued)

OBEDIENCE TO IMMORAL ORDERS (continued)	F	%	%Uneth
Animal should be used, different ways to study memory and learning	2	4.2	9.5
Deceptive	2	4.2	9.5
Other	6	12.5	
REACTION TO AN UNDESIRED TRAIT			
Ethical			% Ethical
Experiment useful	6	12.5	20.0
Helps explain human behavior	4	8.3	13.3
Significant, important topic	2	4.2	6.7
Gives insight to subject	6	12.5	20.0
People only discover truth about themselves	4	8.3	13.3
Anyone reacting to discovery will find he has an area to deal with psychologically	2	4.2	6.7
Harmless, no permanent harm	9	18.8	30.0
Subjects told truth at the end, debriefed	5	10.4	16.7
BUT some people could be hurt, could damage	3	6.3	10.0
Unethical			% Uneth
Harmful	10	20.8	55.6
Could psychologically damage subject, identity doubts, guilt, etc.	7	14.6	38.9
Tampers with sexual outlook	2	4.2	11.1
Could cause intense anxiety	1	2.1	5.6
Unfair, subjects tricked	3	6.3	16.7
No purpose, see no purpose	2	4.2	11.1
Other	12	25.0	
Not interpretable	1	2.1	
SENSORY DEPRIVATION			
Ethical			% Ethical
Subjects not abused or harmed	18	37.5	47.4
Subjects can quit at any time	11	22.9	28.9
Subjects not abused or harmed	6	12.5	15.8
No permanent or lasting effects	2	4.2	5.3
IF...	3	6.3	7.9
If no apparent harm or lasting effects	2	4.2	5.3
If subjects informed of the risk	1	2.1	2.6
Results useful, good sound experiment	11	22.9	28.9
Voluntary	7	14.6	18.4
Subjects may gain something	2	4.2	5.3
Not sure why	2	4.2	5.3

Table 5E. Question 5: (continued)

SENSORY DEPRIVATION (continued)	F	%	% Uneth
Unethical			
Harmful, inhumane	5	10.4	55.6
Subjects can be harmed, experimenters don't know enough about outcome	3	6.3	33.3
Torture, like prison camp, inhumane	2	4.2	22.2
Pointless, ridiculous, no possible value	2	4.2	22.2
Other	5	10.4	
Not interpretable	1	2.1	
ATTACK ON PERSONAL VALUES			
Ethical			% Ethical
Harmless	16	33.3	45.7
Harmless, no aftereffect	9	18.8	25.7
No-one seriously hurt, stress is minimum and temporary	6	12.5	17.1
No physical stress or pain	1	2.1	2.9
Voluntary	5	10.4	14.3
Voluntary, subject not forced into anything	3	6.3	8.6
Subject is volunteer so would expect to stand up to this, meet this challange	2	4.2	5.3
Subjects can learn something, benefit from the experience	6	12.5	17.1
Purpose valuable, results useful	5	10.4	14.3
People have to be prepared for the unexpected, something that happens in everyday life	2	4.2	5.7
IF...	2	4.2	5.7
UNETHICAL			% Uneth
Unfair, betrayal	7	14.6	63.6
Unfair, betrayal, forces people to participate in something they don't like	7	14.6	63.6
Use of skilled'professional' opponent	3	6.3	27.3
Should not attack someone's values, risky to attack someone's values	2	4.2	18.2
Other	6	12.5	
A GAME TO LEARN ABOUT PANICS			
Ethical			% Ethical
Harmless	39	40.6	47.6
Does not harm anyone, no danger or stress involved	36	37.5	43.9
Only a game, fun for subjects	2	2.1	2.4
Does not compel anyone to hurt someone or violate someone's self-esteem	2	2.1	2.4
Voluntary, informed consent*	11	11.5	13.4

* One case had a third code which was omitted.

Table 5E. Question 5: (continued)

A GAME TO LEARN ABOUT PANICS (continued)	F	%	% Ethical
Informed consent, no deception, fully explained	6	6.3	7.3
Voluntary	4	4.2	4.9
Results useful, valid experiment	26	27.1	31.7
Teaches people in experiment something, helps subjects	11	11.5	13.4
Does nothing morally wrong, an exercise in ethics, no problems	10	10.4	12.2
Unethical			**% Uneth**
No relation to subject being studied, invalid	5	5.2	55.6
Other	5	5.2	
Not interpretable	3	3.1	
CONFORMITY AND INDEPENDENCE			
Ethical			**% Ethical**
Harmless	19	39.6	44.2
Results useful	13	27.1	30.2
Can help the subject	5	10.4	11.6
Subjects given a choice as to how to behave	3	6.3	7.0
Deception has useful results, not unfair	3	6.3	7.0
Unethical			**% Uneth**
Fools the subject; can hurt the subject; puts subject in an uneasy position	3	6.3	100.0

APPENDIX F

Frequency Distributions of Questions and Total Rating

Table 1F. Do you think you could benefit in any way by participating in this experiment? (Percentage of participants checking each alternative)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Definitely Not	65.6	43.8	31.3	18.8	27.1	22.9	16.7	-	8.3	4.2
Probably Not	18.8	27.1	33.3	27.1	25.0	33.3	27.1	20.8	22.9	12.5
Possibly	14.6	22.9	35.4	41.7	37.5	37.5	41.7	54.2	47.9	47.9
Definitely	-	4.2	-	12.5	10.4	6.3	14.6	25.0	20.8	35.4
None or two checks*	1.0	2.1	-	-	-	-	-	-	-	-

*Participant gave an explanation for his action and therefore the question was considered answered.

Table 2F. Do you think you could be harmed in any way by participating in this experiment? (Percentage of participants checking each alternative)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Definitely	67.7	35.4	20.8	22.9	4.2	6.3	6.3	2.1	5.2	-
Possibly	29.2	43.8	52.1	50.0	29.2	22.9	39.6	29.2	5.2	20.8
Probably not	3.1	18.8	20.8	18.8	35.4	35.4	29.2	33.3	19.8	35.4
Definitely not	-	2.1	6.3	8.3	31.3	35.4	25.0	35.4	69.8	43.8

Table 3F. Would you consent to serve as a subject in this experiment?
(Percentage of participants checking each alternative)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
NO	87.5	68.8	70.8	47.9	54.2	35.4	39.6	25.0	12.5	2.1
Not sure	11.5	16.7	18.8	33.3	27.1	25.0	22.9	12.5	6.3	16.7
YES	1.0	14.6	10.4	18.8	18.8	39.6	37.5	62.5	81.3	81.3

Table 4F. Do you feel that this experiment is ethical or unethical?
(Percentage of participants checking each alternative)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Definitely unethical	67.7	37.5	22.9	16.7	16.7	14.6	12.5	4.2	1.0	-
Probably unethical	16.7	31.3	20.8	43.8	27.1	22.9	6.3	18.8	8.3	6.3
Probably ethical	7.3	18.8	39.6	27.1	43.8	37.5	52.1	35.4	27.1	35.4
Definitely ethical	2.1	6.3	14.6	8.3	10.4	25.0	27.1	37.5	58.3	54.2
None or two checks*	6.3	6.3	2.1	4.2	2.1	-	2.1	4.2	5.2	4.2

*4.0% of the responses to the question on Ethical were given a "0" (neutral) score. This was done when a participant checked both ethical and unethical or did not check either. In both circumstances, the question still fulfilled the criterion of being answered as the written response explained why the participants acted as they did, e.g., an experiment may have been considered neither ethical or unethical or it may have been asserted that an ethical judgment was inappropriate.

Table 5F. Suppose an experiment could be carried out only with the consent of a board made up of representatives of possible subjects for the experiment. The board would make a judgment based on the experiment's effect on subjects, considerations of the worth of the experiment, its acceptability to community moral standards, or any other factors it deemed relevant. If you were a member of this board, would you vote to give permission for the conduct of this experiment?

( ) Yes ( ) No

(Percentage of participants checking "Yes" or "No" to Permit)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
NO	85.4	77.1	62.5	70.8	43.8	39.6	20.8	14.6	11.5	8.3
YES	14.6	22.9	37.5	29.2	56.3	60.4	79.2	85.4	88.5	91.7

Table 6F. Distribution of Total Rating: Percentage of Participants

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
-10	42.7	14.6	6.3	2.1	-	6.3	-	-	-	-
-9	10.4	10.4	8.3	6.3	4.2	2.1	4.2	-	-	-
-8	10.4	16.7	10.4	8.3	2.1	4.2	4.2	4.2	-	-
-7	11.5	12.5	10.4	12.5	6.3	-	4.2	2.1	-	-
-6	4.2	6.3	12.5	10.4	10.4	4.2	2.1	-	-	-
-5	5.2	4.2	10.4	6.3	10.4	10.4	-	2.1	1.0	2.1
-4	2.1	2.1	-	2.1	4.2	2.1	2.1	-	2.1	-
-3	4.2	4.2	2.1	6.3	2.1	2.1	4.2	2.1	1.0	-
-2	1.0	4.2	-	6.3	2.1	2.1	6.3	-	1.0	-
-1	2.1	2.1	2.1	8.3	4.2	4.2	4.2	8.3	2.1	2.1
0	1.0	2.1	4.2	2.1	-	-	4.2	4.2	3.1	2.1
+1	3.1	2.1	4.2	-	8.3	6.3	2.1	-	3.1	2.1
+2	1.0	2.1	6.3	6.3	10.4	4.2	2.1	4.2	3.1	-
+3	1.0	4.2	10.4	2.1	8.3	6.3	14.6	6.3	3.1	4.2
+4	-	6.3	2.1	6.3	-	2.1	2.1	-	6.3	-
+5	-	2.1	-	4.2	8.3	4.2	6.3	10.4	5.2	10.4
+6	-	-	4.2	2.1	4.2	16.7	12.5	8.3	8.3	10.4
+7	-	4.2	-	6.3	4.2	8.3	10.4	14.6	13.5	27.1
+8	-	-	4.2	-	4.2	10.4	-	8.3	10.4	8.3
+9	-	-	2.1	2.1	4.2	4.2	6.3	20.8	22.9	22.9
+10	-	-	-	-	2.1	-	8.3	4.2	13.5	8.3

APPENDIX G

Tables for Focus on the Questions

Table 1G. Percentage of Actual Checks to Both Permit and Consent: Consistent and Inconsistent

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Permit Yes Consent Yes	1.0	10.4	8.3	14.6	18.8	35.4	35.4	62.5	77.1	79.2
Permit No Consent No	78.1	62.5	54.2	41.7	35.4	29.2	16.7	8.3	5.2	2.1
TOTAL Consistent	79.2	72.9	62.5	56.3	54.2	64.6	52.1	70.8	82.3	81.3
Permit Yes Consent No	9.4	6.3	16.7	6.3	18.8	6.3	22.9	16.7	7.3	-
Permit Yes Consent Not Sure	4.2	6.3	12.5	8.3	18.8	18.8	20.8	6.3	4.2	12.5
TOTAL Permit Yes Consent No or Not Sure	13.5	12.5	29.2	14.6	37.5	25.0	43.8	22.9	11.5	12.5
Permit No Consent Yes	-	4.2	2.1	4.2	-	4.2	2.1	-	4.2	2.1
Permit No Consent Not Sure	7.3	10.4	6.3	25.0	8.3	6.3	2.1	6.3	2.1	4.2

Table 2G. Revised Permit-Consent Responses: Percentage Consistent and Inconsistent Each Experiment

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Permit Yes Consistent	1.0	12.5	27.1	16.7	37.5	47.9	75.0	75.0	85.4	87.5
Permit No Consistent	81.3	72.9	56.3	66.7	41.7	35.4	18.8	10.4	9.4	4.2
TOTAL Consistent	82.3	85.4	83.3	83.3	79.2	83.8	93.8	85.4	94.8	91.7
Permit Yes Inconsistent	13.5	10.4	10.4	12.5	18.8	12.5	4.2	10.4	3.1	4.2
Permit No Inconsistent	4.2	4.2	6.3	4.2	2.1	4.2	2.1	4.2	2.1	4.2
TOTAL Inconsistent	17.7	14.6	16.7	16.7	20.8	16.7	6.3	14.6	5.2	8.3
Permit Yes Consent No Consistent			12.5	2.1	8.3	2.1	18.8	8.3	5.2	
Permit Yes Consent No Inconsistent	9.4	6.3	4.2	4.2	10.4	4.2	4.2	8.3	2.1	
Permit Yes Consent N.S. Consistent		2.1	6.3		10.4	10.4	20.8	4.2	3.1	8.3
Permit Yes Consent N.S. Inconsistent	4.2	4.2	6.3	8.3	8.3	8.3		2.1	1.0	4.2

Table 2G. Revised Permit-Consent Responses: Percentage Consistent and Inconsistent Each Experiment (continued)

	EXPOSURE	TCR	SHOCK	AIRPLANE	OBEDIENCE	REACTION	SENSORY	ATTACK	GAME	CONFORMITY
Permit No Consent Yes Consistent		2.1		2.1					2.1	
Permit No Consent Yes Inconsistent		2.1	2.1	2.1		4.2	2.1		2.1	2.1
Permit No Consent N.S. Consistent	3.1	8.3	2.1	22.9	6.3	6.3	2.1	2.1	2.1	2.1
Permit No Consent N.S. Inconsistent	4.2	2.1	4.2	2.1	2.1			4.2		2.1

APPENDIX H

Tables for Focus on the Reasons

Table 1H. Alternatives for Question 6: Yes and No Analysis

	M.S.	d.f.	F	P
Subjects voluntarily agreed				
Between groups	1.55	9	4.62	.001
Within groups	0.34	262		
Discomfort or stress only temporary				
Between groups	0.79	9	2.43	.01
Within groups	0.33	262		
Of value to Ss in understanding themselves				
Between groups	2.09	9	4.35	.001
Within groups	0.48	262		
Not too unpleasant or stressful				
Between groups	0.80	9	2.93	.003
Within groups	0.27	262		
To learn about behavior				
Between groups	0.23	9	0.67	N.S.
Within groups	0.35	262		
If Ss knew true purpose, they might behave unnaturally				
Between groups	0.99	9	4.06	.001
Within groups	0.24	262		
Value justifies possible stress				
Between groups	0.81	9	2.13	.03
Within groups	0.38	262		
Not unfair to Ss				
Between groups	0.29	9	0.96	N.S.
Within groups	0.30	262		
Ss do not volunteer				
Between groups	2.60	9	10.12	.001
Within groups	0.26	199		
Long term harm				
Between groups	1.60	9	4.44	.001
Within groups	0.36	199		
Lowers self-esteem				
Between groups	2.48	9	9.31	.001
Within groups	0.27	199		
Too unpleasant or stressful				
Between groups	1.78	9	6.56	.001
Within groups	0.27	199		

Table 1H. Alternatives for Question 6: Yes and No Analysis (continued)

	M.S.	D.F.	F	P
No social value				
Between groups	1.04	9	2.77	.005
Within groups	0.38	199		
Ss feel deceived				
Between groups	1.07	9	3.45	.001
Within groups	0.31	199		
Value does not justify possible harm				
Between groups	0.88	9	2.00	.04
Within groups	0.44	199		
Encourages neurotic behavior				
Between groups	2.22	9	2.22	.02
Within groups	1.00	199		

Table 2H. Alternatives for Question 6: Analysis based on total group

	M.S.	d.f.	F	P
Subjects voluntarily agreed				
Between groups	2.21	9	6.42	.001
Within groups	0.34	470		
Discomfort or stress only temporary				
Between groups	1.44	9	5.92	.001
Within groups	0.24	470		
Of value to Ss in understanding themselves				
Between groups	7.26	9	18.07	.0001
Within groups	0.40	470		
Not too unpleasant or stressful				
Between groups	2.12	9	11.88	.001
Within groups	0.18	470		
To learn about behavior				
Between groups	3.97	9	11.94	.001
Within groups	0.33	470		
If Ss knew true purpose, they might behave unnaturally				
Between groups	1.13	9	7.26	.001
Within groups	0.16	470		
Value justifies possible stress				
Between groups	1.34	9	5.27	.001
Within groups	0.25	470		
Not unfair to Ss				
Between groups	1.50	9	7.32	.001
Within groups	0.21	470		
Ss do not volunteer				
Between groups	3.13	9	23.65	.0001
Within groups	0.13	470		
Long term harm				
Between groups	5.22	9	21.32	.0001
Within groups	0.24	470		
Lowers self-esteem				
Between groups	0.67	9	3.64	.001
Within groups	0.18	470		
Too unpleasant or stressful				
Between groups	4.89	9	22.18	.0001
Within groups	0.22	470		

Table 2H. Alternatives for Question 6: Analysis based on total group (continued)

	M.S.	d.f.	F	P
No social value				
Between groups	1.87	9	8.04	.001
Within groups	0.23	470		
Ss feel deceived				
Between groups	1.45	9	8.04	.001
Within groups	0.17	470		
Value does not justify possible harm				
Between groups	4.39	9	14.72	.001
Within groups	0.30	470		
Encourages neurotic behavior				
Between groups	0.19	9	1.79	(.07)
Within groups	0.10	470		

Table 3H. ANOVAS and A Posteriori Differences for Reasons for Granting a Permit That Involve Deception: Only the 6 Deception Experiments Included

If the subjects knew the true purpose ahead of time they would behave unnaturally	M.S.	d.f.	F	P
Based on Yes and No only				
Between groups	0.35	5	1.06	N.S.
Within groups	0.33	160		
Based on total sample				
Between groups	1.06	5	4.82	.001
Within groups	0.22	282		
Ss feel deceived				
Based on Yes and No only				
Between groups	0.39	5	0.97	N.S.
Within groups	0.41	116		
Based on total sample				
Between groups	1.81	5	7.72	.001
Within groups	0.23	282		

A Posteriori Differences: Duncan .05

If the subjects knew the true purpose ahead of time, they would behave unnaturally

TCR	Airplane	Obedience	Reaction	Conformity	Attack
0.02	0.10	0.27	0.31	0.35	0.40

Subjects feel deceived

Conformity	Attack	Obedience	Reaction	TCR	Airplane
0.02	0.10	0.21	0.25	0.42	0.54

Table 4H. General Ranking of Reasons Across Experiments and Percentage of Participants Who Checked Each Reason

Yes Alternatives							
DECEPTION JUSTIFIED 0.28	VALUE JUSTIFIES 0.45	NOT TOO STRESSFUL 0.47	STRESS TEMPORARY 0.51	NOT UNFAIR TO Ss 0.51	Ss VOLUNTEER 0.82	LEARN ABOUT BEHAVIOR 0.91	OF VALUE TO Ss 0.97
43	60	78	74	73	83	91	88 (F)
44.8	62.5	81.3	77.1	76.0	86.5	94.8	91.7 (%)

No Alternatives							
ENCOURAGES UNDESIRABLE BEH. 0.23	LOWERS SELF ESTEEM 0.35	Ss FEEL DECEIVED 0.40	Ss DO NOT VOLUNTEER 0.45	NO SOCIAL VALUE 0.61	LONG TERM HARM 0.82	TOO STRESSFUL 0.82	VALUE DOES NOT JUSTIFY 0.86
36	47	57	66	73	86	83	86 (F)
37.5	49.0	59.4	68.8	76.0	89.6	86.5	89.6 (%)

	M.S.	d.f.	F	P
Total Yes Reasons	19.94	7	56.99	<.001
Residual	0.35	2240		
Total No Reasons	15.27	7	43.28	<.001
Residual	0.35	1778		

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