

CONFESSION OF AWARENESS AND PRIOR KNOWLEDGE
OF DECEPTION AS A FUNCTION OF LEVEL OF
MORAL JUDGMENT AND INTERVIEW SET

By

SHELLEY RODIN BUNTMAN

Bachelor of Science

University of Wisconsin-Madison

Madison, Wisconsin

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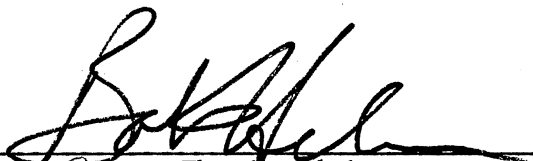
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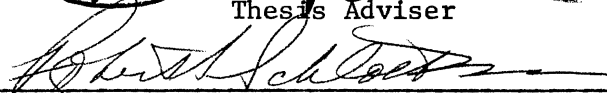


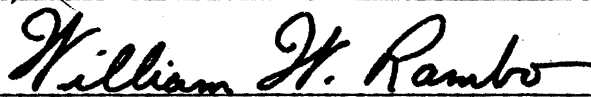
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Thesis Approved:



Thesis Adviser







Dean of the Graduate College

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CHAPTER I

INTRODUCTION

Various political and social events in our recent past, such as those in Nazi Germany, the civil rights movement, the assassinations of American leaders, campus protests and riots over the Viet Nam War and especially in recent governmental abuses of power, have stimulated interest in the issues of morality and values. In addition, threats of nuclear war, of dwindling natural resources, world famine, and of the destruction of our environment produce frightening and grim prospects for the future. Mutual social and political cooperation, as well as strong moral leadership seem essential for our survival.

These issues and events can have implications for our whole process of socialization. "In its broadest and most widely accepted sense, the function of socialization is to enable the individual to 'fit into', and to form adequate relationships with other members of his group or culture" (Kelvin, 1971, p. 212). This definition stresses conformity and implies that conformity is a central aspect of socialization. However, as exemplified by Nazi Germany, socialization can effectively produce conformity, and still not be good.

In addition, "a growing or dynamic group or society, as distinct from a static one, depends on creative individuals who innovate; perfect conformity is sterile, at best maintaining the status quo, at worst blocking adaptive change" (Kelvin, 1971, p. 217). It seems, therefore,

that one goal of socialization, in addition to conformity, is to enable the individual to achieve individuality within the basic framework of society. These two goals may seem incompatible. In fact, moral and political philosophers throughout history have discussed the problem of "the balance, and conflict, between the needs and rights of the individual and those of his community . . ." (Kelvin, 1971, p. 221).

This conflict between conformity and individuality has been studied experimentally. Stanley Milgram (1963) demonstrated quite dramatically how subjects conform to an authority even in the face of violating another's rights. In his study the subjects were instructed to administer increasingly severe "electric shocks" to a confederate "learner" as he made errors in a paired-associate memory task. The majority of subjects complied with the demands of the experimenter to continue shocking the "learner" despite the confederate's loud protests. Many of the subjects justified their behavior in that they were obeying the authority, were following instructions, that they had agreed to participate in the experiment and were fulfilling an obligation.

This high degree of conformity of experimental subjects has been a topic of increasing concern in the past fifteen years. Orne (1962) has discussed the subject's motivation to play the "good subject" role, that is, to behave in such a way as to validate the experimental hypothesis. Even when subjects are aware of the experimental deception procedures, they behave in accordance with the role of the good subject. For example, when completely informed about the verbal conditioning task, subjects gave performance curves which were similar to the learning curves of naive subjects (Levy, 1967; Lichtenstein, 1968). Moreover, when questioned in a post-experimental interview about the amount of

foreknowledge, researchers have found subjects unwilling to tell the truth (Golding & Lichtenstein, 1970; Levy, 1966). That is, they will lie to maintain the social order, or to maintain the expectation of the authority figure (the experimenter) that they persist in their good subject role. Thus, it has been demonstrated that subjects will behave in rather "immoral" ways, i.e., physically harm another or lie, when pressured to conform to the expectations or commands of an authority figure.

The earliest attempts to experimentally investigate various factors which account for moral behavior were atheoretical. The studies were based on the assumption that moral behavior is determined by moral knowledge and beliefs, implying that socialization is a result of learning the rules of society. Following these atheoretical studies, three major, general theories of socialization emerged to guide subsequent research in the area of moral development. These three viewpoints, psychoanalytic, learning approach and cognitive-developmental, have influenced the bulk of this research. Psychoanalytic theory and the learning approach both view man as hedonistic and the process of socialization as gradually modifying the ways in which man strives to satisfy these needs.

On the other hand, the cognitive-developmental approach has focused on analyzing the basic thought structures underlying the development of moral concepts. The development of morality or moral thinking is "in large part dependent on successively emerging concepts of how people form mutual expectations about the coordination of their behavior" (Rest, 1976, p. 6). Kohlberg (1964) is one of the main advocates of the cognitive-developmental theory of moral development. He has conceptualized moral development as a progression through three levels. At the

most rudimentary level (preconventional) moral development begins with a period of conformity or obedience as a function of physical rewards and punishments. As the child develops the cognitive capacity to take another's role, morality is conceptualized as an exchange of favors or as serving self-interest. At the conventional level, a more cooperative reciprocity, based on conformity to the other's or society's expectations then develops. This is finally followed by the ability to think in terms of abstract rights, that go beyond conformity to the expectations of the immediate situation. This is principled morality. This pattern of moral development encompasses the goal of socialization as facilitating individuality within the basic framework of society. The theory speaks to the basic conflict between individual rights (self-interest) and social responsibility.

Kohlberg (1969) has pointed out that level of moral judgment has behavioral implications in that it leads one to differentially define moral obligations and duties in ambiguous situations. Kohlberg (1968) also reports that the majority of adults and young adults function at the conventional level of morality. Thus, it can be expected that a high degree of compliance and conformity will be found among most adult subjects participating in psychology experiments. However, if a group of subjects were known to be functioning at a higher level of moral development, quite different expectations regarding their willingness to comply and conform would prevail. The present study was designed to investigate the relationship between an individual's level of moral judgment and actual conduct. Golding and Lichtenstein (1970) found that subjects were unwilling to confess that a confederate had revealed the experimental deception procedures in a pre-experimental tip-off. In one

of their conditions the experimenter implicitly condoned the subject lying about the amount of prior information he had received. In the other condition the experimenter encouraged the subject to be truthful. Regardless of this differential encouragement to be truthful only 10-15% of the subjects confessed, with no significant difference between conditions.

In the present study subjects were assigned to three levels of moral development as determined by a pre-test. So that no association would be made between the pre-test and actual experiment, subjects were then contacted by phone and asked to participate in an experiment having to do with physiological responses to sexually oriented stimuli (patterned after Golding & Lichtenstein, 1970 and Valins, 1966). Following a preexperimental tip-off where a confederate revealed the experimental deception, subjects experienced a post-experimental interview that either condoned lying or encouraged them to tell the truth regarding their amount of foreknowledge. It is expected that subjects functioning at the principled level of morality will be most truthful regardless of the interview condition. The lying behavior of subjects at the conventional level will be most variable. That is, they will be most susceptible to the demand characteristics and will conform to what they believe is expected of them by the experimenter. It is expected that subjects at the pre-conventional level will lie the most regardless of the differential encouragement to be truthful.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Morality is a complex phenomenon that has been a concern of philosophers, religious leaders and social thinkers for centuries. The complaint that "Young people are not what they were: They no longer obey their parents" dates back to Egypt 1,000 B.C. (Bull, 1969). Ethics, defined as the study of standards of conduct and moral judgment, comes from the Greek word "ethos," meaning character. The beginning of ethics as a branch of human science has been traced to Socrates but probably the most influential work is that of Aristotle (Rogers, 1927). In Nicomachean Ethics he says, "In practical matters the end is not mere speculative knowledge of what is to be done, but rather the doing of it. It is not enough to know about virtue then, but we must endeavour to possess it, and to use it, or to take other steps that may make us good." Reflecting on the divergent viewpoints regarding the development of morality, he goes on to say that "What makes men good is held by some to be nature, by others habit or training, by others instruction." These two quotes capture what has been the major focus of the study of morality within the realm of psychology from the beginning of the twentieth century. In general, researchers have sought to discover the nature of the development of morality, as well as the relationship between moral knowledge, moral affect and moral behavior.

This review of the literature is intended to serve as an introduction to the psychological study of morality. Following an abbreviated historical review, three principle theoretical orientations and a summary of their related research will be discussed. The discussion will cover the psychoanalytic and learning theory approaches and then place greatest emphasis on the cognitive-developmental approach. More extensive reviews and discussion of other theoretical viewpoints can be found (eg. Hoffman, 1970; Kohlberg, 1960; Lickona, 1976).

Historical Review

Initial attempts to study morality were atheoretical and most were based on the notion that moral behavior is determined by moral knowledge and beliefs. Pittel and Mendelsohn (1966), in their review of efforts to conceptualize and measure moral values through research, date the earliest general study of morality back to Osborne (1804). In seeking to discover the "ethical content of childrens' minds," Osborne used an open-ended questionnaire. He asked children to state what they must do to be called good or bad. He discovered that children believed conformity to rules were more important than any specific categories of acts. Interestingly, this finding was later supported by Piaget's (1932) observations of primitive morality being characterized by obedience to external sanctions.

In 1898, Sharp, who was concerned with philosophical issues rather than normative behavior, required college students to write short essays justifying their responses to hypothetical moral situations. The purpose of his research was to develop an objective method for studying moral issues. His open-ended method of responding to hypothetical moral

situations was similar to that used by later investigators (eg. Piaget, 1932; Kohlberg, 1968).

Fernald (1912), in attempting to identify delinquents by a battery of perceptual-motor and paper-and-pencil measures, administered two tests of ethical content. One test asked children to indicate whether they agreed or disagreed with descriptions of legal violations. The other test, considered to indicate moral intelligence, required subjects to rank how serious various offenses were.

Pressey and Pressey's (1919 "cross-out" X-0) tests of moral judgment included 25 groups of 5 items each. Subjects had to cross out the "worst" item in a group, such as the following: dancing, drunkenness, flirting, overeating, smoking.

In 1922, Kohs, who incorporated parts of Fernald's test, as well as Pressey and Pressey's X-0 Test, developed his own Ethical Discriminations Test. Subjects had to choose the correct definition for various words, such as 'good' or 'enemy'. In addition, they had to decide what treatment (praise, nothing, scold, jail, or kill) an individual deserved for different behaviors such as stubbornness, perjury or shoplifting.

A variety of other instruments designed to measure moral knowledge were developed in these first two decades (Brotmarkle, 1922; Lincoln and Shields, 1931; McGrath, 1923; Woodrow, 1926). Because of the accepted notion of a direct relationship between moral knowledge and moral behavior, it was hoped that these tests would differentiate between normal and delinquent individuals. However, this relationship was investigated by Lowe and Shimberg (1925) using the Terman Fables Test, a measure of moral knowledge. These researchers tested a large group of delinquent and normal youths and found that the only

significant difference between the groups was that normal youths were of higher intelligence. The authors concluded that the assumption that moral knowledge predicts moral behavior had to be questioned.

Thus, these early attempts to study morality began with a more general exploration of moral knowledge. Investigators then attempted to show a direct relationship between actual conduct and moral knowledge. As more research was conducted, the assumption that moral behavior is determined by moral knowledge and beliefs became increasingly doubtful.

Probably the most monumental study of moral conduct was that of the Character Education Inquiry (Hartshorne & May, 1928; Hartshorne, May & Maller, 1929; Hartshorne, May & Shuttleworth, 1930). Working with school children, these investigators devised a series of instruments collectively known as the Tests of Moral Knowledge. For example, there was a vocabulary test of moral terms, an Attitudes and Opinions Test, which tapped attitudes toward misconduct and moral principles and duties and a test requiring subjects to anticipate various consequences resulting from certain activities, e.g., getting into a fight at school. The investigators used the Tests of Moral Knowledge in an attempt to predict actual behavior in numerous conduct tests, most of which involved some form of resistance to temptation geared to measure three kinds of deceit; cheating, lying and stealing. The Tests of Moral Knowledge did correlate about .70 with measures of intelligence, but the researchers found low correlations between their Moral Knowledge tests and their behavioral measures (about .25). The authors concluded that the factors producing moral actions were so complex that it was impossible to make any generalizations at all about moral behavior or any generalizations about a pattern of moral development. They found moral conduct to be

situation specific and that there was little evidence that a general honesty trait existed within individuals.

The conclusions of the Character Education Inquiry have subsequently been refuted and criticized. Maller (1944) demonstrated that individual behavior was influenced by specific factors, yet that a common factor, "delay of gratification," existed. Other researchers (Barbu, 1951; Brogden, 1940; Heilman, Hodgson & Hornstein, 1972; Sears, Rau & Albert, 1965) have found a general honesty factor or consistency in moral behavior across situations. Burton (1963) reanalyzed the original Hartshorne and May (1928) data with multivariate methods and discovered a single general factor of resistance to temptation. He agreed that certain social learning conditions could contribute to differential degrees of generality or specificity of moral character within an individual. Burton (1976), in reviewing the generality-specificity issue, concluded that a small but consistently manifested honesty factor exists, yet various conditions affect actual behavior.

In summary, this abbreviated historical review has shown how initial attempts to study morality were atheoretical and focused on moral knowledge or beliefs. The assumption that moral conduct is determined by moral knowledge was not supported by the data. The findings by the Character Education Inquiry of no specific honesty trait were later refuted and it was concluded that there is a general honesty trait that does relate to conduct, even though other factors also affect actual behavior.

Major Theoretical Viewpoints

One result of the Character Education Inquiry conclusions was a

shift away from paper-and-pencil tests of moral knowledge in attempting to predict actual conduct. This shift was also, in part, a result of Piaget's 1932 publication, The Moral Judgment of the Child. Whereas previous research had been atheoretical, focusing on the content of moral knowledge, thoughts and beliefs, Piaget's new methods of assessment were more concerned with the influence of intellectual development on the processes of moral thought. In addition, the impact of the psychoanalytic and behavioristic models of personality development was being felt, each of which in turn generated separate lines of research in the area of moral development. Thus, there have been three main theoretical viewpoints, psychoanalytic theory, learning theory and cognitive-developmental theory, which have influenced the bulk of research and thinking about moral learning and development (Graham, 1972; Hoffman, 1970). Each of the three main theoretical approaches defines morality somewhat differently and has a distinct focus in terms of research, as well as characteristic methods of assessment.

Psychoanalytic Approach

In general, psychoanalytic theory takes a hedonistic view of man which assumes that all human behavior is consciously or unconsciously directed towards the relief of tension or the gratification of impulses. The amoral child lacks the motivation to control his own behavior, thus adult intervention is necessary. It is believed that hostility results as a function of frustration engendered by the adult, yet the hostility is repressed due to anxiety over anticipated punishment. To maintain this repression as well as gain parental affection, the child develops a generalized motive to adopt the parental values and behaviors. Moral

standards are initially and largely a result of introjection, or the process of unthinkingly accepting values given by parents or other authority figures. The function of this internalization of values, or in Freud's term, "super-ego" development, is to keep unacceptable impulses from conscious awareness. This is not to say that these standards, once acquired, remain unchanged or unaffected by various external influences throughout life.

Psychoanalytic research has typically focused on moral development as a function of the parent-child relationship, including an investigation of discipline techniques and the processes of internalization or identification. Much of the research of this type has occurred in naturalistic settings. Utilizing introspective reports, the research has also focused on the affective component of behavior, especially guilt feelings. Psychoanalytic theory postulates that guilt, an unconscious process, is a result of repressed impulses breaking into awareness. A second view suggests that guilt is a conscious experience that follows the violation of an internalized standard and is a self-critical reaction. Projective measures of guilt are considered an index of internalization and typically consist of the subject's responses to deviation, story-completion or doll-play situations (Allinsmith, 1960; Burton, 1971; Rabin & Goldman, 1966; Miller & Swanson, 1960). Indications of the degree of internalization have also included behavioral measures of resistance to temptation, considered to be a result of the individual's repression of the impulse to deviate (Grinder, 1960, 1962; MacKinnon, 1938).

In summary, psychoanalytic research on moral development has been largely conducted in naturalistic settings and has looked at various

aspects of the parent-child relationship. This research has dealt mostly with the affective component of behavior (e.g., guilt).

Researchers have utilized projective measures of guilt as well as behavioral measures of resistance to temptation as indicative of the degree of internalization of morality.

Learning Approach

The learning approach (used loosely here to include such types as social learning, S-R, etc.), influenced by psychoanalytic thought, has taken a clearly hedonistic view of man striving to satisfy his physical or biological needs. In general, the learning approach regards other sources of satisfaction as derived from the basic needs by association. According to more extreme behavior theory (e.g., Gerwitz; Skinner), moral behavior and values, like any other behavior, are learned as a function of rewards and punishments usually administered by parents, the principle agents of socialization. Behavior is maintained or modified by this pattern of reinforcement.

Social learning theorists (e.g., Aronfreed; Bandura & Walters; Sears, Maccoby & Levin) believe that reinforcement by itself cannot account for the acquisition of all behavior and attitudes. Thus, they have focused on the process of observational learning or modeling, and vicarious reinforcement. Internalization of conscience is believed to be a function of these factors, as well as the self-generation of reinforcing events (Graham, 1972). Aronfreed (1961) has emphasized aversive training, anxiety and reduction of anxiety as the main mechanism of internalization. He has also emphasized cognitive processes as the mediators of the anxiety. Social behavior is thus influenced by such factors as the characteristics of the social models, the methods of

parental training and reinforcement contingencies, and the ability to make appropriate generalizations and discriminations. "To be moral is to conform to certain kinds of expectations of reinforcement which may very well be symbolically mediated by the individual himself but which have their ultimate origins in reinforcement from others" (Graham, 1972, p. 98).

The learning approach research has predominantly focused on overt behavior rather than moral emotion such as guilt or moral thought or judgment. There have been attempts to demonstrate the influence of modeling on moral behavior (Ross, 1971; Stein, 1967; Wolf & Cheyne, 1972) as well as the role of imitation, observational learning and vicarious consequences in moral development (Bandura & McDonald, 1963; Cowan, Langer, Heavenrich & Nathanson, 1969; Prentice, 1972). The research has also focused on situational variables as they affect moral behavior. Moral conduct has been shown to be a function of varying incentive (Brodsky & Jacobson, 1970; Mill, 1958) and the risk of detection (Canning, 1956).

In summary, the learning approach to the study of moral development has investigated such variables as the effects of reinforcement, observational learning, modeling and vicarious reinforcement. In addition, characteristics of the social models as well as various situational variables have been studied. In contrast to the psychoanalytic or cognitive-developmental approach, the learning approach research has addressed itself to moral behavior instead of moral emotion or moral judgment. Thus, this broad theoretical line of research has relied most heavily on behavioral indices of morality.

Cognitive-developmental Approach

The cognitive-developmental approach to morality received its main impetus from Jean Piaget (1932), who has provided a conceptual framework for studying the development of moral thought, as well as an important technique for assessing moral reasoning. This viewpoint does not regard the basic motivation for morality as need reduction or the alleviation of anxiety or fear, but instead assumes that moral behavior is produced by a generalized motivation for acceptance or self-esteem.

In general, Piaget (1932) concentrated on analyzing the thought structures underlying a child's moral concepts. These thought structures are unified wholes rather than just a sum of ideas pertaining to bits of behavior. Piaget views moral development as an aspect of more general cognitive development. Thus, like cognitive development, moral development progresses through a sequence of stages. There are central modes of thought or concepts that characterize each stage and are reflected in many behaviors, thus accounting for a certain consistency in the various responses of the child at a particular stage. The stages are defined by structures of interaction between the self and others, rather than through the internalization of rules that were once external. The stages differ both qualitatively and quantitatively in that development consists of integrating the preceding stage as well as synthesizing new structures resulting from the individual's interaction with the social environment.

Maturation of the child's cognitive capacities as well as the experience of socialization and peer interaction influence the transition from stage to stage. The environment influences moral development only by the general quality and extent of cognitive and social

stimulation. Changes in cognitive capacities coupled with new modes of social experience broaden the child's perspective on such things as authority and reciprocal role taking. The influence of the environment does not provide new standards and values, but rather stimulates the child to restructure his existing moral thought patterns.

Another important aspect of the cognitive-developmental approach is that development through the stages occurs in an invariant sequence, the order of succession of stages is constant and universal. However, the age and rate at which each individual passes through the stages is affected by the environment and level of cognitive development.

In his pioneering work, The Moral Judgment of the Child (1932), Piaget proposed two broad stages of moral development: heteronomous morality and autonomous morality. Piaget viewed the essence of morality as consisting of the individual's respect for the rules of social order and his sense of justice or concern for equality and reciprocity between people. Briefly, this early stage of heteronomous morality or morality of constraint is characteristic of children up to age seven or eight and is a reflection of the child's egocentrism. The child views behaviors as totally right or wrong and the wrongness or rightness is determined by the magnitude of the consequences and by the extent the behavior conforms to established rules. The child in the more advanced stage of autonomous morality, or morality of reciprocity takes a much more flexible view of rules, realizing that they are established and maintained through mutual social agreement and responsive to human needs. Intention replaces consequences in determining right and wrong. Obedience to authority, which defined duty and obligation for the heteronomous child, is replaced in the autonomous child by conformity to peer

standards and the ability to empathize.

Piaget's method of assessment was an important contribution in that it provided a means to assess moral development relatively independently of moral content. Children were presented with stories involving some type of transgression, but which differed according to motivation, intention and consequences. Questions were designed to determine the child's beliefs about violation of rules, types of punishment, etc. The responses were classified according to stage of moral development, emphasizing the cognitive component of moral judgment.

Research relating to Piaget's theory of moral development has generally focused on one or more of the various aspects of the theory. There seems to be a great deal of support for the notion of invariant sequence and universal age-trends, although the results are more inconsistent in non-western cultures. Jahoda (1958), working with West African children, found the expected decrease with age in the concept of immanent justice and Dennis (1943) obtained identical results with Hopi Indians. Havighurst and Neugarten (1955) however, found contradictory results working with ten American Indian groups.

Johnson (1962) found a positive relationship between IQ and moral judgment maturity and a positive relationship has been found between formal operations and moral development (Tomlinson-Keasey & Keasey, 1972). "The relation between IQ and the moral attributes formulated by Piaget are consistently positive" (Hoffman, 1970, p. 271). Other investigators have looked at such aspects of the theory as absolutism of moral perspective or ego-centrism (Pinard & Laurendeau, 1970); the child's conception of rules as unchangeable or flexible (Epstein, 1965); and objective versus subjective concept of responsibility (Grinder,

1964; Krebs, 1965).

Piaget's theory and examples of types of related research has been briefly summarized here to provide a theoretical understanding of the origins of more current cognitive-developmental theories of moral development. Piaget's use of hypothetical moral dilemmas allowed moral development to be separated from knowledge or specific moral content. The emphasis is on moral stage as a developmental characteristic rather than morality as a function of situational variables.

Kohlberg's Theory of Moral Development

Lawrence Kohlberg (1958, 1963) has provided the most systematic and influential modification and extension of Piaget's theory of moral development. Accepting the basic cognitive developmental approach, Kohlberg agrees with Piaget that moral development proceeds through an invariant sequence of stages, each stage being qualitatively different from the preceding one. Piaget's conception of cognitive development as progressing through the Sensory-motor, Pre-operational, Concrete, and Formal Operational periods came later than his theory of moral development. Thus, Kohlberg had applied features of Piaget's subsequent theorizing to his model. Kohlberg's subject population, which included adolescents and adults, was older than Piaget's (only up to age 12) and his dilemmas were more complex. Therefore, he was able to extend Piaget's theory, discovering many new characteristics of individuals' moral thinking.

Using the method inspired by Piaget, Kohlberg administered ten hypothetical moral dilemmas to 72 middle and lower class boys (ages 10, 13, and 16) (Kohlberg, 1958). His dilemmas involved a conflict between

conformity to rules or authority and the human needs or welfare of others. The youths were required to choose a course of action to resolve the dilemma and were then asked a series of questions designed to determine the reasoning underlying their choices. Kohlberg, like Piaget, was not interested in the moral content or specific choices, but in determining basic cognitive structures or modes of conceptualization.

Defining Levels of Moral Development

On the basis of his data, Kohlberg defined six developmental types of value-orientations that he grouped into three moral levels. Thus there are two types or stages at each level, and each is characterized by a set of common issues, such as rules, conscience, welfare of others, self's welfare, duty, role taking, punitive justice, positive justice and motives. Each moral statement expressed by a subject was assigned to one of 180 cells (30 dimensions x 6 levels per dimension) and stage type was determined for each individual on the basis of percentage of statements within each type. For example, there are six distinct stage characterizations for the issues of conscience, six for welfare, and so on.

Kohlberg views the three moral levels, each containing two stage types, as separate moral philosophies. These are described below, and summarized in Appendix A. Each level is associated with a distinct sociomoral perspective or point of view the individual takes in defining social facts and moral values or judgments.

At the preconventional level (stages 1 & 2) the individual views the rules and social expectations as external to himself. Behavior is motivated by the avoidance of punishment, attainment rewards or

exchange of favors, without true understanding or upholding of societal rules. These individuals tend to conform to others when those others are powerful, coercive and in control of the rewards and punishments. They also have a highly individualistic perspective and tend to confuse their own needs with what is right and wrong.

Conventional (stages 3 & 4) individuals uphold the rules of society for their own sake. Behavior is geared toward maintaining the expectations of others and is characterized by conformity to stereotypical images of what is majority behavior or by compliance to authority figures. Moral obligation is conceptualized as establishing mutually helpful relationships, of being attuned to the expectations of each other.

At the post-conventional or principled level (stages 5 & 6) there seems to be more of an effort to define moral values and principles apart from the authority of the group, and apart from the individual's identification with these groups. Society's rules are understood and accepted according to the general moral principles that underlie the rules, such as equality, justice and love. The individual tends to function more autonomously in terms of these self-chosen ethical principles, rather than be influenced by situational factors and contingencies.

Research-Construct Validity

Research has typically focused on validating various aspects of the cognitive-developmental approach. Several longitudinal studies have shown that level of moral development increases with age (Kohlberg, 1969; Kramer & Kohlberg, 1969). Kramer (1968) did find that some high school subjects showed a period of regression rather than progression

upon reaching college. This finding is not discrepant with general developmental theory as Kohlberg (1969) explains that within a developmental framework, regression can be accounted for by certain forms of experience. Cross-sectional research has also demonstrated the expected age-related trends and older subjects have been found to use higher stage thinking than younger subjects (Kohlberg, 1969; Turiel, 1969).

Turiel (1966), in attempting to experimentally induce changes in moral reasoning, tested the notion that the stages form an invariant sequence, such that an individual's current mode of thought determines which new concepts he can learn. A corollary to this is that each stage represents a reorganization or displacement of the preceding stages. Turiel found that children exposed to moral reasoning one stage above their own stage were able to learn and generalize more concepts than subjects exposed to concepts either one stage below or two stages above their dominant stage. Because of the fixed sequence of development, subjects were influenced more by reasoning just above their current level than by reasoning just below or two stages above.

Kurtines and Grief (1974) discuss various shortcomings of this study. They feel that Turiel incorrectly analyzed his results, that there was some confounding by a memory effect, and that no subjects were at Stage 5 or 6.

Rest, Turiel and Kohlberg (1969), however, replicated Turiel's (1966) findings and thereby provided further support for the notion of a developmental hierarchy. They also discovered that children prefer concepts that are above their predominant stage to concepts that are below. Reasoning two stages above the predominant stage was more difficult to comprehend than either reasoning one stage above or one stage

below a subject's current stage. Rest (1973), in studying the patterns of comprehension and preference of the reasoning characteristic of each of the stages, became convinced that the stages constitute a hierarchy of logical complexity.

To further support the notion of an invariant developmental sequence and that the stages are culturally universal, Kohlberg has conducted cross-cultural research in places as diverse as Formosa, Turkey, Mexico, Taiwan and Yucatan (Kohlberg, 1969). Despite the fact that specific norms and values differ from culture to culture, Kohlberg has found basic commonalities relevant to making moral judgments. The way in which a subject uses these general considerations determines his stage, and Kohlberg has found similar age trends and patterns of usage in these cultures. However, the universality of moral development stages has been criticized because of the limited number of cultures (twelve) researched (Simpson, 1975). In addition, Kohlberg's method of reporting this data (e.g., unspecified sample size and unspecified characteristics of subjects and methods used to determine the stages) and the fact that in certain cultures individuals were absent in the advanced stages has led to criticism of his research (Kurtines and Grief, 1974).

As further support for the cognitive-developmental approach, Kohlberg's scale has generally been found to be positively correlated with IQ (.30 to .50). This relationship is curvilinear, however, as at lower IQ levels moral reasoning is limited by cognitive development, whereas, at higher IQ levels moral reasoning may be either high or low in terms of moral maturity (.16) (Kohlberg, 1969). Arbuthnot (1972) found positive correlations between moral development or moral judgment

maturity and various measures of cognitive ability, such as with the Differential Aptitude Test (excluding clerical) (.40), with the California Test of Mental Maturity (.55), the Otis (.55) and Lorge-Thorndike (.50).

Evidence of the positive relationship between measures of "ego-strength" and moral judgment maturity has been cited (Kohlberg, 1969). Various aspects of ego-strength, such as IQ, the ability to anticipate consequences, delay gratification, control unsocialized fantasies, and self-esteem, have been related to indices of moral character (Kohlberg, 1964). Grim, Kohlberg and White (1964) found that another ego-strength variable, the capacity to maintain stable, focused attention, contributes to moral conduct. They determined stability of attention as a lack of variation in reaction time to the presentation of various types of stimuli, coupled with GSR measures. These measures correlated positively with behavioral measures of resistance to cheating and with teacher's ratings of "conscience strength." The investigators proposed that stable attention facilitates honesty by raising the threshold at which distracting thoughts of cheating can occur.

In summary, the major constructs in Kohlberg's cognitive-developmental theory of moral development are that level of moral development increases with age, that the stages form an invariant sequence and are culturally universal, and that moral development is positively related to various measures of cognitive and personality development.

Relationship between Moral Judgment and Moral Action

Kohlberg's model does not require a direct relationship between

moral reasoning and moral action because theoretically individuals at different stages can exhibit identical behavior that is supported by different types of reasoning. Likewise, individuals at the same stage can behave in dissimilar ways using identical reasoning to support their actions. Kohlberg's (1969) theory does have implications for behavioral prediction, however.

While moral judgment maturity is only one of many predictors of action in moral conflict situations, it can be a quite powerful and meaningful predictor of action where it gives rise to distinctive ways of defining concrete situational rights and duties in socially ambiguous situations. The causal role of moral judgment appears to be due to its contribution to a cognitive definition of the situation rather than because strong attitudinal or affective expressions activate behavior (p. 397).

Kohlberg (1969) feels that the low correlations between self reported measures of honesty and actual conduct are due in part to the fact that the same desire to cheat may lead to the desire to present oneself as having high moral values. He believes that a more important difficulty is that these self-report indices do not include "cognitive-structural self-critical components." In attempting to predict behavior from measures of moral judgment, better results are obtained when cognitive and developmental measures are employed. Kohlberg reports that significant correlations have been found between his instrument and teachers' ratings of moral conscientiousness (.46), and with peer rating of moral character (.58). He has also found a substantially lower Moral Judgment score to characterize a group of delinquent 16-year olds than a group of non-delinquent controls.

Ruma and Mosher (1967) found a positive relationship between level of moral judgment and guilt in a population of delinquent boys (.47). Their measure of guilt consisted of the sum of the weighted scores of

the boys' responses to a set of questions regarding how they felt during and after their delinquent acts (assault or theft). Level of moral judgment was determined by Kohlberg's scale. The researchers found a positive correlation (.31) between responses to the interview and the Mosher Guilt Scale, as well as a positive correlation (.55) between Kohlberg's scale and the measure of guilt. One shortcoming of this study however, is that none of the subjects were above stage 3 thus, there is no evidence for stages 4, 5, and 6.

Turiel and Rothman (1972) investigated the relationship between moral reasoning, action and developmental change by exposing 12 to 15-year old subjects to moral reasoning regarding a situation and the effect this exposure had on the subjects' actual behavior. After a subject's dominant stage of moral judgment was determined by Kohlberg's scale, he was exposed to reasoning one stage above (+1) his own stage in support of one course of action and one stage below (-1) his own stage supporting an alternative course of action. The subject was then required to choose between these two alternatives. The experimental situation involved the subjects' first observing two adults designated as "teachers" read a word list to an adult "learner," who made spelling mistakes in accordance with a predetermined schedule. As a result of the "mistakes," the learner's chips were taken away and he began to complain. One teacher wanted to continue the experiment, the other wanted to discontinue. The results indicated that there were differential effects of reasoning exposure. There was an initial tendency for all subjects to choose to continue the experiment. The lower stage subjects tended to persist in their choice to continue the experiment regardless of level of reasoning used to support either alternative.

On the other hand, stage 4 subjects chose to stop the experiment when this choice was supported by the reasoning one stage above their own stage. Higher stage subjects integrated their behavior with the +1 reasoning such that their choice was subordinate to the reasoning.

Age differences in the overall process of evaluating moral judgments have been found by other investigators (Keasey, 1974; Rest, et. al., 1969; Turiel, 1966). Looking at the relationship between opinion-agreement and stage of supportative reasoning, and level of moral judgment of pre-adolescent and college females, Keasey (1974) found that opinion-agreement strongly enhanced the evaluation of moral judgment and +1 reasoning was more highly evaluated than -1 reasoning. The pre-adolescents seemed to be more influenced by the opinion-agreement/disagreement component, a more concrete issue, than were the college subjects.

Fodor (1972) administered Kohlberg's interview to 40 delinquent and 40 nondelinquent adolescent boys to assess their level of moral thought. As part of the standard interview, after the subject chooses between two alternatives and supports his choice with his reasoning, the researcher, depending on which choice the subject made and what kind of arguments he had given, administers a predetermined set of probes to determine underlying rationale. There are also built-in arguments to convince subjects they should change their decision, regardless of what the initial moral choice had been. Whether or not the subject is swayed, does not contribute to his Moral Judgment score. Fodor (1972) found that delinquents received lower Moral Judgment scores and those who yielded to the experimenter's efforts to dissuade him from his original moral choice had lower Moral Judgment scores than

those subjects who refused to change their original choice. Like Ruma and Mosher (1967) however, Fodor had very few subjects above stage 4.

The relationship between several personality variables and actual behavior in a conflict situation has also been investigated (Swartz, Feldman, Brown & Heingartner, 1968). The researchers distinguished between personality characteristics that are uniquely relevant to moral aspects of decisions and those relevant to nonmoral cues. Level of moral development, as assessed by Kohlberg's dilemmas, related positively to action in two experimental situations. One situation involved temptation to cheat on a vocabulary test. The other involved a puzzle task with an accomplice who varied the pressure to be helpful. It was found that need for achievement, need for affiliation and level of moral thought were unrelated. With regard to cheating, subjects with higher level of moral development were less likely to cheat, those high in need for achievement were also less likely to cheat and no association between need for affiliation and cheating were found. The relationship between level of moral judgment and helpfulness was not statistically significant, but was in the predicted direction. Subjects low in need for achievement gave more help and there was a positive relationship between high need for affiliation and helpfulness. The authors, however, report some confounding, in that those subjects using principled moral thought (stage 5 and 6) were also more likely to be high in need for affiliation. Level of moral judgment predicted behavior in both situations, whereas need for affiliation and need for achievement were associated with differential situational cues.

Haan, Smith and Block (1968) administered Kohlberg's Moral Judgment Scale to almost 1000 California college students and Peace Corps

volunteers in training and determined their level of moral judgment. Differences in level of moral judgment were analyzed in relation to political-social behavior, family background, perceptions of both parents, self and ideal description and various other biographical data. The principled morality groups (stages 5 and 6) were apt to be most politically active, although men in the premoral (stages 1 and 2) group were also highly politically active. However, individuals in the principled groups seemed to have a more autonomous sense of self, their dissonant political stands were more tension free and ego-syntonic. Their behavior seemed guided by their interpersonal obligations. The premoral group, although behaving similar to the principled individuals, were motivated more by a concern for their own rights and needs. In general, the conventional morality group (stages 3 and 4) were politically inactive, accepting the traditional values of their parents and society. Their relationships tended to be harmonious with the traditional institutions of church, school and personal authorities. Their behavior, for the most part, was guided by the rules of these existing authorities and institutions. The researchers only analyzed those protocols which could be assigned to one of the "pure" moral types thus, 46% of the sample was excluded.

Saltzstein, Diamond and Belenky (1972) investigated the relationship between preadolescents' moral judgment level and conformity behavior in a modified Asch-type group pressure situation. Conformity was measured under two conditions; one in which the individuals were interdependent (prizes were awarded to the most accurate group) and the other in which they were independent (prizes awarded to the most accurate individual). They found that overall conformity, regardless

of condition, was related to moral judgment level. The subjects at stages 4 and 5 were least likely to conform, those at stage 3 were most likely to conform and subjects at stages 1 and 2 conformed at an intermediate frequency. The hypothesis that more conformity would occur in the interdependent than in the independent goal situation failed to be confirmed. This failure could have been an artifact of the experimental procedure, but the authors also discussed the possibility that a sense of obligation leading to the desire to conform may only occur in an interdependent situation when conformity will help advance the group toward its goal. For higher level of moral judgment subjects the desire to conform may have been overridden by a sense of obligation to the experimenter-authority to remain accurate.

In a study by Milgram (1963), subjects were told by an experimenter to administer increasingly severe "electric shocks" to a confederate "learner" as he made errors in a paired-associate memory task. The majority of subjects complied with the demands of the experimenter to continue shocking the "learner" despite the confederate's loud protests. Kohlberg (1965) reports that many of Milgram's (1963) subjects were subsequently contacted and administered Kohlberg's Moral Judgment Scale. It was found that the majority of subjects using stage 6 reasoning were those subjects that had refused to comply with the experimenter.

Although Kohlberg's model does not require a direct relationship between moral reasoning and moral action the theory does have implications for predicting behavior. Subjects with higher level of moral development were found to be less likely to cheat (Swartz, et. al., 1968); conformity behavior is related to level of moral development (Saltzstein, et. al., 1972); and moral development is related to

political activism and various personality characteristics (Haan, et. al., 1968). Except for the Haan, et. al. (1968) study most of the research attempting to predict behavior from level of moral development has been limited in the number of stages used in the study. There are few studies that have included any sizable number of stage 5 or 6 subjects. Thus, there is a paucity of experimental research providing data as to the strength of the relationship between level of moral reasoning and actual conduct.

Statement of the Problem

The purpose of the present study is to investigate the relationship between the moral judgment level of college students and their behavior. Kohlberg (1968) reports that the majority of adults and young adults function at the conventional level of moral development. Both the conventional subject and the "good subject" (Orne, 1962) are concerned with approval, doing what is expected, fulfilling obligations and demonstrating deference to authority. Thus, many college students participating in psychology experiments might be expected to show a high degree of compliance and conformity. This phenomenon has, in fact, been a concern of many researchers in studying artifacts of behavioral science research. However, if a group of subjects were known to be functioning at the principled or preconventional level of morality, quite different expectations regarding their behavior would prevail.

At the principled level individuals strive to define moral values and principles apart from the authority of the groups or persons that hold these principles and apart from their own identification with these groups. In other words, moral values and principles are upheld

for their own sake and are not followed as a function of an external authority or situation. Subjects who were known to be functioning primarily in the principled level would be expected to be much less susceptible to external pressures and situational demand characteristics. It can be predicted that they would uphold their moral ideals and principles regardless of the pressure to do otherwise.

On the other hand, quite different behavior predictions would be associated with subjects functioning at the preconventional level. These individuals are much more hedonistic and oriented to the consequences of action, such as rewards, punishments or exchange of favors. They show deference to an authority or power for its own sake, rather than in terms of respecting the underlying moral order. These subjects might be expected to vacillate as a function of varying external sanctions and pressures.

This study was designed to investigate the relationship between the moral judgment level of college students, their conformity to the experimental demand characteristics and their confession of prior "illegitimate" knowledge of the experimental deceptions. The subjects were pre-selected on the basis of their level of moral judgment. All subjects received a pre-experimental tip-off, were then run through the experimental procedures and finally administered a post-experimental interview that offered them several chances to acknowledge the information received in the tip-off.

More specifically, a confederate provided all subjects with full information regarding the purpose of the experiment and the experimental deceptions employed in the Valins (1966) bogus heart rate study. After being run through the modified Valins procedure subjects were

administered a post-experimental interview that provided them with numerous opportunities to confess their foreknowledge. In one condition the experimenter qualified the post-experimental interview by implicitly suggesting that the subject withhold the information. This was the Pact of Ignorance (PI) demand characteristic set. In the Scientific Integrity (SI) condition the experimenter introduced the post-experimental interview by stressing the importance of scientifically valid and non-contaminated data. These two conditions presented the subjects with differential demand characteristics to confess their prior knowledge of the procedures and purpose of the modified Valins study.

Subjects in the principled level of morality tend to function more autonomously and according to self-chosen moral principles. Thus, it is expected that these subjects will be more truthful than the other two groups regarding the pre-experimental tip-off, regardless of the differential encouragement of the experimenter. Subjects at the conventional level are concerned with being "good" subjects and conforming to the experimenter's expectations. Therefore, when the experimenter implicitly encourages these subjects to conceal their illegitimate information they will follow his implicit suggestion. However, when the experimenter stresses the importance of being truthful conventional subjects will be expected to confess to the same degree that principled subjects do. At the pre-conventional level subjects are expected to be less apt to acknowledge the tip-off regardless of the differential demand characteristics. These subjects are oriented towards rewards and punishments and are apt to be concerned with the consequences of having acquired illicit information about the study. Finally, previous research has shown that when subjects are aware of the hypothesis they

behave in a manner to confirm the researcher's expectations (Levy, 1967; Orne, 1962). Thus, it is expected that overall, the subjects will confess more frequently under the SI condition than the PI condition and that subjects will demonstrate the Valins effect.

The following are the specific hypotheses to be tested.

1. Confession of awareness will be more frequent for subjects in the Scientific Integrity condition than for subjects in the Pact of Ignorance condition.
2. Subjects whose moral judgment is at the post-conventional level will be more truthful about the pre-experimental tip-off regardless of demand characteristic condition.
3. Subjects whose moral judgment is at the conventional level will be most susceptible to the demand characteristic condition, i.e., their confession behavior will be most variable.
4. Subjects whose moral judgment is at the pre-conventional level will be least truthful (lowest confession rates) regardless of demand characteristic condition.
5. Subjects will demonstrate the Valins effect.

CHAPTER III

METHODOLOGY

Introduction

Golding and Lichtenstein (1970), using a modified version of Valins' (1966) false heart-rate feedback procedures, investigated subjects' confession of prior knowledge of the experimental deception. They found very low confession rates (10-15%) for all groups regardless of differential encouragement to be truthful. The present study is modeled after the Golding and Lichtenstein study, utilizing their Informed condition, their modification of Valins' procedures, and the post-experimental interview procedures which vary according to two types of demand characteristics.

Pre-Testing

A total of 256 male subjects enrolled in introductory psychology classes were administered James Rest's (1974) Defining Issues Test (DIT) of Moral Judgment by the female experimenter. The subjects were told a graduate student needed this data for his thesis and that participation was voluntary. The full text of the experimenter's instructions for the pre-testing may be found in Appendix B.

Defining Issues Test

The DIT is based on Kohlberg's cognitive-developmental theory of

moral development. It was designed in an attempt to assess moral judgment in an objective format. The instrument is an "attempt to tap the basic conceptual frameworks by which a subject analyzes a social-moral problem and judges the proper course of action" (Rest, 1974b, p. 4-1). The DIT can be group administered in fifty to sixty minutes and consists of six hypothetical dilemmas. Each dilemma has twelve issues, or considerations that define the issues of the dilemma in various ways.

The subject's first task after reading the story is to rate each of these issues in terms of their importance in making a decision about the dilemma. After rating each item individually, the subject must then choose the four most important items. These issues are keyed to the various theoretical stages of moral development and the rankings yield stage scores. Appendix B includes a copy of the DIT with the instructions to the subjects.

Subjects may be assigned a p-score and a stage score. Because the instrument is based on Kohlberg's theory, his same basic characterizations apply to the stages derived from the DIT. The p-score is the sum of weighted ranks given to stage 5 and 6 items. The other stage scores are computed like the p-score and are interpreted similarly. For example, a stage 3 score is the relative importance a subject attributes to stage 3 reasoning. In addition to stages 2 through 6, there is an A score. This is an antiestablishment orientation. This is a point of view that condemns tradition and the existing social order for its arbitrariness or its corruption by the rich and exploitation of the poor. The A score is possibly a transition phase between conventional morality and principled morality (Rest, 1974b). The M-score indicates a subject's tendency to endorse lofty sounding but meaningless items.

This score serves as a caution about the validity of a subject's data.

The DIT also utilizes a consistency check to indicate whether a subject's questionnaire can be used. The decision rules for determining the validity of a subject's protocol and the scoring procedures can be found in Appendix B.

Validity and Reliability of the DIT

Rest, Cooper, Coder, Masanz, and Anderson (1974a) conducted the first reliability and validity study of the DIT. They administered the DIT to four groups (40 subjects in each group), presumed to represent differing advancements of moral judgment. The groups were junior high school students (age 14), senior highs (age 17, 18), college juniors and seniors, and graduate students. Results indicated that the test-retest reliability had a Pearson correlation of .81. The p-score or percentage of usage of stage 5 or 6 reasoning, clearly differentiated these four groups. Although the DIT is not a direct linear function of age, there should be some relationship because it is a developmental measure. Rest, et. al., (1974a) found the correlation with age to be .62. Positive correlations between the DIT and measures of social-moral concept comprehension (.63), the Differential Ability Test and the Iowa Tests of Basic Skills, as a general aptitude measures (.35), and with Kohlberg's measure (.68) were obtained. On the other hand, as expected, low correlations were obtained between the DIT and IQ (other factors held constant), socioeconomic class and sex.

Rest (1975) investigated directional change on the DIT in terms of decreases in lower stages and increases in higher stages. He also looked at the longitudinal change in the Comprehension of Social-Moral Concepts Test and Law and Order Attitude Test, which had previously

been found to have a high correlation with the DIT (Rest, et al., 1974a). Rest recontacted subjects from a study that was conducted two years earlier (Rest, et al., 1974a). The remaining sample used in this study consisted of 88 former junior high and senior high school subjects. Rest (1975) found that the average p-score did increase significantly, as well as the comprehension test and significant decreases on the Law and Order Test.

McGeorge (1975) gave three groups of subjects differential instructions to either fake good, fake bad, or record their own views (standard). Supporting the general theory of a sequence of cognitive stages of moral judgment, he found that subjects were able to fake bad, recognizing the stages they have passed through as immature. On the other hand, they were not able to fake good.

Rest (1974b) reports numerous studies, mostly unpublished doctoral dissertations showing changes in the DIT as a function of such things as a college course in "Deliberate Psychological Education" (Hurt, 1974, reported by Rest, 1974b); and the DIT changes as a function of a logics course versus an ethics course (Panowitsch, 1974, reported by Rest, 1974b).

Subject Selection

Each subject who completed the DIT was assigned to one of Kohlberg's stages of moral development, in addition to being assigned a p-score. Invalid profiles were eliminated according to Rest's criteria of four inconsistent responses. In addition, only subjects who could be classified into one stage or into two overlapping stages within the same level (e.g. stage 3, substage 4=level II) were included. There were 25

subjects in Level I, 51 subjects in Level II, and 30 subjects in Level III. As the six stages are conceptualized into three main levels, preconventional, conventional and postconventional, an equal number of subjects were randomly chosen from each of the three levels. It was decided to group subjects into levels because previous research (Haan, et al., 1968; Saltzstein & Diamond, 1972) has indicated low relative frequencies of college subjects in stage 1 and in stage 6. Thus, each subject who completed the DIT was assigned a stage score and a p-score. Rest has found the p-score to be the most reliable and favors it over stage typing. However, because of the behavioral predictions associated with the levels of moral development, it was decided to group subjects according to levels rather than by p-scores, which is a continuous variable.

Subjects were contacted by phone by the author and asked to participate in an experiment on physiological reactions to sexually oriented stimuli. Only two subjects contacted refused to participate. No relation between the previous pretesting and participation in the experiment was made. The full text of the experimenter's phone conversation may be found in Appendix C. A total of 54 subjects participated.

The Experimenter

A total of 11 advanced (juniors and seniors) undergraduate psychology majors served as the experimenter and confederate. These undergraduates were all male and were trained by the author to play the roles of both the confederate and experimenter. The confederate was not aware of which post-experimental interview set the subject was to receive and neither confederate nor experimenter was aware of the subjects' level

of moral judgment.

Experimental Procedure

When the subject arrived at the designated place of the experiment, he was met by the experimenter, who explained that there was a preliminary questionnaire on biographical data to be completed. The experimenter led the subject to a room with a sign on the door saying "Waiting Room." There was also a "Do Not Disturb" sign posted on the door. The experimenter attempted to open the door but found it locked, remarking, "I guess this room is being used for another experiment." He then walked down the hall to a door labeled "Learning Experiment-Waiting Room," saying, "I think it will be o.k. to put you in here." Upon entering the room, they found the confederate intently filling out a form. The experimenter asked, "Would it disturb you if my subject filled out this questionnaire in here?" The confederate looked up briefly and said, "No." The subject was instructed to complete the form and was told that the experimenter would return in about 10 minutes to run him in the experiment.

The purpose of this procedure was to reduce the subject's suspiciousness of the confederate's affiliation with the experiment. Golding and Lichtenstein (1970) reported that only 3.3% of their subjects believed that the confederate was working for the experimenter. Thus, they assumed that this procedure effectively led subjects to believe the confederate was a subject participating in a different experiment.

Design

Subjects within each of the three moral development levels were

randomly assigned to one of the two post-experimental interview conditions, Pact of Ignorance (PI) or Scientific Integrity (SI), in a 2 x 3 randomized blocks design.

Prior Information Manipulation

After the subject in the "Learning-Experiment" waiting room had completed the questionnaire, the confederate engaged him in a casual conversation asking, "Which experiment are you in?". Subjects were then told of the deception employed in Valins' procedure. These comments were identical to those used in the Golding and Lichtenstein (1970) study and the full text of the experimenter's and confederate's comments can be found in Appendix C.

Modified Valins Procedure

After being taken to another room by the experimenter, the subject was told that this was a study of physiological reactions to sexually oriented stimuli. His heart rate would be recorded in response to six slides of seminude women. Valins' (1966) instructions to the subjects were employed in the present study and can be found in Appendix C. The experimenter, after giving the instructions, then taped two small electrodes to the subject's forearm and started the tape recorder. Instead of their own heart sounds, the subjects actually heard prerecorded heart beats being played directly from the recorder through the speaker. Valins (1966) had employed heart rate increase, heart rate decrease and extraneous sound conditions. For the purpose of simplification, the present study, as in the Golding and Lichtenstein experiment, only used the heart rate increase condition. The original Golding and

Lichtenstein prerecorded heart beats were employed in the present study.

Twelve color slides were made from magazine photographs of six seminude females. For each subject the order of presentation of the six slides was randomized. The projection of the slides was synchronized with the recording of the heart beats. Each slide appeared three seconds after the beginning of the minute interval and remained on for 15 seconds. For the first two minutes, the subject heard heart beat sounds occurring at a normal or resting rate. After the first slide was projected, he heard the heart beat sound increase. After 15 seconds of observing the slide, the heart rate slowly returned to normal. The subject thus heard the heart rate increase for three of the six pictures. Following the two minute rest, the slides were shown again in the identical order and associated with the same heart sounds.

After the heart rate recording, the subject was told that the experimenter wanted to reduce the number of slides he was using. Thus, he was asking all subjects to rate the slides according to their attractiveness so that he could retain the most appealing photos. As in Valins' study and in the Golding and Lichtenstein study, the subjects in the present experiment saw the six slides again quickly, and were instructed to rate them according to attractiveness using a 100-point scale, ranging from "Not at all" to "Extremely." The subject was then told that the experimenter wanted to discuss his reactions to the experiment with him.

Interview Procedure

Each subject within the three levels of moral judgment were randomly assigned to one of the interview conditions, which differed

according to their social demand characteristics. In the Pact of Ignorance (PI) condition, the experimenter implicitly condoned the subject's withholding knowledge of the experimental deception procedures. The PI interview set was designed to influence the subject to play the role of a "good subject" and conceal the fact that he had pre-experimental information that would invalidate his performance. In the Scientific Integrity (SI) interview set the experimenter explicitly condoned the subject's confession of prior knowledge, emphasizing the importance of getting valid data.

Dependent Variable Measures

Post-Experimental Interview

A 12 question interview modeled after Golding and Lichtenstein's (1970) 13-question interview was developed. It was felt that the questions should be re-ordered from most general (i.e., Have you ever read of any experiments like this one?) to most specific (i.e., Did you hear anything about the experiment from anyone who had been a subject earlier?) With this re-ordering a subject was not forced to commit himself to confessing at the beginning of the interview, but it became increasingly difficult to withhold the information without lying as the questions became more direct. In addition, the wording of various questions was changed so that the subject would not feel caught in a lie. For example, the word "your" heart beats was changed to "the" heart beats.

Rather than have the experimenter record the subjects' responses verbatim and then have independent judges rate each protocol, the experimenter classified each response on the Interview Rating Sheet as the

subject responded to each question. The various possible response categories for each question was determined by a pilot study. If the experimenter was uncertain about the category of a response he recorded it verbatim on the sheet.

The experimenter was allowed to make one probe per question under specified conditions. In general the experimenter probed when the subject indicated that he did not believe the heart beats were his own or that the subject was aware of what the purpose of the experiment was. The situations where probes were permitted were indicated on the interview rating sheet. The probe was limited to a one or two word question such as "Why not?" or "What?".

The scoring system was based on the rationale that a subject who confessed earlier in the interview was more forthright than a subject who withheld information all the way through the interview and then confessed on the last question. It was also felt that subjects who give partial information regarding their awareness, even without a full confession, are behaving differently than subjects who flatly deny any prior knowledge. Thus, a subject who confessed early in the interview or even before the interview began received more points for the confession than a subject who confessed on the last question. In addition, for each question the various response categories and point values assigned to each category took into consideration how much partial information the subject was providing. For example, for the first question "Have you ever read of any experiments like this one?" the response categories and associated point values were: no=0; maybe or vague=1; yes=2; confession=70.

A confession was defined as "mentioning that the confederate told

him that his heart beats were phoney or that the confederate told him that the experimenter was going to try to make him rate some pictures as attractive because the heart rate increases." Therefore, the subject had to implicate the confederate. The interview was discontinued at the point at which the subject confessed. Thus, the confession category was included under each question and assigned a different point value. A confession on question one was worth 70 points whereas a confession on question 12 was worth 30 points. A subject's total confession score was found by adding the points received for each question. If a subject confessed on question 6, he received 52 points for confessing plus the point values for his responses on questions one through 5. Subjects who confessed could receive a score between 30 and 70 and subjects who did not confess could receive between 0 and 29 points. In the pilot study this instrument was also tested on subjects who had not received the tip-off from the confederate. That is, they had no information to confess. The mean confession rate of these subjects was 10, which may be considered the basal score of this instrument.

Valins Effect

Mean values on the attractiveness scale of each subject's ratings of the three reinforced (R) and nonreinforced (basal) (NR) slides were obtained for each. The net "Valins effect," R-NR, was also obtained for each subject.

The post-experimental interview, as well as the experimenter's comments in the PI and SI conditions, the Interview Rating Sheet, instructions for the picture attractiveness rating and the Picture Attractiveness Scale may be found in Appendix D.

Debriefing

After all 54 subjects were run and the data was analyzed, each participant was given a sheet explaining the full study and pertinent results. Subjects were also given the opportunity to ask questions in person. The debriefing is included in Appendix E.

CHAPTER IV

RESULTS

In this section the major hypotheses of the study will be restated and the results pertinent to each will be presented.

Hypothesis 1: Confession of awareness will be more frequent for subjects in the Scientific Integrity (SI) condition than for subjects in the Pact of Ignorance (PI) condition.

The data do not support this hypothesis. The two post-experimental interview conditions were not significantly related to differential confession rates. That is, there were no differences between these two groups. The means and standard deviations of the confession of awareness data for the two interview conditions are presented in Table 1.

Hypothesis 2: Subjects whose moral judgment is at the post-conventional level (Level III) will be more truthful (highest confession rates) about the pre-experimental tip-off regardless of demand characteristic condition.

The data do not support this hypothesis. Subjects whose moral judgment was at the post-conventional level did have the highest mean confession scores as hypothesized, but this was non-significant. In addition, contrary to the prediction, the confession rates of these subjects was most variable between the two interview conditions, although this variability was not significant. The means and standard deviations of the confession data for the two interview conditions and three levels of moral judgment are presented in Table 2. The results of the analyses of variance for confession are presented in Table 3.

Hypothesis 3: Subjects whose moral judgment is at the conventional level (Level II) will be most susceptible to the demand characteristic condition, i.e., their confession behavior will be most variable.

The data, presented in Tables 2 and 3, do not support this hypothesis. These subjects did not confess more under the SI demand characteristic condition than under the PI condition to a significant degree and their confession rates were not the most variable of the three levels of moral judgment.

Hypothesis 4: Subjects whose moral judgment is at the pre-conventional level (Level I) will be least truthful. That is, these subjects will have the lowest confession rates regardless of demand characteristic condition.

The data do not support this hypothesis. Subjects whose moral judgment was at the pre-conventional level did not produce the lowest confession rates. In addition, the confession rates of these subjects was variable between the two interview conditions, although the difference between conditions was not significant. The data is presented in Tables 2 and 3.

The results of the analyses of variance, presented in Table 3, indicate that no group is significantly different from any other group. The F tests for main effects and interaction were all nonsignificant. Thus, hypotheses 1, 2, 3, and 4 were not supported by the data.

Hypothesis 5: Subjects will demonstrate the Valins effect.

This hypothesis was confirmed. The magnitude of this effect for informed subjects was less than the effect demonstrated by previous research (Golding and Lichtenstein, 1970). The reinforced slides were rated as more attractive than non-reinforced slides by subjects in the conventional and post-conventional level of moral judgment. However, subjects at the pre-conventional level did not demonstrate the Valins effect. The means and standard deviations for the Valins effect for the

three levels of moral judgment are presented in Table 4.

TABLE 1

MEANS AND STANDARD DEVIATIONS FOR CONFESSION
RATES FOR SI AND PI INTERVIEW CONDITIONS

Interview Condition	Mean	Standard Deviation
Scientific Integrity	22.56	16.13
Pact of Ignorance	24.93	16.47

TABLE 2

MEANS AND STANDARD DEVIATIONS FOR CONFESSION RATES FOR
LEVEL OF MORAL JUDGMENT AND INTERVIEW CONDITION

Interview Condition	Level	Mean	Standard Deviation
Scientific Integrity	I	22.11	17.82
	II	22.44	13.13
	III	30.22	18.85
Pact of Ignorance	I	24.89	19.62
	II	19.56	16.43
	III	23.22	15.07

TABLE 3
ANALYSIS OF VARIANCE FOR CONFESSION

Source	Sum of Squares	df		F Ratio	
A (INTCOND)	75.8519	1	75.85185	0.2802	NS
B (MORDEV)	296.2593	2	148.4629	0.5471	NS
AB	216.9259	2	108.4629	0.4006	NS
RESIDUAL	12995.3333	48	270.7361		

TABLE 4
MEANS AND STANDARD DEVIATIONS OF VALINS EFFECT

Level of Moral Development	Mean	Standard Deviation
Preconventional	-.87	15.66
Conventional	5.10	17.73
Postconventional	5.32	14.28
Total	3.18	16.36

CHAPTER V

DISCUSSION

There were five specific hypotheses that were tested in this study. These hypotheses can be conceptualized into three general hypotheses. The first hypotheses related to the effect of the post-experimental demand characteristic conditions on confession rate. The second general hypothesis was manifested by three specific hypotheses and related to the predictions regarding confession rates associated with the three levels of moral judgment. The final hypothesis was that the Valins effect would be replicated.

The first general hypothesis of this study was that confession of awareness would be higher under the Scientific Integrity (SI) demand characteristic condition than under the Pact of Ignorance (PI) condition. This hypothesis was not supported by the data.

Golding and Lichtenstein (1970), using the same demand characteristic conditions, found significantly more admission of prior information (i.e., acknowledgment of a prior conversation with the confederate) under the SI condition than under the PI condition for their informed subjects. However, they did not find differences in confessed awareness of the experimental manipulations under either condition. In the present study one confession scale was used, where confession was defined as both admitting having a conversation with the confederate as well as some mention of knowledge of the experimental manipulations.

It was felt that a true confession was more than just admitting having a prior conversation alone or simply admitting awareness of the experimental manipulations because a subject could score high on either one of these scales without really having to be totally truthful. In fact, many subjects in the present study admitted that they did have a conversation with the confederate, but that "he didn't say much" or "I wasn't paying attention." However, these same subjects denied knowing anything about the experimental manipulations or purpose of the study even though the confederate had given them all this information. It is possible that significant differences between the SI and PI conditions for an admission of a prior conversation might have been obtained if the same two scales as used by Golding and Lichtenstein had been employed. However, their distinction between the two scales seems arbitrary and artificial.

One difficulty with the SI and PI conditions that might have contributed to the lack of significant difference was that they were delivered verbally and involved rather subtle clues that were designed to create a certain set in the subjects' minds. There are a multitude of possible extraneous variables that could have been operating to confound the clear differences between the two conditions. For example, one methodological problem with the study was that 11 male undergraduates served as both confederates and experimenters. It is possible that idiosyncratic differences in style clouded the distinction between the two conditions. That is, the implicit message associated with each condition may not have gotten through to all of the subjects.

Other factors, such as the experimenters' youthful appearance may have led subjects to question the authority of the experimenters. Orne

(1962) notes that a subject's response to various subtle demand characteristics is not simply conscious compliance. Numerous situational variables in the experiment "help define the role of 'good experimental subject' and the responses of the subject are a function of the role that is created" (Orne, 1962, p. 779). Thus, the experimenter-subject role might not have been as clearly defined as necessary for subjects to respond differentially to the SI and PI conditions.

It is possible that the effectiveness of the post-experimental interview demand characteristic conditions were contingent upon subjects assuming either a "good subject" (Orne, 1962) or "faithful subject" (Fillenbaum, 1966) role. Orne (1962) has described the "good subject" as one who behaves in such a manner as to confirm the experimental hypothesis. This subject is very compliant, has high regard for the aims of science and is greatly concerned that his performance be valid, meaningful and useful to science or the experimenter. The "faithful subject," who believes that he must be docile and follow the experimental instructions exactly, is similar in many ways to the "good subject." The paradox in the present experimental situation is that the good or faithful subject is one who would be sensitive to and compliant with the differential implicit demands of the two conditions, and he would confess more under the SI condition than PI condition. However, a confession would render the subject's performance invalid, which is exactly what the "good subject" role is geared to prevent. In general, subjects seemed more willing to admit having a vague prior conversation than to admit knowledge of the experimental manipulations. This is what Golding and Lichtenstein had found. It is possible that admitting knowledge of the experimental manipulations is viewed by the subject as

a greater invalidation of his performance. Thus, subjects felt they were maintaining their good subject role by withholding information regardless of encouragement to do otherwise.

It is also possible that the subjects adopted one of the other subject roles, such as the "negativistic" (Weber & Cook, 1972) or "apprehensive" subject role (Reicken, 1962; Rosenberg, 1965). The negativistic subject behaves in a way that disconfirms the experimenter's hypothesis, whereas, the apprehensive subject behaves in a manner to avoid receiving a negative evaluation from the experimenter. One can only speculate as to what the subjects' frame of mind was by the time of the post-experimental interview. The subject was initially contacted by telephone by a female experimenter and asked to participate in an experiment where he would view slides of semi-nude females. The subjects were uniformly enthusiastic and agreeable to participate with only one subject refusing and another subject's wife forbidding participation. Thus, the subjects arrived at the experiment expecting to be in a study of physiological reactions to sexually oriented stimuli. They were placed in a room with a previous "subject" and immediately told that the experiment is a fake and they had been brought here under false pretenses. Without exception, every subject allowed himself to be run through the study and "played along" as the experimenter continued to "lie" to him. It can be expected that this state of affairs might have angered subjects, influenced their perception of the validity of scientific value of the whole study, and reduced their trust and respect for the experimenter. In essence, it is rather hypocritical for the experimenter to be making a plea for honesty when he, himself, has just lied to the subject. It is quite plausible for these "angered" subjects

to adopt a negativistic subject role and simply tune out the implicit demands of either the SI or PI condition, or just become uninvolved in the study and avoid any type of confrontation (i.e., confession).

On the other hand, as mentioned, all subjects allowed themselves to be run through the study. Thus, the "apprehensive subject" may have felt caught in a bind, not having anticipated the post-experimental interview. These subjects are motivated to present themselves favorably to the experimenter and to confess would mean that they had faked their performance during the entire experiment.

In summary, there are various possible explanations as to why no differences were found in confession rates for subjects in the PI and SI post-experimental interview conditions. The methodological problem of attempting to influence a subject's behavior by creating a certain set through verbal instructions seems to be the most serious difficulty. Another complicating factor was the large number of experimenters used in the study although there were no systematic experimenter effects in confession rates. Finally, one can only speculate as to the variety of subject roles that were assumed and how subjects in the various roles would respond to the differential demand characteristics to confess.

The second general hypothesis of the study was the level of moral judgment would relate to subjects' truthfulness regarding their foreknowledge of the experimental deception procedures. This general hypothesis was manifested in three specific hypotheses concerning the three levels of moral judgment and their associated characteristics. None of these hypotheses were supported.

The most serious methodological problem with the study relates to the manner in which subjects were grouped into levels of moral judgment.

Despite the fact that Rest favors using the p-score, or relative importance a subject gives to principled (stage 5 and 6) moral considerations, it was decided to use stage-typing because of the behavioral predictions associated with the three levels of moral development. Thus, subjects were assigned to groups on the basis of their stage type rather than p-score. However, regression analysis indicated that the p-score accounted for more variability in confession score ($r^2 = .07$, $p < .05$) than did level of moral development ($r^2 = .007$, ns).

One would assume a very high positive correlation between p-score and stage of moral judgment. This is generally, but not always the situation. A subject may be typed stage two, but can still utilize some principled thinking. In the present study the correlations between p-score and level of moral development were only moderate (Spearman $r = .62$; Kendall Tau = .48). These moderate correlations indicate that there was variability within the three levels of moral judgment, with some subjects within a group having much higher p-scores than others. In addition, the three groups, although comprising different stages, overlapped in their p-scores. Thus, rather than have three distinct, homogeneous groups representing differing levels of moral judgment, there was, in fact, both too much variability within the groups as well as overlap between the groups. In retrospect, the three groups should have been selected on the basis of both stage-type and p-score to get the most consistent indication of moral judgment level.

Since it has been shown in this study that level of moral judgment is not a strong predictor of confession of awareness, aside from the methodological problem of group selection, one can now only speculate as to what possible alternative factors, such as reasons, motives and

emotions, were operating and wonder about their relationship to confession of awareness. There are various factors that complicate the relationship between moral judgment and actual conduct. In general, the moral stages have been operationally defined as a score that indicates the manner in which a subject constructs a solution to a moral dilemma and the considerations he has used in reaching his solution. The judgment score is an assessment of how a subject thinks about moral problems, sophistication in thinking and ways of problem solving. "Valid moral judgment assessment does depend on the subject using problem solving strategies that are typical of him, however stage scoring doesn't depend on a subject's accurate prediction of his actual behavior" (Rest, 1974, p. 67).

The finding that level of moral judgment was not significantly related to confession of awareness seems to be due, in part, to the differences between these two variables. That is, on one hand, the subject fills out a questionnaire and thinks about how someone else should resolve a hypothetical moral situation. He is then posed with an actual dilemma where he has to make a behavioral choice, i.e., should he be truthful or not? A basic problem in utilizing paper and pencil measures of hypothetical moral dilemmas in predicting behavior in a conflict situation is that a hypothetical moral situation lacks the same immediacy as an actual moral conflict. The individual's own situational reasons, motives, wants and emotions, which clash with the principle of, for example, truth telling, contributes to the experiencing of the moral dilemma.

Individuals also have other values besides their moral values. When an actual moral conflict occurs, other concerns may take precedence

over the directives that come from moral judgment or understanding. In addition, moral value systems may not play the same role in each person's life. Just because an individual has sophisticated moral understanding, this does not necessarily mean that moral judgment plays a central role in his personality organization. Rather, one individual may be more governed by situational pressures and habitual patterns than another. For example, in this study the observation was made that regardless of whether a subject eventually confessed or not, there was a wide range of subject behavior during the interview. Some subjects were noticeably stressed, some had poor eye contact or looked obviously guilty. Other subjects appeared very calm and were quite convincing as they refused to admit their prior knowledge. However, these variables were not studied systematically, thus their relationship to level of moral judgment is not known.

Previous research on the admission of prior information in a deception paradigm has shown low confession rates (Denner, 1967; Freedman, Wallington & Bless, 1967, Golding & Lichtenstein, 1970; Levy, 1967; Lichtenstein, 1968). Regardless of the length of interview and manipulation of interview demand characteristics, 10% to 15% of the subjects admit their foreknowledge. Thus, subjects tend not to divulge their knowledge regardless of type or extensiveness of the post-experimental interview.

The confession rates in this study were somewhat higher than those found by other researchers. In the present study, 18 subjects or 33%, told the experimenter about their conversation with the confederate (i.e., confessed). Of the subjects that did confess, 8 or 44% of them were from the highest level of moral development. Thus, it appears

that the higher confession rates found in this study could be due, in part, to the subjects known to be higher in level of moral judgment, even though this variable did not significantly predict confession.

In summary, the lack of a significant relationship between level of moral judgment, susceptibility to demand characteristics and confession rates is due to several factors. The variability within the three levels and the overlap between these groups most likely contaminated the predictions associated with each level of moral judgment. In addition, even with discrete groups there are a variety of factors that complicate the relationship between moral judgment and actual conduct.

The final hypothesis was that subjects would demonstrate the Valins' effect. This hypothesis was confirmed, although the magnitude of this effect was less than demonstrated by previous research (Golding & Lichtenstein, 1970; Valins, 1966). Valins (1966) found that the mean ratings of the reinforced pictures was 72.42 and the mean of the non-reinforced pictures was 54.11 for his heart rate increase condition, a difference of 18.31. Valins also had a heart rate decrease condition where he hypothesized similar higher attractiveness rating effects for the reinforced pictures. In the heart rate decrease condition the means were 69.26 for reinforced pictures and 62.57 for non-reinforced pictures, a difference of 6.69. According to Valins, "in order to be effective the manipulation of differential heart rate feedback must be accurately perceived by the subjects and adequately accepted as a reflection of their internal reactions" (Valins, 1966, p. 404). All of Valins' subjects believed that the heart beats were their own. In the present study, employing only heart rate increase condition, the mean of the reinforced pictures was 71.47 and the mean of the nonreinforced

pictures was 66.90, a difference of 4.57. The overall Valins' effect in the present study was 3.18, which was somewhat lower than the Valins' effect of 11.77 obtained by Golding and Lichtenstein (1970) for their informed subjects.

It must be remembered that in the present study the subjects knew beforehand that the heart beats were not their own. Thus, one would expect a somewhat lower Valins' effect. The fact that subjects in this study demonstrated the Valins' effect at all is congruent with previous research showing that informed subjects generally produce the expected experimental effect (Levy, 1967). However, subjects in the pre-conventional level of moral judgment did not produce the Valins' effect, although the difference between the three groups was not significant.

In conclusion, the main purpose of this study was to test the relationship between level of moral judgment, susceptibility to demand characteristics and actual conduct. It was found that regardless of level of moral judgment or differential encouragement to be truthful approximately 75% of the subjects did not confess their foreknowledge of the experimental deceptions and admit their prior conversation with the confederate. However, it is felt that the relationship between level of moral judgment and actual conduct was not adequately tested in this study because of the previously discussed methodological problem in the selected criteria for grouping subjects.

This study does have implications for an important aspect of almost all psychological research, our debriefing procedures. The extended post-experimental interview, with an objective means to rate awareness provided more non-naive subjects with the opportunity to disqualify themselves from a study, as well as provide the researcher with a more

uniform criteria for eliminating invalid data. It was found that approximately 25% of the subjects in the present study confessed, as compared with 10% to 15% found in previous research (e.g., Golding & Lichtenstein, 1970). Despite the improved rate of admission, it still seems unacceptable that only 25% of the fully informed subjects are honest about the invalidity of their data. More research in this area seems crucial. For example, one possibility would be to allow subjects to fill out an awareness questionnaire instead of responding to the experimenter's questioning directly. Perhaps in eliminating the face-to-face encounter, subjects might feel more comfortable in admitting their awareness. Thus, the adequacy of our current debriefing procedures as a means of assessing the validity or degree of contamination of our research remains a problem for psychologists that needs further investigation.

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APPENDIX A

KOHLBERG'S THEORY OF MORAL DEVELOPMENT

The Six Moral Stages

Content of Stage			
Level and Stage	What Is Right	Reasons for Doing Right	Social Perspective of Stage
LEVEL I—PRECONVENTIONAL Stage 1—Heteronomous Morality	To avoid breaking rules backed by punishment, obedience for its own sake, and avoiding physical damage to persons and property.	Avoidance of punishment, and the superior power of authorities.	<i>Egocentric point of view.</i> Doesn't consider the interests of others or recognize that they differ from the actor's; doesn't relate two points of view. Actions are considered physically rather than in terms of psychological interests of others. Confusion of authority's perspective with one's own.
Stage 2—Individualism, Instrumental Purpose, and Exchange	Following rules only when it is to someone's immediate interest; acting to meet one's own interests and needs and letting others do the same. Right is also what's fair, what's an equal exchange, a deal, an agreement.	To serve one's own needs or interests in a world where you have to recognize that other people have their interests, too.	<i>Concrete individualistic perspective.</i> Aware that everybody has his own interest to pursue and these conflict, so that right is relative (in the concrete individualistic sense).
LEVEL II—CONVENTIONAL Stage 3—Mutual Interpersonal Expectations, Relationships, and Interpersonal Conformity	Living up to what is expected by people close to you or what people generally expect of people in your role as son, brother, friend, etc. "Being good" is important and means having good motives, showing concern about others. It also means keeping mutual relationships, such as trust, loyalty, respect and gratitude.	The need to be a good person in your own eyes and those of others. Your caring for others. Belief in the Golden Rule. Desire to maintain rules and authority which support stereotypical good behavior.	<i>Perspective of the individual in relationships with other individuals.</i> Aware of shared feelings, agreements, and expectations which take primacy over individual interests. Relates points of view through the concrete Golden Rule, putting yourself in the other guy's shoes. Does not yet consider generalized system perspective.
Stage 4—Social System and Conscience	Fulfilling the actual duties to which you have agreed. Laws are to be upheld except in extreme cases where they conflict with other fixed social duties. Right is also contributing to society, the group, or institution.	To keep the institution going as a whole, to avoid the breakdown in the system "if everyone did it," or the imperative of conscience to meet one's defined obligations (Easily confused with Stage 3 belief in rules and authority; see text.)	<i>Differentiates societal point of view from interpersonal agreement or motives.</i> Takes the point of view of the system that defines roles and rules. Considers individual relations in terms of place in the system.
LEVEL III—POST-CONVENTIONAL, or PRINCIPLED Stage 5—Social Contract or Utility and Individual Rights	Being aware that people hold a variety of values and opinions, that most values and rules are relative to your group. These relative rules should usually be upheld, however, in the interest of impartiality and because they are the social contract. Some nonrelative values and rights like <i>life</i> and <i>liberty</i> , however, must be upheld in any society and regardless of majority opinion.	A sense of obligation to law because of one's social contract to make and abide by laws for the welfare of all and for the protection of all people's rights. A feeling of contractual commitment, freely entered upon, to family, friendship, trust, and work obligations. Concern that laws and duties be based on rational calculation of overall utility, "the greatest good for the greatest number."	<i>Prior-to-society perspective.</i> Perspective of a rational individual aware of values and rights prior to social attachments and contracts. Integrates perspectives by formal mechanisms of agreement, contract, objective impartiality, and due process. Considers moral and legal points of view; recognizes that they sometimes conflict and finds it difficult to integrate them.
Stage 6—Universal Ethical Principles	Following self-chosen ethical principles. Particular laws or social agreements are usually valid because they rest on such principles. When laws violate these principles, one acts in accordance with the principle. Principles are universal principles of justice: the equality of human rights and respect for the dignity of human beings as individual persons.	The belief as a rational person in the validity of universal moral principles, and a sense of personal commitment to them.	<i>Perspective of a moral point of view</i> from which social arrangements derive. Perspective is that of any rational individual recognizing the nature of morality or the fact that persons are ends in themselves and must be treated as such.

APPENDIX B

DEFINING ISSUES TEST

Instructions to Subjects

This instrument is a questionnaire aimed at understanding how people think about social problems. It is a test of moral reasoning or moral judgment. We are interested in your opinions about controversial social issues. Different people have different opinions so there are no wrong or right answers.

A graduate student is using this scale in her research and would greatly appreciate your cooperation. Of course, participation is voluntary. We will not be able to give you immediate feedback on the results of this questionnaire nor your individual score. However, near the end of the semester, once the data is analyzed you will receive a summary of the experiment.

On the first page of the questionnaire please indicate your sex: male or female; your name and phone number. If you do not have a phone yet, just note the street on which you live. It is very important that we have this information should we need to recontact you for clarification. Your responses to this questionnaire will remain confidential and all protocols will be destroyed once the data is collected.

The questionnaire consists of several stories or dilemmas. Your first task, once you have read the story, will be to read the 12 statements and rate each one according to how important a consideration you feel it is in resolving the problem. If you don't understand a statement or if it sounds like gibberish or nonsense to you, mark it "no importance."

Your second task for each story will be to rank your first most important statement, then second, third and fourth.

Please begin by reading the example story about Frank Jones and his car on pages one and two, then proceed with the rest of the questionnaire. If you have any questions, just raise your hand. You should have 14 pages. Once again, make sure that your questionnaire is complete and that you have indicated your name, sex and phone number on the front.

2. SCORING THE D.I.T.

Stage Scores, Including the "P" Score

If you are hand scoring your questionnaires, follow these steps:

1. Prepare data sheets for each S as follows:

<u>Story</u>	Stage 2	3	4	5A	5B	6	A	M	P
Heinz									
Students									
Prisoner									
Doctor									
Webster									
Newspaper									
Totals									

2. Only look at first four rankings at bottom of test page.

3. For the "question" marked as most important (Rank #1) consult the chart below to find out what stage the item exemplifies. For instance, if a subject's first rank on the Heinz story was question 6, this would be a stage 4 choice.

<u>Story</u>	Item 1	2	3	4	5	6	7	8	9	10	11	12
Heinz	4	3	2	M	3	4	M	6	A	5A	3	5A
Stu.	3	4	2	5A	5A	3	6	4	3	A	5B	4
Pris.	3	4	A	4	6	M	3	4	3	4	5A	5A
Doc.	3	4	A	2	5A	M	3	6	4	5B	4	5A
Web.	4	4	3	2	6	A	5A	5A	5B	3	4	3
Newsp.	4	4	2	4	M	5A	3	3	5B	5A	4	3

2. Take each stage score for a subject and convert it to a standardized score (using the original sample--Rest et al., 1974--of juniors, seniors, college and grad Ss as the reference group), as follows--

- a. Take the stage 2 score (not percentage), subtract from it 4.131, then divide by 3.665;
- b. Take the stage 3 score, subtract from it 9.619, then divide by 5.676;
- c. Take the stage 4 score, subtract from it 15.010, then divide by 6.903;
- d. Take the stage 5A score, subtract from it 15.344, then divide by 7.100;
- e. Take the stage 5B score, subtract from it 5.719, then divide by 3.463;
- f. Take the stage 6 score, subtract from it 4.487, then divide by 3.493;
- g. Take the A score, subtract from it 2.469, then divide by 2.431;
- h. Take the II score, subtract from it 2.712, then divide by 2.417.

Note that the standardized stage scores may be positive or negative. A score of +1.000 indicates that the subject has used that stage one standard deviation above the average--in other words, the subject has attributed an exceptional degree of importance to issues keyed at that stage.

3. Locate those stage scores which exceed +1.000. If there is only one such score, designate the subject as that type. If there are two high scores, designate the subject by the highest score with a subdominant type of the other scores above +1.000. If no scores are greater than +1.000, then the subject has not endorsed any stage orientation exceptionally and the subject cannot be "typed." Expect about 10 to 20% of your sample to be non-types.

4. After finding the item's stage, weight the choices by giving a weight of 4 to the first choice, 3 to the second choice, 2 to the third choice, and 1 to the fourth choice.

5. For each 1st, 2nd, 3rd, and 4th choice in the 6 stories, enter the appropriate weight in the stage column on the subject's DATA SHEET. For instance, in the example above where the first choice was a stage 4 item, enter a weight of 4 on the data sheet under stage 4 across the Heinz story.

6. The completed table on the DATA SHEET will have 4 entries for every story and 24 entries altogether. (There may be more than one entry in a box, e.g., a first and second choice on the Heinz story of a stage 4 item.)

7. On the subject's DATA SHEET, total each stage column (e.g., for stage 2 column, add numbers by Heinz story, Student story, Prisoner, etc.).

8. To get the "Principled" morality score ("P"), add the subtotals together from stages 5A, 5B, and 6. This is interpreted as "the relative importance attributed to principled moral considerations" in making a moral decision.

9. You may want to express the totals in terms of percentages, in which case divide the raw score by 60. Note that the P score (as a percentage) can range from 0 to 95 instead of 100 due to the fact that on 3 stories there is no fourth possible Principled item to choose.

Consistency Check

Check the reliability of your data by observing the consistency between a subject's ratings and rankings. If a subject ranks an item 1st, then his ratings for that item should have no other items higher

(although other items may tie in rating). Similarly, if a subject ranks an item 2nd, then his rating for that item should have no other items higher except the item ranked 1st. If there are items not chosen as 1st or 2nd choices which are rated higher than the ratings of the items chosen as 1st or 2nd, then there is an inconsistency between the subject's rankings and ratings due to careless responding, random checking, misunderstanding of instructions, changing one's mind about an item, etc. In short, inconsistency raises questions about the reliability of the subject's entire protocol, although a little inconsistency might be tolerated. As a rule of thumb, look at the inconsistencies in a subject's first and second ranks and discard a subject's whole protocol if there are inconsistencies on more than 2 stories, or if the number of inconsistencies on any story exceeds 8 instances. (See Panowitsch, 1974, for a study of the Consistency Check.). Also, if a subject shows little discrimination in his ratings (for instance, rates every item as "some importance") there is the suspicion that he may not be taking the test seriously. As a rule of thumb, discard a protocol if two stories have more than 9 items rated the same.

Stage Typing

In research to-date on the D.I.T., the P score has been the most useful way to index development. In other words, if you want to correlate moral judgment with another variable, use the P score. If you want to measure change, use the P score. It is possible, however, to assign subjects to a stage based on exceptional usage of that stage. (See Section 4 for further discussion.) The procedure is as follows:

1. Take the Stage totals from the DATA SHEET totals (the bottom line totals).

OPINIONS ABOUT SOCIAL PROBLEMS

This questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right and wrong. There are no "right" answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. The papers will be fed to a computer to find the average for the whole group, and no one will see your individual answers.

Please give us the following information:

Name _____ female

Age _____ Class and period _____ male

School _____

* * * * *

In this questionnaire you will be asked to give your opinions about several stories. Here is a story as an example.

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there were a lot of questions to consider. Below there is a list of some of these questions.

If you were Frank Jones, how important would each of these questions be in deciding what car to buy?

Instructions for Part A: (Sample Question)

On the left hand side check one of the spaces by each statement of a consideration. (For instance, if you think that statement #1 is not important in making a decision about buying a car, check the space on the right.)

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
				✓	1. Whether the car dealer was in the same block as where Frank lives. (Note that in this sample, the person taking the questionnaire did not think this was important in making a decision.)
✓					2. Would a <u>used</u> car be more economical in the long run than a new car. (Note that a check was put in the far left space to indicate the opinion that this is an important issue in making a decision about buying a car.)
		✓			3. Whether the color was green, Frank's favorite color.
				✓	4. Whether the cubic inch displacement was at least 200. (Note that if you are unsure about what "cubic inch displacement" means, then mark it "no importance.")
✓					5. Would a large, roomy car be better than a compact car.
				✓	6. Whether the front connibilities were differential. (Note that if a statement sounds like gibberish or nonsense to you, mark it "no importance.")

Instructions for Part B: (Sample Question)

From the list of questions above, select the most important one of the whole group. Put the number of the most important question on the top line below. Do likewise for your 2nd, 3rd and 4th most important choices. (Note that the top choices in this case will come from the statements that were checked on the far left-hand side--statements #2 and #5 were thought to be very important. In deciding what is the most important, a person would re-read #2 and #5, and then pick one of them as the most important, then put the other one as "second most important," and so on.)

MOST SECOND MOST IMPORTANT THIRD MOST IMPORTANT FOURTH MOST IMPORTANT

HEINZ AND THE DRUG

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200 for the radium and charged \$2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife.

Should Heinz steal the drug? (Check one)

_____ Should steal it _____ Can't decide _____ Should not steal it

IMPORTANCE:

Great	Much	Some	Little	No	
					1. Whether a community's laws are going to be upheld.
					2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal?
					3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
					4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
					5. Whether Heinz is stealing for himself or doing this solely to help someone else.
					6. Whether the druggist's rights to his invention have to be respected.
					7. Whether the essence of living is more encompassing than the termination of dying, socially and individually.
					8. What values are going to be the basis for governing how people act towards each other.
					9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
					10. Whether the law in this case is getting in the way of the most basic claim of any member of society.
					11. Whether the druggist deserves to be robbed for being so greedy and cruel.
					12. Would stealing in such a case bring about more total good for the whole society or not.

From the list of questions above, select the four most important:

- Most important _____
- Second Most Important _____
- Third Most Important _____
- Fourth Most Important _____

-3-

STUDENT TAKE-OVER

At Harvard University a group of students, called the Students for a Democratic Society (SDS), believe that the University should not have an army ROTC program. SDS students are against the war in Viet Nam, and the army training program helps send men to fight in Viet Nam. The SDS students demanded that Harvard end the army ROTC training program as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degrees.

Agreeing with the SDS students, the Harvard professors voted to end the ROTC program as a university course. But the President of the University stated that he wanted to keep the army program on campus as a course. The SDS students felt that the President was not going to pay attention to the faculty vote or to their demands.

So, one day last April, two hundred SDS students walked into the university's administration building, and told everyone else to get out. They said they were doing this to force Harvard to get rid of the army training program as a course.

Should the students have taken over the administration building? (Check one)

Yes, they should take it over Can't decide No, they shouldn't take it over

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Are the students doing this to really help other people or are they doing it just for kicks?
					2. Do the students have any right to take over property that doesn't belong to them?
					3. Do the students realize that they might be arrested and fined, and even expelled from school?
					4. Would taking over the building in the long run benefit more people to a greater extent?
					5. Whether the president stayed within the limits of his authority in ignoring the faculty vote.
					6. Will the takeover anger the public and give all students a bad name?
					7. Is taking over a building consistent with principles of justice?
					8. Would allowing one student take-over encourage many other student take-overs?
					9. Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative?
					10. Whether running the university ought to be in the hands of a few administrators or in the hands of all the people.
					11. Are the students following principles which they believe are above the law?
					12. Whether or not university decisions ought to be respected by students.

From the list of questions above, select the four most important:

Most Important _____

Second Most Important _____

Third Most Important _____

Fourth Most Important _____

ESCAPED PRISONER

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For 8 years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized him as the man who had escaped from prison 8 years before, and whom the police had been looking for.

Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison? (Check one)

_____ Should report him _____ Can't decide _____ Should not report him

IMPORTANCE:

Great Much Some Little No

					1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?
					2. Everytime someone escapes punishment for a crime, doesn't that just encourage more crime?
					3. Wouldn't we be better off without prisons and the oppression of our legal systems?
					4. Has Mr. Thompson really paid his debt to society?
					5. Would society be failing what Mr. Thompson should fairly expect?
					6. What benefits would prisons be apart from society, especially for a charitable man?
					7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison?
					8. Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off?
					9. Was Mrs. Jones a good friend of Mr. Thompson?
					10. Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?
					11. How would the will of the people and the public good best be served?
					12. Would going to prison do any good for Mr. Thompson or protect anybody?

From the list of questions above, select the four most important:

- Most Important _____
- Second Most Important _____
- Third Most Important _____
- Fourth Most Important _____

THE DOCTOR'S DILEMMA

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.

What should the doctor do? (Check one)

_____ He should give the lady an overdose that will make her die _____ Can't decide _____ Should not give the overdose

IMPORANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Whether the woman's family is in favor of giving her the overdose or not.
					2. Is the doctor obligated by the same laws as everybody else if giving her an overdose would be the same as killing her.
					3. Whether people would be much better off without society regimenting their lives and even their deaths.
					4. Whether the doctor could make it appear like an accident.
					5. Does the state have the right to force continued existence on those who don't want to live.
					6. What is the value of death prior to society's perspective on personal values.
					7. Whether the doctor has sympathy for the woman's suffering or cares more about what society might think.
					8. Is helping to end another's life ever a responsible act of cooperation.
					9. Whether only God should decide when a person's life should end.
					10. What values the doctor has set for himself in his own personal code of behavior.
					11. Can society afford to let everybody end their lives when they want to.
					12. Can society allow suicides or mercy killing and still protect the lives of individuals who want to live.

From the list of questions above, select the four most important:

- Most Important _____
- Second Most Important _____
- Third Most Important _____
- Fourth Most Important _____

WEBSTER

Mr. Webster was the owner and manager of a gas station. He wanted to hire another mechanic to help him, but good mechanics were hard to find. The only person he found who seemed to be a good mechanic was Mr. Lee, but he was Chinese. While Mr. Webster himself didn't have anything against Orientals, he was afraid to hire Mr. Lee because many of his customers didn't like Orientals. His customers might take their business elsewhere if Mr. Lee was working in the gas station.

When Mr. Lee asked Mr. Webster if he could have the job, Mr. Webster said that he had already hired somebody else. But Mr. Webster really had not hired anybody, because he could not find anybody who was a good mechanic besides Mr. Lee.

What should Mr. Webster have done? (Check one)

_____ Should have hired Mr. Lee _____ Can't decide _____ Should not have hired him

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Does the owner of a business have the right to make his own business decisions or not?
					2. Whether there is a law that forbids racial discrimination in hiring for jobs.
					3. Whether Mr. Webster is prejudiced against orientals himself or whether he means nothing personal in refusing the job.
					4. Whether hiring a good mechanic or paying attention to his customers' wishes would be best for his business.
					5. What individual differences ought to be relevant in deciding how society's roles are filled?
					6. Whether the greedy and competitive capitalistic system ought to be completely abandoned.
					7. Do a majority of people in Mr. Webster's society feel like his customers or are a majority against prejudice?
					8. Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society.
					9. Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?
					10. Could Mr. Webster be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?
					11. Whether the Christian commandment to love your fellow man applies in this case.
					12. If someone's in need, shouldn't he be helped regardless of what you get back from him?

From the list of questions above, select the four most important:

- Most Important _____
- Second Most Important _____
- Third Most Important _____
- Fourth Most Important _____

APPENDIX C

EXPERIMENTER AND CONFEDERATE COMMENTS

Telephone Contact

I got your name from your introductory psychology class. I'm conducting a psychological experiment and am calling to ask if you'd be interested in being a subject. As you know, you will receive extra credit for participation and this study will involve about 30 minutes of your time.

Let me tell you briefly what the study is about. We're interested in physiological reactions to sexual stimuli. Before you agree to participate you should know that the sexual stimuli we are using consist of slides of semi-nude females. Essentially, we will be monitoring your heart rate with small electrodes taped to your forearm as you view slides of semi-nude females. Do you have any questions?

Experimenter's Instructions for Questionnaire

Hello. My name is _____. Before I run you in the experiment, there is a brief questionnaire I need you to fill out. The questionnaire is self-explanatory and I'd like you to try to answer all of the questions. Of course, you are free to leave any question blank. The information will remain confidential and your name will be blacked out once your data is collected.

(Experimenter leads subject to waiting room with "Do Not Disturb" sign.)

I guess this room is being used for another experiment.

(Experimenter leads subject to another room.)

I think it will be o.k. to put you in here. Would it disturb you if my subject filled out this questionnaire in here? I'll be back in about ten minutes to run you. Please wait here for me.

QUESTIONNAIRE

1. Name: _____
2. Year in School:
 - ___ Freshman
 - ___ Sophomore
 - ___ Junior
 - ___ Senior
 - ___ Graduate
3. Age (to nearest year): ____
4. Marital Status:
 - ___ Single
 - ___ Married
 - ___ Divorced
5. Number of Children: ____
6. Number of Siblings: ____
7. Your position in family:
 - ___ Oldest
 - ___ Youngest
 - ___ Other (specify): _____
8. Size of town where raised:
 - ___ Rural area
 - ___ Less than 5,000
 - ___ 5,000-10,000
 - ___ 10,000-50,000
 - ___ More than 50,000
9. Education of Mother:
 - ___ Graduate Degree
 - ___ College Graduate
 - ___ More than one year of college
 - ___ Highschool graduate
 - ___ Did not complete highschool
10. Education of Father
 - ___ Graduate Degree
 - ___ College Graduate
 - ___ More than one year of college
 - ___ Highschool graduate
 - ___ Did not complete highschool
11. Mother's Occupation: _____
12. Father's Occupation: _____

13. Dominant Religion of Family During Childhood:
- Nonreligious belief, atheist, or agnostic
 - Unitarian, Quaker
 - Protestant (Fundamentalist, Baptist, Pentecostal, etc.)
 - Protestant (Methodist, Presbyterian, Episcopalian, etc.)
 - Catholic
 - Jewish
 - Eastern Religions
14. Church Attendance as a Child
- Never
 - Occasionally (special holidays, etc.)
 - Bimonthly
 - Weekly
 - More than once a week
15. Current Religious Beliefs:
- Nonreligious belief, atheist, or agnostic
 - Unitarian, Quaker
 - Protestant (Fundamentalist, Baptist, Pentecostal, etc.)
 - Protestant (Methodist, Presbyterian, Episcopalian, etc.)
 - Catholic
 - Jewish
 - Eastern Religions
16. Current Church Attendance:
- Never
 - Occasionally (special holidays, etc.)
 - Bimonthly
 - Weekly
 - More than once a week

Experimenter's Instructions for Valins Procedure

I will be taping these electrodes to your forearms. They pick up each major heart sound which is amplified here and initiates a signal on this signal tracer. The signal is then recorded on this tape recorder. By appropriately using a stop watch and footage indicator, I can later determine exactly where each stimulus occurred and evaluate your heart rate reaction to it. Unfortunately, this recording method makes it necessary to have audible sounds. There would be a serious problem if we were employing a task which required concentration. Since our procedure does not require concentration, it won't be too much of a problem and it is not likely to affect the results. All that you will be required to do is sit here and look at the slides. Just try to ignore the heart sounds. I will tape these electrodes to your arms and after recording your resting heart rate for awhile, I will present 12 slides to you at regular intervals. Then I will record your resting heart rate again for several minutes and I will repeat the same slides again in the same order.

APPENDIX D

DEPENDENT VARIABLE MEASURES

Experimenter's Comments for Picture Rating

I'm asking all subjects to rate the slides as to how attractive or appealing they were so that I can select a smaller number of the more attractive slides for future research. Using this Picture Attractiveness Scale, please rate each picture as I show them to you again very quickly. Circle the number indicating your attractiveness rating, zero being not at all attractive to 100 being extremely attractive.

Pact of Ignorance Set

Before you go, I'd like to get some of your reactions to the experiment you were just in. This experiment is part of my doctoral dissertation and I'm trying to get the data collected before the end of the semester. This late in the semester, it's pretty hard to get subjects, you know, so I want to really thank you for participating. Well, let me ask you a few questions about your reactions to the experiment.

Scientific Integrity Set

I want to thank you for your participation in this experiment. Before you go, however, I'd like to ask you a few questions about your reactions to the experiment you were just in. The idea of this interview is to make sure we know if any kinds of possible irregularities in the procedure have taken place. These kind of things sometimes do happen. As long as we know about them, we can correct for it, and thus insure that our findings are valid and reliable--that's extremely important for the scientific validity of the experiment. O.K.? Well, let me ask you a few questions about your reaction to the experiment.

INTERVIEW

1. Have you ever read of any experiments like this one?
2. Have experiments like this one ever been discussed or described in your lectures, classes or lab work?
3. I had asked you to try to ignore the heart sounds. Did you have any trouble doing this during the experiment?
4. Did you notice anything about the rate of the heart sounds during the experiment?
5. Were you aware of any relationship between the heart beats and the attractiveness of the pictures?
6. Did the heart sounds seem to you to accurately reflect your reaction to the slides? (probe "Why" if S says No)
7. As far as you could tell, what do you think the connection was between the pictures and your heart rate? (probe if "no connect.")
8. Do you have any hunches about what the purpose of this experiment was? (probe if S says he was deceived)
9. Did you think there was any deception involved in the experiment? Were you fooled in any way? (If yes question about details) eg. "Why?"
10. Did you ever have the idea that the heart sounds might not be your own? (probe "Why" if S says yes)
11. Did you hear anything about the experiment from anyone who had been a subject earlier? (Probe if S says yes)
12. (If vague or No to question 11) Sometimes people do talk about the experiment and it's not really anybody's fault . . . so don't hesitate to tell us if some information leaked out.

Confession = Subject must mention that confederate told him his heart beats were phony/try to make him rate some pictures as more attractive because the heart rate increases.

Discontinue interview if subject confesses. Thank him, etc.

If subject says he did not think heart sounds were his own (eg. on questions 3, 4, 5, 6, 7, 8, or 9) make a single probe or "Why?" Make sure that the probe is brief. Do not make more than one probe per question.

Record subjects' responses as accurately as possible, noting any irregularities, etc. Sign your name to his protocol sheet.

INTERVIEW RATING SHEET

1. no no/not mine/phony--PROBE
 maybe or vague confession
 yes 7. don't know
 confession vague response
2. no faster-pictures
 maybe or vague not mine/no connection--
PROBE
 yes confession
 confession
3. nothing 8. no
 little/some vague response
 yes reaction to pictures
 not mine/phony--PROBE (eg. why) imply deception--PROBE
 confession confession
4. no 9. no
 changed/vague vague response/guess
 faster-pictures more specific
 not mine/phony--PROBE not mine/phony--PROBE
 confession confession
5. no 10. no
 vague response not sure/vague
 yes/faster-pictures yes--PROBE (eg. why)
 not mine/no relation--PROBE confession
 confession
6. yes 11. no
 some slides not sure/vague
 not sure/vague response yes--PROBE (eg. what)
 confession

12. nothing
 confession

Experimenter:

Condition: PI or SI (circle one)

Interview Scoring

Confession = subject must mention that the confederate told him that his heart beats were phony/try to make him rate some pictures as attractive because the heart rate increases.

- | | |
|---|---|
| <p>1. 0 = no
1 = maybe (vague)
2 = yes
70 = total confession</p> | <p>9. 0 = no
1 = vague-guess
2 = more specific
3 = not mine (PROBE)
40 = total confession</p> |
| <p>2. 0 = no
1 = maybe (vague)
2 = yes
67 = total confession</p> | <p>10. 0 = no
1 = not sure
2 = yes (PROBE)
36 = total confession</p> |
| <p>3. 0 = no
1 = little
2 = yes
3 = not mine (PROBE)
64 = total confession</p> | <p>11. 0 = no
1 = not sure
2 = yes (PROBE)
33 = total confession</p> |
| <p>4. 0 = no
1 = changed (vague)
2 = faster-pictures
3 = not mine (PROBE)
60 = total confession</p> | <p>12. 0 = nothing
30 = total confession</p> |
| <p>5. 0 = no
1 = vague
2 = yes-faster
3 = not mine (PROBE)
56 = total confession</p> | |
| <p>6. 0 = yes
1 = some slides
2 = not sure (vague)
3 = no-not mine (PROBE)
52 = total confession</p> | |
| <p>7. 0 = don't know
1 = vague
2 = faster-pictures
3 = not mine-no connection (PROBE)
48 = total confession</p> | |
| <p>8. 0 = no
1 = vague
2 = faster-pictures
3 = deception (PROBE)
44 = total confession</p> | |

APPENDIX E

DEBRIEFING

DEBRIEFINGSUMMARY OF EXPERIMENTAL PROCEDURE

Students in Introductory Psychology classes were administered Rest's Defining Issues Test of moral judgment. Only male protocols were scored and each subject was assigned a stage score of moral development. An equal number of subjects were randomly chosen from each of the three levels of moral development. These subjects were contacted by phone and asked to participate in an experiment on physiological reactions to sexually oriented stimuli. No relation between the pretesting and participation in the experiment was made.

When the subject arrived he filled out a questionnaire. Because the designated waiting room was locked and "accidentally" in use E has to put S in a room where a subject (really our confederate) from another experiment was working. One of the difficulties of doing research in psychology is that subjects often tell others what the experiment is about. When the experimenter asks them if they have ever heard anything about the experiment most subjects say "no" because they don't want to invalidate their data, get anyone in trouble or make things difficult for the experimenter. We had the confederate tell you what our experiment was about so that we could study this situation. After viewing the slides subjects were administered a post-experimental interview to which they were assigned to one of two conditions. In one condition, the Pact of Ignorance (PI), the experimenter hinted that he needs the subject's data and doesn't really want to know if the subject has illegitimate information. In the Scientific Integrity (SI) condition the experimenter stressed the importance of valid data and tried to encourage the subject to be truthful. Thus, using a more complex kind of questionnaire than has been used before we were trying to see if we could influence subjects to be more open with us regarding their knowledge of the experimental procedures. We were also looking at the relationship between being open (confession) and level of moral development.

RESULTS

None of the experimental hypotheses were supported. Neither level of moral development nor type of interview (PI or SI) influenced how open subjects were regarding their knowledge of the procedures. Only about 20% of the subjects told the experimenter of his conversation with the confederate and these subjects were distributed across all conditions.

Your participation in this study was greatly appreciated. The data is in code form and the names have been destroyed to insure confidentiality. If you have further questions about this study please feel free to stop by my office. I am there on Tuesday from 10:00 a.m. to 2:00 p.m. Thank you once again.

Diagram of Study

		Interview Type	
		SI	PI
Level of Moral Development	I		
	II		
	III		

VITA²

Shelley Rodin Buntman

Candidate for the Degree of

Master of Science

Thesis: CONFESSION OF AWARENESS AND PRIOR KNOWLEDGE OF DECEPTION AS A
FUNCTION OF LEVEL OF MORAL JUDGMENT AND INTERVIEW SET

Major Field: Psychology

Biographical:

Personal Data: Born in Chicago, Illinois, April 28, 1951, the
daughter of Dr. and Mrs. N. Rodin.

Education: Graduated from Highland Park High School, Highland
Park, Illinois, in May, 1969; received Bachelor of Science
degree from the University of Wisconsin-Madison, in May, 1973.

Professional Experience: Served as a graduate instruction assist-
ant in the Department of Applied Behavioral Studies in
Education, Oklahoma State University, Spring-1976 and Fall-
1977; served as a graduate instruction assistant in the
Department of Psychology, Oklahoma State University, 1976-
1977.