

AN EXPERIMENTAL COMPARISON OF TWO CONCEPTS OF PERSONALITY

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TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
LIST OF TABLES	vi
CHAPTER ONE: SPEECH COMMUNICATION AND THE STUDY OF PERSONALITY	1
CHAPTER TWO: LITERATURE ON DOGMATISM AND SOCIAL LEARNING THEORY	8
I. Literature on Dogmatism, with a Focus on Learning . .	9
A. Antecedents to Dogmatism: The Authoritarian Personality	10
B. Rokeach's Dogmatism Theory	11
1. Belief Structures	11
2. Dogmatism and Resistance to Change	13
3. Dogmatism and Susceptibility to Change	14
C. Research in Dogmatism and Learning Since 1960 . .	15
1. Literature on Dogmatism and Resistance to Change	15
2. Literature on Dogmatism and Susceptibility to Change	17
3. Summary of Literature on Dogmatism and Learning	23
II. Literature on Social Learning Theory	24
A. Walter Mischel's "Reconceptualization of Personality"	24
1. Attack on Traits: Behavior Is Not Consistent	24
2. Alternative to Traits: Social Behavior/ Social Learning Theory	28

B.	Elaboration of the Social Learning Model	33
1.	The Social Learning View of Persons	34
a.	"Cognitive and Behavioral Construction Capacities"	34
b.	"Encoding Strategies and Personal Constructs"	35
c.	"Behavior-Outcomes and Stimulus Outcome Expectancies"	35
d.	"Subjective Stimulus Values"	35
e.	"Self Regulatory Systems and Plans" . . .	35
2.	The Social Learning View of Situations . . .	36
3.	The Social Learning View of Persons and Situations Interacting	37
C.	Social Learning Research	38
1.	Research Supporting the Person X Situation Interaction View	38
2.	Future Research Implications	42
D.	A Rejoinder to the Social/Learning Model: Traits Defended	46
1.	Theoretical Defense of Traits	46
2.	Utility of Traits	49
E.	A Critique of The Social Learning Model.	52
1.	The Problem of Assessing Situation	52
2.	The Problem of the Locus of Situation	56
3.	An Attempt at Resolution	58
4.	An Interpretation	60
III.	Rationale for an Experiment: Dogmatism v/s Social Learning	62
A.	Interface of Dogmatism and Social Learning Theories	62

CHAPTER THREE: DESIGN AND PREDICTIONS; PROCEDURES	66
I. Design and Predictions	67
II. Procedure	70
III. Data Analytic Procedure	75
CHAPTER FOUR: RESULTS	77
I. Data from Assessments of Dogmatism (DOG, Perceived Constraint (PC), and Memory (MEM)	78
II. Analysis of Data	80
III. Data and Data Analysis Applied to Specific Hypotheses	83
IV. Summary of Results	84
CHAPTER FIVE: INTERPRETATION AND IMPLICATION	86
I. Support for Social Learning Theory	87
II. Explanation for Dogmatism's Failure to Emerge as a Predictor	90
III. Implications for Additional Research	95
IV. Conclusion	97
BIBLIOGRAPHY	100
APPENDICES	104
A. Instructions for Low Constraint Condition (LDC) . .	105
B. Instructions for Medium Constraint Condition (MDC) .	114
C. Instructions for High Constraint Condition (HDC) . .	123
D. Post Test	132
E. Comparison of Data from an Earlier Version and the Present Version of the Experiment.	138

LIST OF TABLES

TABLE

I.	Dogmatism Scores (DOG)	78
II.	Perceived Constraint by DC Level	79
III.	Memory Scores (MEM)	80
IV.	Correlation Among Variables	81
V.	MR, All Variables	82
VI.	MR, DC Only	82
VII.	MR; PC 1, PC 2, PC 3	82

CHAPTER ONE

SPEECH COMMUNICATION AND THE STUDY OF PERSONALITY

In recent years the field of speech communication has reached out to embrace the findings and methods of the behavioral sciences, sometimes in haste, sometimes very effectively, but always with the conviction that communication, the core human behavior, ought to be conceptualized and studied "behavioristically" as well as "humanistically."

The study of personality psychology has been an area especially intriguing and useful to speech communication scholars. In part, this has been due to the ability of personality psychology to offer neat and precise explanations of many patterns of behavior which communication research has begun to discover. For example, the susceptibility of audiences to fear appeals in messages is clearly related to the idea that some personalities may be characterized as high or low in "chronic anxiety." The impact of perceived credibility of a message source would no doubt be affected by the tendency of some personalities to rely heavily on authority figures. A strong need to be included in others' activities is clearly related to conformity behavior in groups. Acceptance of complex or two-sided messages must take into account high and low levels of tolerance for ambiguity. In these and countless other ways, the claimed ability of personality psychology to offer systematic explanations of apparent patterns in communication behavior has made it a very important resource area for speech communication writers and researchers.

But there is no doubt another reason for the interest in personality psychology among scholars in various fields including our

own. It is that personality theorists have gone beyond the complex and technical conceptualizing and research that is part of any serious behavioral study to produce a product which is neither complex nor ambiguous or difficult to use; the personality test. Now it is possible for almost anyone to bypass the process of theory building and instrument validation, and simply buy or copy the pencil-and-paper test instrument which is the product of personality research. It is then a simple matter to administer it to a group of subjects or students or members or clients or applicants, score the test, compare results to a widely published set of "norms," and pronounce the test takers to be high or low in the personality trait "measured" by the test. What is done with this information is then left to the person administering the test. The information may be used in predicting experimental results, screening job applicants, placing students in instructional groups or levels, or planning therapy. Thus speech communication researchers and teachers, with a certain eagerness to get on with the catch-up work of embracing the behavioral sciences, have found in the psychology of personality a remarkably unambiguous and useful resource which assures them that people are predictable, that they are guided by remarkably stable patterns called "traits" which they follow consistently across situations, and not least, that these traits can be measured quickly and easily by a written test.

However, it is also very important to the field of speech communication to know if something is wrong with this scenario. It is the purpose of this study to report on and test a major line of inquiry which posits that something is very wrong with the entire

paradigm of personality as we have received and accepted it from trait theorists. In the face of the view that personality traits form a permanent structure which circumscribes and motivates consistent patterns of behavior in all situations, the emerging challenge denies that people behave consistently across situations, and reinterprets personality to be a style of interpreting environmental cues.

A group of theorists, led by Walter Mischel of Stanford University, has advanced the "social learning" perspective which views personality not as structural or permanent or independent of environmental cues, but as interactive with situations. Specifically, these theorists believe that "differences in persons" or "personality differences" should be conceptualized as differences in styles of interpreting the demands of situations relative to behavior. These differences in persons may influence behavior heavily if situational demands are weak or ambiguous, or their influence on behavior may be relatively weak if situations make strong demands. Not only is this view at odds with the psychodynamic trait theories which see differences in persons as permanent, producing measurable behavior differences across all situations; in addition, the social learning view is an indictment of the trait conceptualization. It charges that trait psychology is a special case of stereotyping which has been legitimized by a series of impressive tests whose validity and utility is highly questionable.

If this counter-paradigm prevails, it too will have important implications for the field of speech communication and the assumptions in which we have believed.

If the social learning theorists are correct, the personality assessment tests on which much communication research depends, and the rationale for those tests on which much communication theory rests, no longer would be considered valid. If the single most extensive review of literature of the whole area of personality is taken seriously, the predictive value of measured personality traits is very low. And if the foremost defender of the new paradigm has his way, we shall have to realize that in characterizing persons as behaving consistently across situations we have engaged in stereotypical oversimplifications which say nothing accurate, valid, or useful about the person characterized. On the other hand, these stereotypes or "thumbnail sketches" of persons (to use Mischel's faintly derisive term) may say a great deal about those of us who have done the projecting and stereotyping and legitimized it all by uncritical use of readily available pencil-and-paper tests.

The counter-view to be presented here suggests a way of looking at personality which tentatively identifies "person variables" which replace the trait notion with a set of categories in which persons interpret the constraints of environmental stimuli. To the speech communication field this promises a possible way of strategically manipulating communication settings and messages to achieve desired responses. The new focus on people's interpretation of situations as predictors of behavior and the attendant skepticism regarding the search for the roots of behavior in "inner states" might provide significant input to the associated question of how attitudes and behavior relate. The new approach to personality

research which reduces radically the ratio of subject N to experimenter may suggest new techniques of research useful in experimental studies in speech communication. The potential payoff might include methods for embedding experiments in real-life, familiar situations, subjects who knowingly cooperate in an experiment they understand, results which are far more probable and accurate, and an increasingly sophisticated technology for eliciting accurate assessment of subjects' responses to situation and manipulations. All these and perhaps more benefits are possible to the speech communication researcher and theorist if the new paradigm prevails.

But by far the most important justification for a dissertation in speech communication focused on personality is the theoretical issue of what is personality, how does it relate to the environment, how should it be assessed, and how does it relate to communication behavior. Because students of communication have assumed that these questions were to some extent answered, it is all the more important now that a challenge to that conceptualization has been raised, to respond to it. This dissertation is an attempt to respond with an explanation of the challenge, awareness of its substance, a recognition of its importance, and an experimental study which is one of the first direct tests of its theoretical base.

In Chapter Two we shall examine theoretical and experimental research relevant to the defenders and reconceptualizers of traditional personality theories. The dogmatism theory of Milton Rokeach will be developed as a case-in-point of trait theory: this trait construct sees persons as possessing a structural feature of personality which determines the type and sequencing of judgments about new information.

Dogmatism bears directly on the question of whether persons will accept or reject messages. Then Chapter Two will trace the development of the social learning paradigm of personality. Included in this review of literature will be an attempt to follow systematically the somewhat confusing and (in its way) exciting debate which has raged quietly in the pages of social psychology and personality psychology journals. Finally, Chapter Two will suggest the areas of stasis between dogmatism and social learning theories which will provide the setting for a test of both.

Chapter Three will discuss rationale and design of an experiment aimed at testing the competing paradigms.

Chapters Four and Five will present results of the experiment and conclusions to be drawn from them.

Throughout, it will be the purpose of the study to represent the arguments on both sides fairly, and to bring to the complexity of personality theory two contributions from speech communication: the one, an ordering and organization of the disorganized debate over social learning theory, and the other, a test of the two paradigms in a setting of communication behavior.

CHAPTER TWO

LITERATURE ON DOGMATISM AND SOCIAL LEARNING THEORY

This chapter provides a review of literature relative to the issue of psychodynamic trait theories of personality versus the more recent social learning view of persons and situations. Section I traces relevant literature on dogmatism theory as a carefully developed, validated, and researched example of trait psychology. Section II develops the social learning view and literature in response to it. The chapter concludes with an examination of areas in which the two orientations speak directly to each other and make quite different and competing conclusions.

I. LITERATURE ON DOGMATISM, WITH A FOCUS ON LEARNING

In order to design a behavioral test of trait theories and a competing paradigm of personality, this study will examine one specific trait theory, that of dogmatism. This trait is useful because it is typical of trait theories (it is believed to be part of the permanent structure of individuals' personalities and purports to predict consistent patterns of behavior across situations). As we shall see, the dogmatism construct has been extensively validated, defended, and used in behavioral studies. Further, dogmatism should be capable of providing a rigorous test of any challenge to the trait idea, since, as we shall see, it shares some similarities with intelligence which has proved less vulnerable to indictments brought by the challengers to trait theories.

In order to provide an historical and scientific perspective for the concept of dogmatism, this section will trace the development of the authoritarianism concept, briefly summarize basic dogmatism theory as formulated by Rokeach and his associates, and trace in some

detail the research which has followed the publishing of Rokeach's basic work and which applies to the study of learning.

We first shall review literature on dogmatism focusing on literature which applies to the area of learning. "Learning" has been defined by Kenneth E. Andersen as a process of acquisition or modification of beliefs, attitudes, and values, resulting from an organism's interaction with the environment (Andersen, 1972). Implicit in this definition is that learning will result in the acquisition and modification of corresponding types and patterns of behavior. Accordingly, the literature to be reviewed will refer variously to absorption of new information, persuasion, and changes in beliefs and values as part of that process of altering and modifying the human organism which is called "learning."

A. Antecedents to Dogmatism: The Authoritarian Personality

The history of the concept of authoritarianism has been written by Nevitt Sanford (1965, pp. 255-319). Sanford credits Fromm for Fromm's work on masochism and sadism, but begins the narrative of the development of the authoritarianism concept with studies in anti-Semitism, begun in 1943 by Sanford and Levinson at the University of California, Berkeley. This research culminated in the publication of The Authoritarian Personality (Adorno, 1950).

Among the hypothetical components of authoritarianism or facism which the researchers gleaned from interviews with anti-Semitic subjects were "conventionalism" (value placed on customary mores), "authoritarian submission," "authoritarian aggression," "superstition and stereotype," "power and toughness" (preoccupation with a strength-weakness dimension), and others (Sanford, 1965, pp. 269-275).

The Authoritarian Personality describes facism or authoritarianism as a personality characteristic which causes susceptibility to "anti-democratic propaganda." Authoritarianism is seen as causally "behind" and contributing to certain behavior. It is viewed as both fixed and flexible; that is, it is an enduring feature of personality structure, but it represents one end of a continuum along which people may be seen as located relative to other people (Adorno, pp. 1-2, 5, 7).

B. Rokeach's Dogmatism Theory

The work of Milton Rokeach builds on and extends the idea of authoritarianism. Rokeach envisioned a study of authoritarianism not only of the right, but authoritarianism conceived as a part of one's personality structure, distinct from ideological content, and thus discoverable in persons of all ranges of politics or other ideology.

Rokeach's theory received its fullest exposition in The Open and Closed Mind (1960). This book represents the most searching investigation of authoritarianism up to that time, and since its publication it has served as the foundation for most significant research in the area. Attempting much more than to refine earlier authoritarian personality theory, Rokeach has developed a personality model which, he argues, applies to and explicates a very wide range of human behavior. He begins with a discussion of "belief structures."

1. Belief Structures. Rokeach envisions dogmatism and authoritarianism as a structural feature of personality. Rather than being limited to any one belief or set of beliefs within an individual, the extent to which one is open- or closed-minded affects all cognitive activity.

Specifically, the Rokeach model sees beliefs organized along a central-peripheral continuum (Rokeach, 1960, pp. 39 ff). Central beliefs are those basic, "primitive" beliefs about the nature of one's self and the world in which he lives. In the intermediate region are located beliefs about the nature of authority, and what people represent authoritative sources of information for him. The peripheral region encompasses beliefs and disbeliefs whose assimilation is the result of their coming from positive or negative authority figures in the intermediate region.

Beliefs, according to Rokeach, are organized into "systems," a term which refers simply to groupings both of beliefs and disbeliefs. The belief system includes everything "that a person at a given time accepts as true of the world he lives in," and the disbelief system includes all that "a person at a given time rejects as false" (Rokeach, 1960, p. 33). The disbelief system is divided into disbelief subsystems which represent groupings of disbeliefs according to some relationship among the specific beliefs included (Rokeach, 1960, p. 35).

Rokeach takes pains to say that belief systems are not to be regarded only as religious or political or scientific systems, since any one belief could be said to fit all three of those categories and the human mind does not make such discreet divisions. But some division of disbelief subsystems according to interrelationships of beliefs has already been made explicit, and one sees Rokeach referring at least implicitly to belief subsystems as well. For example, when describing laboratory experiments, Rokeach describes subjects as facing the task of assimilating "a new belief system that is at odds with a

previously held belief system" (Rokeach, 1960, p. 286). Since a relatively small number of new beliefs is included in these studies, Rokeach appears to use the term "belief system" to apply to almost any group of beliefs.

This usage occurs again in a problem-solving experiment in which subjects are said to be integrating three new beliefs into "a new system" (Rokeach, 1960, p. 211). Even though belief systems are not only political, scientific, or religious, they evidently may be so. Rokeach at one point speaks of "...beliefs of a new system (political, religious, scientific, etc.)..." (Rokeach, 1960, p. 286). In short, a belief system for Rokeach may be any grouping of related beliefs, or may be the totality of what one accepts as true.

2. Dogmatism and Resistance to Change. At this point the contrast between open-mindedness and closed-mindedness comes into focus. To the extent that one is open-minded, or low in dogmatism, he will assimilate new information "as is," according to its own merits. When new information is received by the open-minded person, the individual beliefs in his belief system will be re-arranged and adjusted, as necessary, in keeping with the merits of the content and implications of the new information. To the extent that one is closed-minded, on the other hand, new information will be assimilated only if it is seen as emanating from or consistent with an external positive authority source. It is accepted not on its own merits, but on its relationship to authority. The result may be that the new information will be distorted to fit the existing belief system which already contains beliefs fed the individual by some accepted positive

authority source (Rokeach, 1960, pp. 50, 57 ff.).

In terms of the central-peripheral continuum, the highly dogmatic person is seen as follows: his central beliefs include a view of the world as threatening, his intermediate beliefs hold authority to be absolute (evaluating other people in terms of how they relate to that authority), and his peripheral beliefs (which come to him through his authorities) are isolated from each other, a feature of his belief system which allows conflicting beliefs to be held simultaneously (Rokeach, 1960, pp. 54 ff.). This closed-minded approach is seen as warding off threats to the individual's cognitive structure, providing him security in a seemingly unfriendly and threatening world.

3. Dogmatism and Susceptibility to Change. One of the least understood and most overlooked areas of dogmatism theory has to do with susceptibility to change. Given new information which does not come from a highly authoritative source, the implication of the theory is that the high-dogmatic subject will be more resistant to attitude or belief change than the low-dogmatic individual. But basic dogmatism theory asserts that the closed-minded person should be highly susceptible to change if the suggestion for change comes from a highly authoritative source. In such a situation the closed-minded person will be expected to change more, or more easily, than the open-minded subject (Rokeach, 1960, pp. 336-337).

This view of the dogmatic person as susceptible to change stems from the fact that such a person, relying heavily on authority, is a "party-line" thinker in that he accepts uncritically beliefs suggested by highly authoritative sources (Rokeach, 1960, p. 49). This susceptibility to change is made possible in part by the

phenomenon of "isolation" of peripheral beliefs already mentioned above. Newly assimilated beliefs in the system of a closed-minded person are not related logically to other, already held, peripheral beliefs. Because they are accepted on the recommendation of positive authority figures, these beliefs are held uncritically, resulting in "the coexistence of logically contradictory beliefs within the belief system." This is made possible by the closed-minded person's "perception of irrelevance," his tendency to avoid contradiction by refusing to recognize the logical relatedness of conflicting beliefs (Rokeach, 1960, pp. 36-37).

C. Research in Dogmatism and Learning Since 1960

A perusal of the published literature since 1960 reveals several hundred studies aimed directly at elaborating or testing dogmatism theory, and hundreds more which utilize or account for the concept in related experiments. There is no question that Rokeach's reconceptualization of authoritarianism has stimulated research interest.

Not the least of this interest has been in the area of learning. To the extent that open- and closed-mindedness has to do with assimilation of new information, it is appropriate that learning be a prime area for testing and applying the theory. What follows is a summary and assessment of the literature on dogmatism and learning.

1. Literature on Dogmatism and Resistance to Change.

Rokeach's model of dogmatism anticipates that the highly dogmatic person will assimilate new information less efficiently than the non dogmatic person under some circumstances. Rokeach and his associates developed a problem-solving task, the rather famous "Doodlebug"

problem, which requires the subject to give up some prior beliefs and assimilate new ones in order to solve the problem. Low-dogmatic subjects solved this problem faster than high-dogmatic subjects (Rokeach, 1960, pp. 196 ff.). Rokeach argues that two distinct processes are involved in the solution of the problem: "analysis," overcoming old beliefs which are recognized as inappropriate; and "synthesis," integrating the new beliefs (required for solution) into "a new belief system" (Rokeach, 1960, pp. 174-175). He offers evidence that open-minded and closed-minded subjects do not differ significantly in their analytic abilities, but do differ in their ability to synthesize the new information into a new belief system.

Several studies have succeeded in showing an inverse correlation between dogmatism and learning. White and Alter (1967, pp. 285-289) reported testing 2,099 undergraduate psychology students over a two year period at the University of Utah, and found "statistically significant correlations between D scores and examination scores," but only from larger classes. However, the variability of correlations, even among classes taught by the same teacher was so great that the authors suggested "the predictive power of the D Scale with regard to grades is not impressive" (White, 1967, p. 288).

In 1968, Costin (pp. 529-534) again studied dogmatism and classroom achievement among psychology students. He hypothesized that dogmatism would not be related to students' assimilation of basic principles of psychology, but that dogmatism would correlate positively with students' "retention of specific false beliefs about human behavior" (Costin, 1968, p. 529). Costin reports both hypotheses confirmed.

The Ehrlich and Lee (1969, pp. 249-259) summary of research in dogmatism and learning reports some additional experiments in dogmatism and classroom achievement which, taken together, show very mixed results. Among them is a study by Rokeach and Norrell (1966) which reports wide variation in the ability of the D Scale to predict academic achievement, depending on sex and academic major of subjects. Ehrlich and Lee interpret the findings to be highly suggestive of "the presence of uncontrolled intervening variables" (Ehrlich, 1969, p 251).

Three studies which found a relatively uncomplicated inverse relationship between dogmatism and learning are notable primarily because their subjects were not college students. Linton (1968, pp. 49-53) correlated low dogmatism to achievement in grade school, Jacoby (1971, pp. 384-388) found low-dogmatic subjects more willing to accept innovative products among several types of manufactured items, and Joure, et al (1972, pp. 151-156) reported greater change in self concept following sensitivity group training among low-dogmatic subjects.

The foregoing review suggests that a simple, unqualified relationship between dogmatism and resistance to change is supported neither by Rokeach nor by research in dogmatism since 1960.

2. Literature on Dogmatism and Susceptibility to Change.

The research described above was in some sense oriented toward the expectation that dogmatism is inversely related to change. But basic dogmatism theory suggests a second, equally important area of investigation; that is, the situation in which dogmatism and the likelihood or tendency to change are directly related. As we have seen,

according to Rokeach's theory, new information from a highly authoritative source should produce greatest change among highly dogmatic persons.

To test this prediction, Rokeach and his associates redesigned the Doodlebug problem in such a way that the new beliefs required for solution did not have to be discovered by subjects, but were given to them "on a silver platter." In this experiment closed-minded subjects actually solved the problem faster than open-minded subjects (Rokeach, 1960, pp. 238-239). The time difference was not statistically significant but was found consistently in replications of the experiment using different beliefs and solutions. The explanation offered was that in this "silver platter mode" for presenting new information, closed-minded subjects do not have to remember the items since all three are presented at one time, thus their performances are enhanced. Open-minded subjects are less willing to accept new information unquestioningly, hence the "silver-platter mode" does not improve their performance (Rokeach, 1960, pp. 212-213).

Incredibly, Rokeach's argument that closed-minded persons may be more subject to change or quicker to assimilate new information is taken by some researchers as contrary to dogmatism theory! Ehrlich and Lee, for example, open their article by saying: "A central proposition of Rokeach's theory...is that the cognitive system of closed persons is highly resistant to change" (Ehrlich, 1969, p. 249). These same authors say later that the variable of authoritative message source is an "intervening variable" which may confound the experimental effects of dogmatism! (Ehrlich, 1969, p. 255). An experimental study in which the experimenter was

evidently surprised to find high-dogmatism correlated directly to persuasibility is that of Bostrom (1964, pp. 283-287). Bostrom examined students' rating of speakers and response to messages. He found that dogmatism was unrelated to ratings assigned to speakers, but that there was greater agreement with speakers' positions among dogmatic subjects. Bostrom did allude to the possibility that closed-minded subjects may be more persuasible, but concluded that such behavior was "illogical and inconsistent" (Bostrom, 1964, p. 287). No mention was made of whether the speakers in the study were perceived generally as highly authoritative sources.

On the other hand, several studies have recognized susceptibility to change in dogmatic subjects as integral to Rokeach's model. Vidulich and Kaiman (1961, pp. 639-642) studied the conformity behavior of subjects who responded to light stimuli after an experimental confederate (identified as high or low prestige source) had verbally expressed an opinion as to direction of movement of the light. The study found a significant correlation between high dogmatism, high prestige source, and conformity behavior.

Mertz, Miller, and Ballance (1966, pp. 429-433, 485) subjected high- and low-dogmatic subjects to messages incongruous with their beliefs but attributed to highly authoritative sources. It was predicted that attitude change toward the sources would be greater among open-minded subjects (supported), but that attitude change toward the message concept would be greater among closed-minded subjects (supported to a limited degree).

In 1968 Crano and Sigal (pp. 241-247) offered experimental evidence suggesting that highly dogmatic subjects assimilated

discrepant positions more readily than more open-minded subjects when the message source was presented as highly authoritative. They found slightly more change among low-dogmatic subjects in the direction advocated by a low prestige source. The authors interpret their findings in terms of dissonance theory, suggesting that high-dogmatic persons have a low tolerance for dissonance or perceived inconsistency.

Schmidt (1971, pp. 742-743) found a positive relationship between levels of dogmatism and suggestibility in experiments in which subjects were asked to perform visual, tactual, and word-recognition tasks with a prestigious co-judge. High-dogmatic subjects were more influenced by prestigious co-judges than low dogmatics.

It is also in this area of highly authoritative sources that Rokeach's dogmatism theory has had one of its most serious challenges. Recall Rokeach's rationale for "party-line" thinking. Dogmatic subjects, Rokeach asserts, are more susceptible to change when the new beliefs come from an authoritative source. His argument is that the experiment using the silver-platter mode of presentation is "analogous" to the presentation of new beliefs by a high authority figure. But he wants to say also that what the silver-platter experiment overcomes is the closed-minded person's tendency not to remember the new beliefs. Rokeach's use of memory in this explanation is speculative and -- significantly -- does not rule out the possibility that a dogmatic person's memory for new beliefs might be poor regardless of the prestige of the source. In other words, if memory is a variable in the persuasibility of dogmatic persons, it may be that what Rokeach's

silver-platter experiment showed was not that dogmatic subjects are highly susceptible to new beliefs from high prestige sources, but precisely that dogmatic subjects have poorer memories for new beliefs! It is this possibility that has subjected dogmatism theory to one of its directest and most serious challenges. Two studies have raised the issue of whether McGuire's (McGuire, 1968, pp. 1130-1187) view of persuasibility may not call into question any generalized trait of authoritarianism as a significant factor in persuasion. McGuire's position is that several processes act as variables in producing general persuasibility, interacting to produce an outcome not necessarily explained by examining one process alone. He argues that at least two of these processes are at work in every persuasive situation: comprehension of the message (including attention and perception) and the willingness to yield to what is received.

Johnson, Torcivia, and Poprick (1968, pp 179-183), have suggested that McGuire's formulation conflicts with the idea that highly-authoritarian subjects are "source-oriented" or highly susceptible to change advocated by high-prestige message sources. They cite evidence that whereas authoritarianism (as measured by the F Scale) and yielding are related directly, authoritarianism and comprehension are inversely related.

Accordingly, these investigators hypothesize that the point at which the comprehension and yielding components intersect to produce maximum persuasibility will be at a relatively low or moderate level of authoritarianism even when the message comes from a highly authoritative source. To test this hypothesis, they attributed messages opposed to frequent toothbrushing and x-ray detection of

Tuberculosis to both high and low credible sources. The results showed that the level of source credibility produced little difference in net persuasive effect on highly authoritarian subjects. As predicted, low F-scorers showed greatest differential response to messages from high versus low credible sources.

The findings of Johnson, Torcivia, and Poprick were extended subsequently by Johnson and Izzett (1969, pp. 317-321). Noting that a difficult or ambiguous message may have masked the effect of authoritarian source-orientation, these authors compared four levels of authoritarianism (measured by the F Scale), high and low source credibility, and two levels of the yielding component indicated by plausible and implausible or unsupported messages. All messages were judged to be easily comprehensible. The results showed interaction between source credibility and authoritarianism to be that suggested by the McGuire model. Low authoritarians responded more to highly credible sources than high authoritarians, just as in the previous study.

Crary (1973) also addressed the question of whether yielding and comprehension could interact in such a way as to work against authoritarian/dogmatic reliance on authority. Noting that Johnson, Torcivia and Poprick (1968, pp. 179-183) did not actually isolate memory or comprehension as the variable which prevented high authoritarian subjects' yielding to persuasive appeals, he pointed out that an alternative explanation of those results is that subjects were unwilling to comprehend. This would suggest that low comprehension operates as a strategy of refusing to yield; put another way, the Johnson, Torcivia, and Poprick results may have demonstrated only

that highly authoritarian/dogmatic subjects resist appeals even from high prestige sources.

Grary (1973) then ran an experiment designed to demonstrate that higher levels of dogmatism correlated to lower comprehension independently of the yielding dimension. An informative message from a high credible source was presented with no agreement or yielding required of subjects. A measure of message comprehension found a significant inverse relationship between dogmatism and comprehension, suggesting that yielding and comprehension can operate at cross-purposes to negate the predictions that highly dogmatic persons are easily swayed by high prestige sources.

3. Summary of Literature on Dogmatism and Learning. To summarize this review of literature on dogmatism and learning, it is apparent that the notion that dogmatism is inversely related to learning or message acceptability has received considerable support. The prediction of theory that dogmatism is positively related to learning or message acceptance has received little experimental support, and indeed has been seriously challenged. That aspect of dogmatism theory which seems relatively intact is that dogmatism seems to be a powerful inverse predictor of the ability of subjects to remember new information. Remembering Rokeach's claim that the dogmatism construct represents a structural, relatively stable, and situation-independent feature of personality, this review moves to an approach to personality which challenges these assumptions, one by one.

II. LITERATURE ON SOCIAL LEARNING THEORY

A. Walter Mischel's "Reconceptualization of Personality"

A central figure in recent investigations of personality and learning is Walter Mischel (1968) of Stanford University whose Personality and Assessment has sparked a great deal of subsequent debate. The book is significant in its review of several years of literature in the psychology of personality, proposed reformulation of the theoretical understanding of personality, and research guidelines. Our immediate concern is with the book's comments on research prior to 1968 in personality and learning.

Mischel (1968, pp. 5-9) first notes that personality research has been dominated both by psychodynamic theory which holds that personality is formed genetically and during early childhood and, once formed, remains largely unchanging and unchanged throughout adult life; and by a trait orientation which shares with psychodynamic theory the premise that regularities in individual behavioral responses are signs of underlying structures or dispositions. These traits are discovered as abstractions from regularities in behavior, but they are seen both as reality and cause; the traits are believed both to exist and to function as causes of behavior. Trait psychology has engaged primarily in the quest for discovery and measurement of these underlying, structural predispositions of personality.

1. Attack on Traits: Behavior is Not Consistent. Mischel's second chapter is a summary (Mischel, 1968, pp. 14-37) of the somewhat dismal success of that quest. Beginning with the most successful work, Mischel notes that "cognitive and intellectual" measures have had the best success in predicting behavior. Correlations between

intelligence and achievement, intelligence and grades, have been fairly high. Such tests as Stanford-Binet, "Embedded Figures," "Tilting Room" and time-response tests have had a measure of success in predicting behavior. But even in this area of relative success, there are significant problems: low correlations are typical among two or more tests of the same subject's intellectual ability, reliability is limited to situations involving similar tasks, and results are highly vulnerable to procedural differences in test administration.

These and other problems affect the whole trait approach to personality study, Mischel believes. F scale (authoritarianism) scores show no significant correlation with measures of rigidity (Mischel, 1968, pp. 28-30). Researchers have failed to find correlations among measures of dependency (Mischel, 1968, p. 27) and tests for susceptibility to conditioning (Mischel, 1968, p. 32). Mischel reports that measures of cognitive avoidance of threatening stimuli did intercorrelate with minimal statistical significance, but researchers who reported the interrelationships of scores argued that the significance was insufficient to argue for a trait of cognitive avoidance. Moreover, subjects were found in at least one study to disagree on which stimuli were threatening (Mischel, 1968, pp. 30-32).

This review suggests to Mischel that it is in spite of research data that personality continues to be reconceptualized in terms of traits. He notes a study by Hartshorne and May (1930) of morality as a personality variable, in which researchers obtained very consistent and reliable pencil and paper responses from subjects but found relevant behavior to be very situation-specific and

unpredictable by test results. Mischel believes this early study foreshadows later personality research, and it certainly anticipates his own theoretical orientation that behavior is predictable by knowledge of situations to a far greater degree than by knowledge of personality variables. Mischel concludes that the psychodynamic, trait-oriented view has been so influential that data for cross-situational specificity of behavior such as that reported by Hartshorne and May "...were reported extensively, but did not influence psychological theorizing about the generality of traits" (Mischel, 1968, p. 36).

In Chapter IV of Personality and Assessment Mischel focuses particularly on the question of validity (Mischel, 1968, pp. 74-82) of personality questionnaires. Noting that the "least hazardous" data are obtained from tests which give examples of situations and ask for a response specific to the example, researchers have underutilized this approach in favor of ambiguous test items, artificial test situations, yes-no responses, and inferences subjects must make about themselves as traits. Thus the trait orientation not only influences the psychologist himself, but becomes a filter through which the subject must report on his own inner "states." Further, the traits sought out have been developed arbitrarily, many individual questionnaire items duplicated, with the result that "...one man's introversion scale could be another's measure of independence or resistance to conformity pressures" (Mischel, 1968, p. 75).

Whereas Mischel reports over 100 studies correlating F Scale authoritarianism scores with variables such as ideology, anxiety, and

prejudice, he notes that (typical of pencil and paper trait questionnaires) F Scale results do not correlate significantly with non-questionnaire personality measures of theoretically similar personality variables (Mischel, 1968, pp. 77-78). Citing an extensive review of research on personality and performance in a small group from 1900 to 1957, the median correlation in no study was reported by the reviewer to exceed .25 and more typically ranged near .15. But in some later studies, including some conducted by Mischel himself, where statistically significant correlations were found between personality trait measures and behavior, the magnitude of the relationship was so small as to account for only a fraction of the variance noted (Mischel, 1968, pp. 78-82).

Mischel then cautions about interpreting data from personality measures (Mischel, 1968, pp. 83 ff.), noting that experimenter predisposition, and agree-disagree tendencies of subjects may account for much of the magnitude of responses and correlations obtained. Moreover, Mischel notes, the similarity of individual items makes this cross-correlational "validation" very suspicious. Or, put another way, when individual test items are the same or similar, highly correlated responses may be attributed to highly similar situational factors in administering the tests. A further caveat to the interpretation of test data comes from Mischel's report that responses to trait questionnaires frequently covary with intelligence scores as significantly as with alternative measures of the trait, suggesting that the trait should not be regarded as an independent construct of personality.

Finally, Mischel (1968, pp. 91-99) argues the fallacy of reasoning directly from construct validity to systematic validity on personality tests. He notes that defining a construct in terms of a series of test items, and then reasoning from responses on those items to a conclusion that the subject possesses or does not possess that trait is a process which assumes a causal link which is unproved. He argues that so long as construct validity is the only validity demonstrated with the accompanying argument that behavioral referents for a trait are not available, the trait construct is "unstudiable." Throughout Mischel's early chapters he repeats a claim which especially applies to an over-reliance on construct validity in defending psychological traits: the ascription of traits to subjects by researchers probably gives more information about the psychological make-up of the researchers than that of the subjects. In a later chapter which focuses on changing behavior in psychologically troubled and maladapted patients or clients, this point is repeated (Mischel, 1968, p. 198) in reference to supposed "mental illness." Such "illnesses" or "diseases," he argues, just like supposed traits have no validity beyond construct validity. Hence the loci of mental diseases and traits are in the observer. We shall come to see that the significance of this for Mischel is no less than to suggest an alternative approach to prediction and control of behavior.

2. Alternative to Traits: Social Behavior/Social Learning Theory. After developing extensively the foregoing argument that psychodynamic psychology has failed to demonstrate that (a) behavior is caused by broad, underlying predispositions or traits and (b)

trait tests (personality inventories) are valid beyond construct validity, and having argued that the locus of such traits is the observer, rather than the observed, Mischel suggests an alternate view of behavior which focuses on the behavior itself rather than on antecedent causes. The discussion is not limited to the modification of behavior; it begins by developing the view that social behavior is learned. The basic theory is variously called "social learning theory" (Mischel, 1968, pp. 149-150) and "social behavior theory."* It does not presume the existence of traits, and thus does not rely on the demonstrating of cross-situational consistency of behavior. Instead, the theory is concerned with variations in situations, independent stimulus variables which "covary with the occurrence, maintenance, and change of the behavior" (Mischel, 1968, p. 150). The theory suggests three sources of learned behavior.

The first source of learned social behavior is "observational learning," (Mischel, 1968, p. 150-157) which is learning which results from noting the behavior of others. It is learning which is not directly reinforced, but relies on observation of behavior and the conditions in the environment which constitute the situation or

*The significance of this seems to be that Mischel will argue that behaviors do not occur because they were caused by some underlying predisposition; rather, they are evoked by stimulus conditions which interact with a person's repertoire of behaviors, his perceptions and constructions of the evoking situation, and such cognitive activities as placing value on stimuli and behavior outcomes. All of these things about a person have been learned and Mischel takes social learning theory as his model for how behaviors are acquired and subsequently evoked. Thus the understanding of behavior according to the social learning model becomes "social behavior theory" which we shall observe evolving in Mischel's later writings into "cognitive social learning theory."

setting of the behavior, and then "matching" the modeled behavior. This kind of learning is a complex process involving perceived characteristics of the model whose behavior is observed, the observer's prior conditioning, and the observer's experiences of reinforcement for "matching" or independent behavior.

Secondly, conditioning (Mischel, 1968, pp 157-158) is suggested as a source of learned social behavior. This kind of learning is characterized by various stimuli "acquiring valence and reinforcing powers when they become associated with other stimuli that already have reinforcing powers and emotion-arousing properties" (Mischel, 1968, p. 157). Such conditioning may be aversive or positive, and Mischel notes that this kind of behavioral learning may be the primary source of highly emotional valences of stimuli. Conditioning in which the positive or aversive stimulation is not received directly but is observed, Mischel calls "vicarious classical conditioning" (Mischell, 1968, p. 158). A distinction is made between behavior which is learned (that is, included in the repertoire of behaviors a person can perform) and performance of the behavior (since situational constraints or lack of incentive may work against the performance of a learned behavior).

A third source of socially learned behavior is that of "response-reinforcement relations" (Mischel, 1968, pp. 161-167). This kind of learning produces patterns of responses based on reinforcement of past responses. Mischel discusses briefly several variables in reinforcing responses, including sequencing and scheduling of reinforcement and the effects on responses that these cause. Most significantly for the research and therapy paradigm which Mischel

will later develop he reviews several studies to demonstrate that:

"The response pattern selected by an individual in a situation is affected by the previous reinforcing consequences or reinforcement history of similar responses in earlier related situations..." (Mischel, 1968, p. 164).

It is further noted that the process of response reinforcement may be affected by providing information regarding the situation or behavioral outcomes, persuasive appeals, high or low credibility of a communication, needs for consistency, etc. (Mischel, 1968, pp. 169-171). These variables which are or may be introduced verbally may be a primary cause of any experimental results and must be considered part of the real contingencies of any situation (experimental or otherwise) which produce behavior. As Mischel argues, these contingencies are of primary concern in predicting whether a person will behave one way or another...response-reinforcement is perceived by persons in terms of the situations in which the reinforcement occurs.

This suggests to Mischel that the earlier experimental results showing very inconsistent behaviors across situations support social learning theory or social behavior theory as delineated here. If subjects could not distinguish among varying situational constraints, their "consistent" behavior in different situations would be appropriate for some, but very inappropriate for others. Clearly, people do discriminate among situations.

Accordingly, Mischel believes:

"it is naive to believe that behavior on psychological tests ostensibly measuring personality reflects a pure x-ray-like version of the respondent's durable under-

lying psyche and is somehow immune to response reinforcement consequences and situational cues" (Mischel, 1968, pp. 184-185).

Where cross situational consistency does occur, as in achievement or intelligence tests, it is likely that this is due to the similarity of consequences for certain responses across many situations, and the similarity of response modes. Where social desirability of responses varies from situation to situation the responses will vary accordingly. Social learning theory suggests an approach to control of behavior which involves identifying those situational stimuli which have significance for the person, then systematically manipulating a few of the most important ones to produce the behavioral change (Mischel, 1968, pp. 182-191).

This implication relates directly to Mischel's earlier point that overreliance on construct validity by trait theorists tells one more about the inner states of the observer than about subject traits or personality variables. In his chapter on psychotherapeutic behavior change, he notes (Mischel, 1968, pp. 198-201) that just as trait psychologists have attributed broad behavioral causality to traits, psychoanalysts have attributed problematic behavior to mental illness or disease. He believes that such attribution of causes of behavior is no more valid or demonstrable than that practiced by trait psychologists. Ascribing traits or inner states to others, Mischel argues, is really a process of making a "social judgment" about the social appropriateness of behavior, or about the behavioral consequences for the person. Social learning theory or social behavior theory would shift this focus away from "causes" of

maladaptive behavior, to specific changes in behavior brought about by appropriate and systematic manipulation of situations.

"Rather than becoming embroiled in social judgments about the client's behaviors, or in speculative reconstructions about their hypothetical origins and motivational roots, behavior assessment begins with an attempt to select reasonable treatment objectives" (Mischel, 1968, p. 198).

"Research, assessment, and treatment are truly integrated in the social behavior approach. Assessment identifies the problem-producing stimuli; treatment modifies the disadvantageous responses...by changing the power of the problematic stimuli, either by associating them with other stimuli or by changing the consequences they evoke. Alterations in previously problematic behavior are also supplemented by the development of more advantageous alternative behaviors." (Mischel, 1968, p. 201).

B. Elaboration of the Social Learning Model

In 1973 Mischel (1973c, pp. 252-283) expanded on the position presented above. Beginning with a recapitulation of research findings on personality traits, Mischel noted that significant correlations are to be found between intelligence tests and such behavior as problem-solving, and that people rate themselves in trait terms very consistently across various self-report measures. But beyond that, the data indicate high situational specificity of behavior and little utility of "inferring global personality dispositions from behavioral signs..." (Mischel, 1973c, p. 253).

The article then responded to critics of social behavior theory and made suggestions as to how variations in situations may be manipulated experimentally. We shall examine that part of Mischel's 1973 paper which elaborates on his social behavior/learning

theory we have examined thus far.

1. The Social Learning View of Persons. Mischel proposes an alternative to the psychodynamic theoretical orientation whose empirical support and utility he has attacked. In its place he suggests a set of "person variables" which in a sense define personality, not in terms of what a person has, but in terms of what he does in constructing and responding to the situations which "evoke, maintain, and modify them" (Mischel, 1973c, p. 265). These person variables are suggested as representing "a synthesis of promising constructs in the areas of cognition and social learning" (Mischel, 1973c, p. 265). Thus, they are something of a beginning, an attempt to conceptualize personality in a way consistent with the foregoing comments on personality research. In the attempt to categorize how persons mediate stimuli in their individually unique and idiosyncratic construction of situations, Mischel believes that the variables overlap while remaining distinct enough to be measured and systematically manipulated.

a. "Cognitive and Behavioral Construction Capacities" (Mischel, 1973c, pp. 265-267). This first person variable is a broad category which includes the choice of constructs the person applies to himself and others, accepted social norms, and how information is acquired or "retrieved," categorized, and transformed. Here the focus is on what a person does in responding to stimuli and what he is capable of doing (what repertoire of possible behaviors is at his disposal). Although all person variables proposed here are situationally fluid, this one dealing largely with intellectual capacities is relatively enduring.

b. "Encoding Strategies and Personal Constructs"

(Mischel, 1973c, pp. 267-269). This variable deals with the meaning of situational stimuli as transformed through perceptual selectivity (attention and filtering) and encoded into meaningful symbolic representations. One's view of self is based on information which is also transformed by perception, and encoding processes, and the tendency to perceive self in stable trait terms is explained by constructing various behaviors in different situations as (subjectively) consistent.

c. "Behavior-Outcomes and Stimulus Outcome Expectancies"

(Mischel, 1973c, pp. 269-272). Expected consequences of behavior, perceived sign-relationships among stimuli, and intentions of others are all included in this category. Such expectancies clearly mediate the way persons respond to situations. Or as Mischel puts it, these expectancies mediate the degree to which behavior is cross-situationally consistent. If expectancies are not similar in different situations, then behaviors should not be expected to covary. The best source of information on such expectancies must be the subject himself, reporting on his expectancies in a given situation.

d. "Subjective Stimulus Values" (Mischel, 1973c, pp.

272-273). Even if two subjects' expectancies are the same, the value they place on expected outcomes may vary. Thus one person may behave differently from another with whom he shares similar expectancies because he values different behavioral consequences.

e. "Self Regulatory Systems and Plans" (Mischel, 1973c,

pp. 273-275). Persons set goals for themselves, interpret whether they have been reached, and engage in continuing self-critical

assessment in the achieving of the goals. Mischel sees this as a person constructing his own outcomes, his own behavioral consequences.

2. The Social Learning View of Situations. Mischel argues further that behavior may be predicted without knowledge of person variables, but based on knowledge of "relevant stimulus conditions, especially when those conditions are powerful" (Mischel, 1973c, p. 277). As examples of this, he notes studies which establish that post-hospital prognosis of mental patients is predicted best by knowledge of whether the patient was institutionalized or in the community, and whether jobs and "family support" were provided, that "predictions of intellectual achievement are greatly improved if they take account of the degree to which the child's environment supports (models and reinforces) intellectual development" (Mischel, 1973c, p. 277).

Four criteria are offered (Mischel, 1973c, p. 276) as indices of whether a situation is "powerful" or "highly constrained."

- a. The situation induces all persons to construe or interpret it the same (to the extent the situation is "uniformly encoded").
- b. The situation induces uniform expectancies regarding the appropriate behavior (this would appear to include expectancies regarding behavioral outcomes).
- c. The situation provides adequate incentives or reward for the appropriate behavior.
- d. The situation instills the skills necessary for understanding and executing the appropriate behavior.

3. The Social Learning View of Persons and Situations

Interacting. Having suggested a tentative paradigm for an understanding of persons and situations, Mischel suggests that person variables interact with situations in producing behavior; and he sets about describing the interaction (Mischel, 1973c pp. 276-279). Situations affect behavior by "influencing" person variables such as encoding, expectancies, and so forth. If the situation is "ambiguously structured," (Mischel, 1973c, p. 276) he believes, the person variables are most likely to predict behavior.

"To the degree that a situation is 'unstructured,' the subject will expect that any response from him is likely to be equally appropriate (i.e., will lead to similar consequences) and variance from individual differences will be greatest. Conversely, when subjects expect that only one response will be reinforced (e.g., only one "right" answer on an achievement test, only one correct response for the driver when the traffic light turns red) and that no other responses are equally good, and all subjects are motivated and capable of making the appropriate response, then individual differences will be minimal and situational effects prepotent. To the degree that subjects are exposed to powerful treatments, the role of individual differences will be minimized. Conversely, when treatments are weak, ambiguous, or trivial, individual differences in person variables should exert significant effects." (Mischel, 1973c, p. 276).

Mischel explains the interaction between situation and personality another way, using terms specifically related to the "person variables."

"Psychological" situations and "treatments" are powerful to the degree that they lead all persons to construe the particular events

the same way, induce uniform expectancies regarding the most appropriate response pattern, provide adequate incentives for the performance of that response pattern, and instill the skills necessary for its satisfactory construction and execution. Conversely, situations and treatments are weak to the degree that they are not uniformly encoded, do not generate uniform expectancies concerning the desired behavior, do not offer sufficient incentives for its performance, or fail to provide the learning conditions required for successful construction of the behavior." (Mischel, 1973c, p. 276).

The point seems to be that it is not only true that situations control behavior, it is equally true that persons construe situations, even the same situation, very differently (Mischel, 1973c, pp. 278-279). Further, persons alter situations by construing them and behaving in response to mediated situational stimuli. One's behavior in a given situation, for example, influences how other persons in that situation will behave. Thus "situation" is not static, but fluid, and relates to behavior in a highly interactive and mutually dependent manner.

Although the emphasis in the foregoing sections seems to shift back and forth between the researcher's knowledge of the "powerfulness" of a situation to the construction (interpretation) of a situation by the subject, both ideas are clearly articulated in the 1973c article. I will comment at more length on this apparent problem when discussing criticisms of the social learning paradigm of personality.

C. Social Learning Research

1. Research Supporting the Person X Situation Interaction View. Several studies are cited in support of the view of person/

situation interaction which we shall review here.

Mischel and Staub (1965, pp. 172-179) studied the effects of choice contingencies on subjects with high and low generalized expectancies of success in task performance. Subjects were given a problem or task to solve and were then told they had failed or succeeded, or were given no information. They were then asked to choose between an immediate reward of lesser value or a delayed reward of greater value. Obtaining the greater reward was contingent on successful completion of a second, similar task plus delay, completion of a dissimilar task plus delay, or delay only with no task. Among the findings:

a. High expectancy subjects with no information on the initial task chose task contingent rewards significantly more often than low expectancy's (i.e., the person variable of expectancy predicted choices when information about the situation was lacking)

b. Both high and low expectancy subjects were more likely to choose task contingent rewards after information was provided that the initial task was completed successfully, than when they were led to believe they had failed (here the situational element of information of success or failure predicts outcome).

c. Larger (delayed) rewards with no task contingencies were preferred more often in all groups of subjects than delayed rewards contingent on task completion. (Prediction of this outcome would require knowledge of the multiple situational variables of reward size and task contingency.)

In 1973 Mischel commented on this study:

"The effects of situational success and failure were so strong that they wiped out the role of individual differences in pre-experimental expectancy for success. But in the 'no information' condition (in which subjects obtained no feedback about their performance quality in the situation) pre-experimental expectancy was a highly significant determinant of their choice to work for contingent rewards." (Mischel, 1973c, pp. 276-277).

In another series of studies on delay of gratification, Mischel, Ebbeson, and Zeiss (1972, pp. 129-142) studied the ability of children to wait for a more attractive delayed reward. This experiment found that children who were able to see both the lesser (immediate) and greater (delayed) or who were instructed to ideate about the rewards were more likely to seek immediate gratification. But in a variation on this study, Mischel and Moore (1973, pp. 172-179) found to their surprise that subjects who were presented with a picture of the rewards were able to delay gratification significantly longer than those for whom no such symbolic representation was present. Thus on the one hand the presence of a reward or thinking about it worked against delay of gratification; on the other hand a picture of the reward seems to have enhanced delay. This seemingly subtle difference in situational stimuli produced marked differences in behavior.

Mischel, Ebbeson and Zeiss (1973, pp. 129-142) studied the effect of subjects' success or failure on an achievement and expectancy of further testing on attention to positive and negative information about themselves. Subjects were given the Byrne Sensitization-Repression Scale prior to the experiment. As predicted, "sensitizers" who expected no further testing were more likely to attend to negative

information about themselves and conversely. But this effect was eliminated in the situational variable of expectancy of testing. There was no significant difference in preference for positive and negative feedback among "sensitizers" and "repressors" when subjects expected further tests to be run on themselves. Although no significant interaction was obtained between expectancy and the effect of sensitization-repression on attention to negative feedback, the expectancy variable did "modify" that interaction enough that differences between "sensitizers" and "repressors" regarding attention to negative feedback were insignificant.

Moos (1968, p. 49-61) argued that there is reason to believe that interactions between subjects' individual differences and situation, subjects and modes of behavior, and situation and modes of behavior better predict behavior than individual differences or situations alone. Referring to a study by Endler, Hunt, and Rosenstein (1962, pp. 1-33) which obtained reports from subjects about responses presumed to be indicative of anxiety experienced in a variety of anxiety-producing settings, Moos noted that these researchers found that individual differences and settings, each accounted for 5-10% of the variance noted, whereas the interactions among variables accounted for considerably more variance, with 30-35% of variance estimated to be accounted for by a second-order interaction among individuals, settings, and modes of behavior.

Moos (1969, pp. 405-412) attempted to study these interactions more systematically and reliably by eliciting reports from outpatients and staff members at a psychiatric hospital about their feelings in various everyday settings, including going to bed, at

lunch, in group therapy, etc. Subjects responded to a semantic differential questionnaire while in these situations on items including hostility, security, shyness, socialibility, and several others. Moos found that individual differences and setting differences each accounted for significant amounts of variance. Individual X setting interactions accounted for more variance than individual differences or settings alone. Consistent with Mischel's argument, Moos noted that individual differences among patients accounted for significantly more variance than among staff members (Mischel argues that cross-situational consistency is dysfunctional and abnormal) and that knowledge of either individuals or situations is insufficient to predict behavior. Moos summarizes succinctly:

"...the setting is important not necessarily because it elicits the same reactions across all patients, but rather because it elicits different reactions in different patients, different reactions which cannot be accurately predicted from knowing only the general response tendencies of the patient." (Moos, 1968, pp. 57-58).

The above studies suggest that in the absence of situational variables impinging on a subject's behavior, person variables may indeed predict behavior. But when subjects are aware of situational variables such as the presence or absence of task contingencies, past success or failure on similar tasks, and likelihood of future testing, the effect of person variables is overwhelmed by these situational factors, and situations appear to predict and control behavior.

2. Future Research Implications. Mischel portrays social behavior theory as enlisting the aid of the client (Mischel, 1968,

pp. 236 ff.) or subject in seeking specific behavioral referents for the vague linguistic terms in which clients express their problems. These referents must be "public" as opposed to private, specific as opposed to general, behavioral as opposed to trait-oriented, in order for specific behavioral objectives to be achieved by manipulating the stimuli which are problematic for the disturbed person. He recommends Kelly's methodology for eliciting from subjects specific information about their problems and conditions which make them "better" or "worse." Besides this interview technique, other self-report mechanisms are suggested including subject diaries, lists of all stimuli which cause discomfort, and pre-prepared anxiety scales for clients to make. In addition to self reports, Mischel recommends direct sampling of behavior with closeness of approach to aversive stimuli serving as the objective measure.

Strength of reinforcement value (Mischel, 1968, pp. 251 ff.) utilizes client assistance through reports of preference or rank ordering types of reinforcement. Another technique is that of observing a client "selecting" reinforcement by systematically administering various reinforcing stimuli as the client selects from among several task options. Mischel notes the danger of assuming that certain reinforcement stimuli (particularly social rewards) have positive value for a given client.

Learning problems are also addressed by the social behavior approach (Mischel, 1968, pp. 254 ff). Beginning from a "baseline" level for each subject, desirable reinforcements are introduced for progress in small enough increments that no massive failures occur. Specific behavioral goals are charted for each subject with appropriate

reinforcing stimuli, again selected for each subject. Moreover, the program is constantly reviewed for possible revision of learning increments and reinforcement.

Here, then, is a listing of several points from Personality and Assessment (Mischel, 1968) and the 1973 article (Mischel, 1973c) which Mischel offers as criteria for research.

a. Researchers and therapists must specify behavioral referents; public (not private), specific (not general), behavioral (not trait-oriented).

b. Along with behavioral specificity, there must be specificity of conditions in which the behavior occurs. Predictive hypotheses must therefore specify (1) behavioral mode and (2) situational contingencies in which the behavior is expected to be high or low frequency.

"Such cumbersome, hyphenated descriptions would lack the 'thumbnail sketch' appeal of global trait portraits. But they would remind us of the discriminativeness and complexity of the individual's behavior, its idiosyncratic organization, its dependence on conditions, and the hazards of attempting to abbreviate it grossly." (Mischel, 1973c, p. 278).

c. Researchers should enlist subjects in telling the researcher (therapist) which stimuli are positively or negatively significant to them (which may work at cross-purposes to concealed experimenter purpose), using:

- (1) Kelley's categories technique
- (2) Interviews
- (3) Diaries
- (4) Subject-made lists

- (5) Pre-prepared check lists
- (6) Direct behavioral sampling: manipulate (for example) some anxiety arousing pictures, objects, etcetera, and observe effect.

d. Subjects should be enlisted in determining "behavior outcome expectancies:" ("if I do such and such, such and such will occur"). Mischel also notes that expectancies can be altered by giving instructions about the required response and reinforcement available (Mischel, 1973c, p. 270).

e. Subjects should describe their own self-regulatory rules and plans which tend to guide the individual and impose consistency on him in the absence of powerful situations (Mischel, 1973c, p. 279).

f. Rewards or reinforcement values must be elicited by subject rank-order (Mischel, 1973c, p. 273); i.e. social rewards may not have the value for a subject/client that experimenter/therapist presumes, by allowing choices from among several possibilities, or rank-ordering reward possibilities.

g. Conceptualization of behavior must be embedded in specific conditions in which it occurs. Predictions should be made in terms of behavior-contingency units which specify modes and conditions in which a given behavior will be of high- or low- frequency (Mischel, 1973c, p. 278).

In summary, it would appear that Mischel is suggesting that everything about the subject which is relevant should be known. The acquisition of that knowledge by a researcher should be guided by the "person variables" as categories of information about a person in

interaction with a highly specific (and idiosyncratically construed) situation. Perhaps another way of saying this is that everything about the situation must be known by the researcher, but the acquisition of that knowledge must come from the subject himself. I shall argue below in evaluating social learning/behavior theory that the two statements in Mischel's paradigm are equivalent.

D. A Rejoinder to the Social/Learning Model: Traits Defended

In a later section we shall examine critics' responses and objections to the social learning model. First, however, this section will summarize those responses whose focus is that of defending the trait conceptualization itself.

1. Theoretical Defense of Traits. One area of attack the social learning paradigm has developed concerns potential usefulness and theoretical justification for identifying personality dispositions. In 1971 Jones and Nisbett developed an argument based on the history of the concept of qualities or attributes as developed in the history of science (Jones and Nisbett, 1971, p. 86). Noting the distinction among primary qualities (objective features existing apart from anyone's perceptions of them), secondary qualities (such as taste, odor, or color, which exist only as sensed by an organism), and value qualities (such as beauty or goodness, which exist only in the perceiver), these authors argue that the attribution of traits to subjects represents confusion between primary and value qualities. Jones and Nisbett believe that to ascribe a trait to a person is really to make an evaluative judgment about him (recall Mischel's belief that trait attributions are a "social judgment" made on behavior), while mistakenly thinking the trait to be a primary

quality "possessed" by the person judged.

In response to Jones and Nisbett, James R. Averill (1973, pp. 275-283) notes that the distinction among primary, secondary, and value qualities has never been clear or agreed on by philosophers. He notes the range of views on this from Platonism (which views all qualities as primary) to the Idealism summarized in Berkeley's esse est percipi (all qualities lie in the perceptions of the observer). Moreover, the distinction has had the troublesome effect of limiting research both in the sciences and in psychology. But a second line of attack on trait dispositions has come from the Aristotelian distinction among types of causes. The tradition of British Empiricism and logical positivism has accepted only efficient cause (which must be an event) as appropriate for scientific inquiry. The result has been, Averill believes, that traits have been reinterpreted as inner stimuli (a move which makes the logical mistake of shifting logical categories by interpretation of a concept) or else traits have been denied any explanatory power (because dispositions as formal causes may have no explanatory power in a mechanistically oriented science). As an alternative, Averille advances the view that (1) dispositions or traits do not refer to events, but summarize the relationships among events (dispositions are "high-order relational variables") (Averille, 1973, p. 281); (2) beyond mere historical precedent there is no compelling philosophical or logical basis for denying that dispositional qualities are a function both of that which is observed and the observer, and (3) dispositions can function to explain events. This author also responds to the Jones and Nisbett argument that ascribing traits to others, but not to one's self,

indicates an entirely different mode of information processing, Averill counters that dispositions may reflect only the difference in knowledge one has of the other compared to self-knowledge, and are therefore useful as answers to the sorts of questions one would ask about another's behavior. Rather than throwing out all dispositional traits on a priori grounds which are not compelling, they should be recognized as potentially useful "under appropriate circumstances." The elucidation of these appropriate circumstances is an important problem for future empirical research" (Averill, 1973, p. 282).

In one respect, Averill's position is consistent with Mischel. As we have seen, Mischel believes that the attribution of traits to others is an important area of study, and that it may in fact be possible to identify genuine dispositions in persons. It is true that Mischel avoids the cross-situational consistency assumption of the term "trait" and uses "person variable" to indicate dispositions which predict behavior when situations are ambiguous, but his belief that person variables interact with situations seems very compatible with Averill. In another respect, however, the Averill paper skirts the main issue that Mischel has developed earlier. The primary burden Mischel lays on psychodynamic theorists is precisely to demonstrate the utility of broad dispositional traits. Averill says only that there is no theoretical reason to deny such utility. Thus, in a sense the two positions agree that identification of dispositional traits may be of some value, but Mischel wants to know what that value is and the Averill paper does not provide an answer.

2. Utility of Traits. One of the most vigorous attacks on Mischel's paradigm has come from Paul L. Wachtel (1973a, pp. 324-334) who sees the controversy in terms of conflicting approaches to psychotherapy. Arguing that (1) psychodynamic theorists and therapists have long recognized situational specificity in behavior, he cites several writers on psychoanalysis who have dealt with selective perception, the influence of external stimuli, and the role of analyst as a participant in the psychoanalytic setting. Moreover, (2) psychodynamic theories were originally intended for abnormal persons whose inability to adapt to situations is demonstrable, whereas the research cited by Mischel deals with normal subject populations. Further, (3) the laboratory with its narrowing of the field of environmental stimuli may create unrealistic response inconsistencies which would be more consistent and predictable in realistic interpersonal situations where the subject is more free to focus on stimuli he chooses; behaviorist therapy then, perpetuates this experimental bias and manipulates only stimuli.

To the first argument, Mischel (1973a, pp. 335-344) responds that no one is denying psychodynamic theorists' concern with situational specificity. For Wachtel to "answer" such a misinterpretation is to focus on a pseudo-issue. Rather, the issue is whether from diverse behaviors interpreted as "signs" these theorists are justified in reasoning backwards and very indirectly to underlying "genotypic" dispositions, and most important, what utility has been empirically demonstrated of this quest. Following this point and in response to Wachtel's second attack, Mischel points to his chapter (Mischel, 1968) on the utility of psychodynamic approaches, noting that studies have

not supported the therapeutic utility of the approach. In response to Wachtel's third major point, Mischel notes that he has argued for an exploration of each subject's idiosyncratic constructions of situations both in the laboratory and in therapy, so that situational stimuli and therapeutic stimuli may be tailored for each subject's idiographic qualities. This suggests a very different view of behaviorist therapy (and research) than the mechanistic, personality-less, and stimulus oriented picture suggested by Wachtel. Mischel further notes that his own focus on situations may be easily misinterpreted if one fails to note his emphasis on situation as construed and selected by the subject or client himself. But given that emphasis Mischel is not vulnerable to Wachtel's attack.

The discussion between Wachtel and Mischel is not quite complete, however, for each was given a rebuttal opportunity in the Journal of Abnormal Psychology. Wachtel (1973b, pp. 537-540) now shifts from his earlier attacks and argues (1) Mischel's own research efforts from 1967-1972 are not significant because the rewards used in self-control and delay of gratification studies were trivial (marshmallows, pretzels, etc.). He then suggests that (2) behavior therapy has not been "fully" successful in solving psychological problems. Finally, (3) Wachtel accuses Mischel of shifting from an attack on psychodynamic theories to an interactive view of personality and situations.

Mischel (1973b, pp. 541-542) responds to the attack by remarking that whether or not his own research is relevant to the complexities of real situations should be judged on grounds other than what sort of gratification was used. Secondly, he agrees that

behavior therapy is not problem-free and denies that that was ever his point. Finally, he is able to show that throughout his writing from 1968, his primary attack on psychodynamic trait theories is directed at their lack of demonstrable utility.

By way of reaction to this whole discussion between Wachtel and Mischel we might note that Mischel appears able not only to answer each attack with empirical data and arguments, but he is also able to show in most cases that the attacks were pre-empted by his earlier writing and analysis. The "rebuttal" by Wachtel is actually not a rebuttal (since his earlier arguments are not extended beyond Mischel's strong initial reply) but rather a shift from arguments Mischel has answered to new arguments which are run very superficially and briefly. But Wachtel does touch on something about Mischel's 1968 Personality and Assessment which may explain some of the debate. If there is a stronger emphasis in that work between attacking psychodynamic theory and showing how psychodynamic insights may usefully interact with adequate appraisals of psychological situations, the emphasis is on the former. My own impression of Mischel from 1968 to 1973 is that there is a shift in tone if not strict content which seems more amenable to the possibility that psychological traits may ultimately survive their currently demonstrated low correlations with predicted behavior and provide personality variables which may interact significantly with situations.

Wachtel's attack on Mischel's own research gives no cogent reason for his conclusion that the studies do not bear on complex behavior, but there is some truth in what he says. Whereas Mischel believes that subjects must be asked by experimenters to indicate

which stimuli or cues are important and how important they are, his own studies on delay of gratification do not indicate very clearly whether this was done. On the other hand, Mischel does indicate (Mischel, Ebbsen, Zeiss, 1972) that in one study where the rewards were marshmallows and pretzels that the subjects (children) were interviewed prior to the experiment and it was determined that these were very important to them as sources of gratification. Nevertheless the sort of research Mischel envisions (research in which the subject plays an integral part in the assessing of his own constructs) is not widely reported as yet.

E. A Critique of The Social Learning Model

1. The Problem of Assessing Situation. Adinolfi (1971, pp. 167-176) remarks that the social behavior (social learning) theory of Mischel only assumes that stimulus conditions which elicit subject behavior can be more objectively and accurately assessed than the traits which Mischel challenges. This offhand criticism actually deserves a detailed response. On one level, it is easy to answer, because Mischel's model does not rely ultimately on a researcher's or observer's appraisal of a situation; ideally the subject or client is himself asked to tell the researcher what it is about the situation which is relevant and significant. But the answer is not that simple, for Adinolfi has perhaps unwittingly touched on what appears to be an inconsistency borne out in our review of Mischel's theory, relative to who assesses situations. On the one hand Mischel seems to believe, as Adinolfi suggests, that situations can be assessed by observers, as when he talks about situations having a quality of powerfulness and lack of ambiguity (Mischel, 1973c, p. 277). On the other, he clearly

argues for a process of assessing situations in which subjects are the judges (Mischel, 1973c, p. 261). An answer to this problem relates to a broad area of criticism which we consider now: has social behavior theory abandoned the study of persons for an excessively mechanistic study of situations? In answering that question we shall also confront the issue of who is the assessor of situation, the experimenter or the subject.

We shall first consider arguments that Mischel's position is a personality-less theory with overemphasis on situational control of behavior, and second, the question of who assesses situation.

The argument that Mischel is talking not about personality but only about situations is very briefly implied by Adelson (1969, pp. 217-252) who believes that Mischel is really talking about "transient states" rather than personality.

A similar criticism of Mischel is levelled by several other respondents, particularly Bowers (1973, pp. 307-336) who casts Mischel in a position he describes as "situationist;" situationism being a school of thought embracing the idea that "causal or controlling variables are generally exterior to the behaving organism" (Bowers, 1973, p. 308). Recognizing that situationists vary as to the degree that internal factors (such as meaning) mediate the stimulus-response relationship, Bowers believes that Mischel emphasizes situational determinants sufficiently to put him at the right of this school, and a speech by Mischel is quoted in which he states that behavior is "utterly dependent" on situations (Bowers, 1973, p. 308). Bowers believes that situationism has provided a corrective to trait psychology and has made significant contributions to clinical

practice. But he believes it is an inadequate view of man and man's personality. Bowers reviews several research reports which compare variance from situations and subject variables and notes that the largest variance comes from person X situation interactions. As an alternative paradigm, the author suggests what he calls an "interactionist" view which has it that "situations are as much a function of the person as the person's behavior is a function of the situation" (Bowers, 1973, p. 327). Citing diverse sources of research, Bowers notes that situations are construed by subjects in ways that are unique to and characteristic of each. The author argues for a research paradigm which recognizes not only the influence of situational factors but the individual differences with which people construe and respond to those factors.

A similar suggestion has been urged by Endler (1973, pp. 287-303) who believes that the interactionist approach is one which will do justice to "the relative contribution of situations and individual differences to behavioral variances" (Endler, 1973, p. 300).

In his 1973 response to critics of the "cognitive social learning" paradigm, Mischel (1973c, pp. 254 ff.) denies that he has ever taken a radical situationist position or a personality-less view of man. He points to the 1968 Personality and Assessment and particularly the chapter "Principles of Social Behavior" (Mischel, 1968, pp. 149 ff.) in which he develops the idea of behaviors as learned according to principles from social learning theory. These principles include "observational learning," "vicarious conditioning," and "self-administered response consequences." It is this same social learning theory which Bowers points to approvingly as a more moderate

form of situationism than Mischel's (Bowers, 1973, p. 308). But there really is an end to the dispute with Mischel's "Toward a Cognitive Social Learning Reconceptualization of Personality" (Mischel, 1973c, pp. 252-283) because Bowers in a footnote reports that the Mischel article was received by him too late to be considered in his own paper, but he believes it represents a "clarification of the importance of cognition for social learning theory" (Bowers, 1973, p. 315). In fact the article probably represents a great deal more. As we have seen, Mischel develops a fairly elaborate picture of how he views personality, including a set of "person variables" (Mischel, 1973c, pp. 264 ff.). The article includes a discussion of how Mischel believes these person variables interact with situations noting:

"...the person continuously selects, changes, and generates conditions just as he is affected by them. The mutual interaction between person and conditions...cannot be overlooked when behavior is studied in the interpersonal contexts in which it is evoked, maintained, and modified" (Mischel, 1973c, p. 278).

This must be recognized as very true to the "interactionist" view espoused by Bowers (1973, pp. 307-336) and Endler (1973, pp. 287-303). But in at least one important respect it is more an interactionist view than either Bowers or Endler have taken, for Mischel's person variables actually comprise a fairly complex model (reflecting an extensive review of recent research) of how situations and persons interact. Mischel does not simply say, "Let's be 'interactionist,'" he does the more difficult task of presenting a tentative, but sophisticated model which may enable the "interactionist" approach

to be operationalized; something which the Endler paper (which suggests only paying more attention to person X situation interactions) and the Bowers paper (which makes almost no specific proposal) do not provide. Ironically, this more thorough exploration of issues, review of research, and specifying of new research directions will probably make Mischel even more vulnerable to criticism. But if he is at least partly right, he may continue to influence the course of personality study profoundly.

In fairness to Mischel's critics in this area, Mischel's position as an "interactionist" or as one who gives importance both to persons and situations may represent a shift in emphasis. Mischel does not admit such a shift, but we may at least agree that his (1968) massive assault on trait psychology and his emphasis on behavioristic strategies for psychotherapy were not balanced by a fully articulated view of personality, until the 1973c article. I believe Bowers (1973, pp. 307-336) is correct in noting this shift in emphasis in Mischel's changing from "social behavior theory" to "cognitive social learning theory" as the preferred label for his model (Bowers, 1973, p. 315).

2. The Problem of the Locus of Situation. A second problem in Mischel's conceptualization of situation is the question of whether situations have any significance for persons aside from their unique and idiosyncratic construction of them. As we have seen again and again, persons and situations interact in a mutual causality, in Mischel's view, and the experimenter must enlist the aid of subjects in seeing situations through subjects' perceptions. The problem arises when Mischel (1973c) indicates that experimenters'

knowledge of situations alone may enable predicting of behavior, provided the situations are "powerful," the emphasis seems to be on the researcher's assessment of whether the treatment or situation is powerful.

"...when relevant situational information is absent or minimal, or when predictions are needed about individual differences in response to the same conditions, or when treatment variables are weak, information about person variables becomes essential" (Mischel, 1973c, p. 277).

Yet, again, it was argued at length that it is the subject's perception of a situation as "highly structured" or "ambiguous" which determines whether the person variables will in a sense take over (in the case of an ambiguous situation) and predict behavior very much like "traits." And further, if person variables are constructs which, among other things, tell us what a subject is doing (cognitively) to the situation, how is it possible to make a clear distinction between a variable such as behavior outcome expectancy and the situation to which that expectation is relevant?

This apparent inconsistency has considerable impact on Mischel's suggestions about how to do research. If situations may sometimes be objectively rated by an observer or researcher as powerful or not powerful, then it is not necessary to argue that all personality research must enlist the aid of subjects in interviews and other self-reports in determining what situational elements are important to them. That would be true only in some situations; for those situations where it is not true, what we would really need is a research technique for isolating powerful situations from ambiguously structured ones.

3. An Attempt at Resolution. I will suggest that this question may be resolved in one of two ways. First, perhaps Mischel does not mean that a researcher's knowledge of powerful situations will allow him to predict behavior, but rather that if the researcher lacks knowledge of subjects' construction of a situation, some situations are so obviously different that gross differences in behavior are predictable. This is another way of emphasizing that behavior is situation-specific. But the thrust of Mischel's position clearly is that specific predictions of behavior must be based on knowledge of how a given subject construes and interprets situational stimuli, and this knowledge (including whether a situation is perceived as structured or ambiguous) must come not from some gross assessment by a researcher but from the subject himself.

Or second, the research Mischel cites in support of his notion that persons and situations interact (Mischel and Staub, 1965; Mischel, Ebbeson and Zeiss, 1972) does not indicate that the researchers interviewed subjects to ascertain their construction of the situations in which they were placed. Instead situations were manipulated in such a way that no room for interpretation remained: subjects were told they failed or succeeded; they expected further testing or did not. In these carefully controlled experiments there was little room for idiosyncratic constructions of situation. Perhaps this suggests a resolution of the apparent inconsistency in Mischel's view of psychological situations. So long as research is conducted in carefully controlled settings, the experimenter may be able to argue that situations are presented unambiguously to subjects, and are thus "powerful" in the sense that no alternate interpretations are possible.

But as researchers approach Mischel's ideal of conducting research in the complex social settings in which people live and behave, it is increasingly necessary to enlist subjects in describing the more and more complex array of idiosyncratically meaningful variables.

These attempts to resolve the apparent inconsistency leaves some problems unanswered, however. If either or both of the above interpretations is/are correct, why must Mischel talk about "interactions" between situations and person variables at all? If it is supremely important in personality research to determine how subjects interpret situations, what sense does it make to speak of situations as though they existed independently of their construction by persons? It seems to me that Mischel's massive case for a new paradigm in personality argues (by implication) that for practical and operational reasons in research, situations do not exist outside the idiosyncratic constructions of subjects. As Mischel has developed the argument, this would appear to be the preeminent reason for enlisting the aid of subjects in determining what situational stimuli and manipulations are important or relevant to them. Use of what Mischel calls "actuarial data" (which may allow us to predict, for example, that most post-hospital mental patients improve more rapidly in the community with jobs and family support than in institutions) may provide some opportunity for the researcher to make grossly general predictions without knowledge of person variables, but such data does very little to enable prediction and control of the behavior of individuals. Closely controlled and circumscribed laboratory experiments may, indeed, require less participation of subjects in defining situations, but one does not proceed

very far in the direction of experimental realism or settings outside laboratories before this caveat must be disregarded. Unquestionably, it is consistent with Mischel's central focus to abandon the notion of psychological situations existing independent of subjects' views of them.

4. An Interpretation. I would finally offer a speculative footnote to this discussion of the locus of situation. Mischel believes that some of the criticism of his theory may be motivated by its potential for providing a "paradigm crisis" (Mischel, 1973c, p. 254) in personality study, as indeed it may. We might speculate that his own unwillingness to argue consistently that the locus of situation is in subjects' idiosyncratic constructs may stem from something of a philosophical crisis of his own. A strict behaviorism, with its antecedents in logical positivism, is comfortable with the notion of behavior control through manipulation of situation. But if we are correct in saying that Mischel's paradigm implies that researchers must deal with situations only as they exist in subjects' "minds," then we have placed him, perhaps unwillingly, in a strongly relativist position which seems rather gestaltist and quite "cognitive." Mischel himself notes (Mischel, 1973a, pp. 342-343) with some hint of trepidation that social behavior theorists and Rogerians (existential-phenomenologists) now share a discontent with dispositional constructs "about the a priori nature of personality." He is quick to note the essential difference, however: the existential-phenomenological orientation posits man as being what he wills to be, whereas the social behavior (social learning) theorist "requires more specific causal analyses that link what the person

does and construes to the psychological conditions in which he does it" (Mischel, 1973a, p. 343).

But in support of our speculation Rotter (1975, pp. 56-67) flatly characterizes social learning theory as:

"a molar theory of personality that attempts to integrate two diverse but significant trends in American psychology -- the stimulus-response, or reinforcement, theories on the one hand and the cognitive, or field, theories on the other. It is a theory that attempts to deal with the complexity of human behavior without yielding the goal of utilizing operationally definable constructs and empirically testable hypotheses." (Rotter, 1975, p. 57).

The speculation may be quite wrong in the sense that Mischel may not actually feel uncomfortable at all on his dialectical bridge between gestaltist and behaviorist camps. As for the theoretical ambiguity we have ascribed to that duality, one might even say that a little ambivalence adds flexibility and resilience to a theoretical model which is largely untried.

My own position is that it is most consistent with the mainstream of "cognitive social learning theory" to recognize that situations do not possess "power" or (conversely) qualities of "ambiguity" independently of persons' constructions of them. In its most consistent form social learning theory makes an absolute identification of situation and personal constructs; it is a model whose strength (philosophically, theoretically, heuristically, pragmatically) is precisely that it takes seriously the interaction of person and environment. It is a paradigm which sees man neither as indiscriminately responsive to environmental stimuli, nor as regulated by

inner dispositions which produce totally consistent behavior; but instead espouses what may be the first radically interactionist or mediationist view of man in the modern study of personality. Not only do persons construe situations and mediate the impact of environmental stimuli on their behavior, but by behaving they influence and change the environment itself.

III. RATIONALE FOR AN EXPERIMENT: DOGMATISM V/S SOCIAL LEARNING

A. Interface of Dogmatism and Social Learning Theories

It has already been suggested that the social learning model and dogmatism theory are of significance to the study of speech communication, and that the way in which they relate would emerge from a review of recent literature in the behavioral and social sciences. I will now suggest some specific relationships drawn from the foregoing review.

First, dogmatism (as conceived by Rokeach) is clearly a psychological trait (as conceived by Mischel). We have noted that dogmatism is postulated as a relatively stable and enduring feature of the structure of personality, influencing behavior across ideological lines. From the history of authoritarianism and dogmatism we have seen this trait inferred by theorists and researchers from very diverse sorts of behaviors relative to ethnocentrism, anti-semitism, reliance on authority, resistance to change, party-line thinking, and so on. This trait is designed to predict accurately how people will behave in a variety of situations and that they will behave similarly in similar situations. Moreover, it is believed that dogmatism can be measured by using a paper-and-pencil instrument which is capable

of isolating not only the presence of the trait, but also carefully differentiated levels of it. On all these levels, Rokeach and Mischel are quite evidently speaking of the same thing; dogmatism is a prime example of a psychological trait.

Second, Mischel's (1968; 1973c, pp. 252-283) challenge to trait theorists and psychodynamically oriented therapists to demonstrate the utility of inferring underlying dispositional tendencies from diverse behaviors is a challenge which advocates of dogmatism must confront as well. Because Mischel levels his challenge very strongly and because it is an issue relative to dogmatism which we have not commented on directly in this review, an examination of several possible responses to the challenge is in order. One response to Mischel might be that his challenge was issued in the context of his attack on psycho-dynamic therapy strategies which have as great a likelihood, Mischel believes, of harming clients and patients as helping them. Unless insights from dogmatism theory were to become integral in psycho-therapeutic practice, the challenge would not apply. But Mischel challenges not only therapists, he challenges the utility of the application of traits in general. Furthermore, dogmatism scores, if invalid, may cause as great a harm in improper school placement or teacher behavior based on ill-founded expectancies of "dogmatic" students, for example, as would an invalid psychotherapeutic method. And ultimately, the issue of utility can never be resolved until there is greater certainty whether a given trait or personality construct is theoretically sound and applied consistently with theory.

Finally, it would seem appropriate to test these two theoretical positions against each other in areas where each seems strong and where the two clash most directly. In the case of dogmatism, this would be the prediction that high dogmatic persons are resistant to new information as measured by recall. In the case of social learning theory, the aspect which most directly confronts the competing trait theory is the idea that differences in persons are able to predict behavior only in ambiguous or low constraint situations, whereas in unambiguous or high constraint conditions, the effect of the person variable or trait will "wash out" as persons respond to the increased demands of the situation.

Accordingly, this review of literature in dogmatism and social learning theory leads to several specific hypotheses. From dogmatism:

1. In any situation where subjects are presented with information contrary to their belief systems, dogmatism will be a significant predictor of subjects' recall of the information.

Note that this would not apply to information from a perceived high credible source.

From social learning theory:

- 2a. In situations of low, medium, and high constraint where subjects are presented with information contrary to their belief systems, level of constraint will be the most significant predictor of memory of contrary information.
- 2b. In a high constraint situation the ability of dogmatism scores to predict subjects' recall of information contrary to their belief systems will be "washed out."

Note that 2b is an extension of 2a which suggests as Mischel (1973c) indicates that differences in persons will predict behavior

less and less as situations become less ambiguous or more highly constrained.

Chapter Three describes the design of an experiment intended to provide a comparative test of dogmatism and social learning theories. This experiment attempted to create both low and high constraint ("weak" and "powerful," "ambiguous" and "unambiguous") situations on the assumption that if dogmatism theory prevails, that trait will predict behavioral differences in subjects in all conditions. Conversely, if social learning theory prevails, dogmatism should predict recall only in the low constraint condition. However, in a situation highly constrained by Mischel's characteristics of situational strength, dogmatism should cease predicting recall as constraint "takes over."

CHAPTER THREE

DESIGN AND PREDICTIONS; PROCEDURES

In this chapter we shall first describe the design of the experiment. The discussion will then specify hypotheses in terms of this design, based on predictions from Chapter Two. Finally, we shall describe procedures of conducting the experiment and strategies of data analysis.

I. DESIGN AND PREDICTIONS

The experiment was intended to test the possibility of using levels of dogmatism and degrees of situational constraint to predict subjects' recall of information which is contrary to their belief structures. Subjects were pre-tested for dogmatism; placed in experimental conditions designed to contain high, medium, or low constraint; and post-tested for their perceptions of situational constraint levels and their ability to remember contrary information. Dogmatism levels were determined by scores on the Rokeach "E" Scale. Levels of situational constraint were defined in terms of Mischel's criteria: knowledge of appropriate behavior, knowledge of outcomes of the appropriate behavior, and incentive or reward for appropriate behavior (see "Procedures" below). No attempt was made to operationalize Mischel's fourth category of situational constraint, that of subjects' skills relevant to the experimental task. To summarize, the following variables were identified:

- Levels of dogmatism (DOG)
- Designated Constraint Levels (DC)
 - High Designated Constraint (HDC)
 - Medium Designated Constraint (MDC)
 - Low Designated Constraint (LDC)

- Perceived Constraint Levels (PC)

Knowledge of Appropriate Behavior (PC 1)

Knowledge of Outcomes of Appropriate Behavior (PC 2)

Perceived Importance (Incentive) of Appropriate Behavior
(PC 3)

- Dependent Variable: Memory of Contrary Information (MEM)

The following predictions derived from dogmatism and social learning theories were made with respect to the possibility of using these variables to predict levels of the dependent variable MEM:

Dogmatism

- 1) As dogmatism scores (DOG) increase, recall of contrary information (MEM) will decrease in all situational constraint conditions.

Social Learning Theory

- 2a) As designated constraint (DC) increases, recall of contrary information (MEM) will increase.
- 2b) As designated constraint (DC) increases the ability of dogmatism scores (DOG) to function as a predictor of recall of contrary information (MEM) will decrease.
- 3a) As perceived constraint (PC) increases, recall of contrary information (MEM) will increase.
- 3b) As perceived constraint (PC) increases, the ability of dogmatism scores (DOG) to function as a predictor of recall of contrary information (MEM) will decrease.

Several comments regarding these hypotheses should be noted.

Hypotheses 1) and 2a) are not necessarily competing. Trait theorists agree that persons respond to situational differences, but they would

argue that within a given situation dogmatism would continue to differentiate among persons in predicting relevant behavior. Thus confirmation of 1) and 2a), but not 2b), would offer support for the trait view. Hypothesis 2b) is an extension of 2a) and contrary to 1). Confirmation of 2a) and 2b) would support the social learning view of personality. Hypotheses 3a) and 3b) are parallel to 2a) and 2b) but with this difference: perceived constraint (PC) is a score reported by subjects on a post-test. Designated constraint is an experimental condition created by the experimenter. As we have seen in Chapter Two, Mischel believes that situations may possess a quality of strength or unambiguity, but he also argues that situations are construed by subjects. True to his advice that researchers must find techniques and procedures for enlisting subjects' assistance in assessing situations, this experiment asked subjects whether their perceptions of situational constraint agreed with the experimentally created constraint conditions. Their responses will be reflected in a numerical value of PC derived from the Post-Test. If DC proves not to function as a predictor of MEM (2a) and 2b) are disconfirmed), it is appropriate to ask whether PC as a de facto indicator of situational constraint has the effect hypothesized for DC. From the standpoint of the social learning theorists, the confirmations of 3a) and 3b) constitute the sine qua non of experimental support for the theory.

To summarize in terms of this experiment, the trait view predicts that dogmatism scores will significantly differentiate among subjects in their ability to remember contrary information, irrespective of situational constraint. The social learning view predicts that as subjects are placed in conditions of higher situational constraint they will

respond less to levels of dogmatism and more to the demands of situational constraint. In the HDC condition, the effects of dogmatism should wash out as subjects respond to this highly constrained, "unambiguous" situation.

II. PROCEDURE

We shall first present a brief, step-by-step summary of procedures, and then further explain several of the design/procedural points.

A. Step-by-Step Summary

1. First, subjects were placed in one of three experimental conditions, designed to be high, medium, or low constraint situations.

2. Subjects were placed in groups of eight to ten; each subject was given a set of instructions corresponding to the constraint condition (DC) in which the group was to function.

3. Subjects were instructed to read a case study of two divorced persons who plan marriage, but whose relationship is threatened by severe conflict. They were then instructed to discuss the case and five possible solutions provided with the case study.

4. Following the discussion, subjects were instructed to write down which solution each would select as the best of the solutions provided, and then to write several reasons defending the choice.

5. Subjects were then instructed to announce to the other group members which solution each had selected and the reasons for it.

6. Next, subjects were asked to consider (remember) a list of reasons in support of the four possible solutions which each subject had not selected.

7. Finally, subjects were requested to return the instruction booklet and complete the post-test.

B. Subjects

Subjects were undergraduate students enrolled in day and evening Speech Communication classes at California State University, Fullerton, during the spring semester, 1978. Each class was used as a separate subject pool from which subjects were assigned at random to one of three constraint conditions.

C. Levels of Constraint (DC)

Subjects were randomly assigned from each subject pool to one of three experimental conditions. The conditions were designated high, medium, or low constraint, depending on the kind of instructions provided each group of subjects. Mischel has defined situational constraint in terms of explicitness of instructions, subject knowledge of what behavior is appropriate or required, subject knowledge of the outcomes of required behavior, incentives or rewards for required behavior, and the degree subjects possess skills necessary for performance of required behavior. All criteria but the last were manipulated as independent variables in the three levels of constraint.

In the low constraint condition (LDC, Appendix A), subjects were provided sufficient instructions to complete the steps of reading and discussing a case study, deciding on one of five possible solutions, announcing and defending their choice of solution, and reading reasons for solutions other than the one they selected.

In the medium constraint condition (MDC, Appendix B), the task was identical to that of the other conditions. The level of constraint was increased by making instructions more explicit with respect to the criterion of subjects' knowledge of appropriate behavior. At two places in the instruction booklet subjects were told that their primary task

was to remember reasons for solutions to the problem other than the solution they selected as best.

In the high constraint condition (HDC, Appendix C), instructions were very explicit with respect to subjects knowledge of expected behavior, behavioral outcomes, and reward incentive. First, in several places the instruction booklet reminded the high constraint condition subjects that their primary task was to remember solutions and reasons for solutions which they did not select. Second, in an attempt to manipulate knowledge of behavioral outcomes, the instructions made it explicit that the post-test would ask subjects to recall solutions and their supporting reasons which were not the solution chosen. Finally, subjects were told that the group which scored highest on the recall test would be treated to refreshments by the experimenter.

D. Post Test

The post test (Appendix D) consisted of two sections. The first section was designed to check subjects' perception of constraint levels (PC). Each of the first three pages of the post test asked for subjects' perceptions on one of the three criteria of constraint manipulated in the study. The second section was the test of recall.*

*A series of pilot studies was undertaken to develop and refine these perceived constraint instruments and the instruction booklets. In the first pilot, subjects were asked to agree/disagree to a series of statements for each constraint criterion. These responses were factor analyzed, but no unambiguous factors of perceived constraint emerged. Two subsequent pilot studies were conducted asking subjects to make a multiple-choice selection of judge-ranked statements designed to reflect constraint criteria. Each "right" statement was clustered with two "wrong" statements, and subjects were asked to select the "right" statement from each cluster of three. For the criterion of incentive, subjects were asked to agree/disagree with statements indicating that it was important to score high on the recall test ("final test") which would follow. Through a combination of correlating scores on these measures with the constraint condition (DC) of each subject and extensive interviewing of subjects, the present form of the post test and instructions to subjects was developed.

As we have seen, Mischel argues both that situations may possess a quality of powerfulness or lack of ambiguity and that situational characteristics do not exist outside persons' perceptions of them. The procedure followed here was to attempt to construct experimental conditions with varying degrees of constraint, and then to check subjects' perception of such constraint on the post-test.

Regarding the criterion of subject knowledge of appropriate behavior (PC 1), page 1 of the post test listed nine statements which had been ranked by three judges as to how closely each approximated subjects' primary task of remembering reasons for problem solutions which had not been chosen. Three statements were judged as correctly or closely approximating the primary task:

1. "looking at points of view other than our own"
2. "seeing how well we could remember reasons for solutions to a problem which were different from the solutions we chose"
3. "gaining experience in evaluating reasons which support solutions I did not select"

A score was assigned each subject on the criterion of PC 1 based on how many of these "correct" statements were selected. Scores on the variable PC 1 ranged from zero to three.

Regarding the criterion of subject knowledge of behavioral outcomes (PC 2), page two of the post test listed nine statements which had been judged by three judges as accurately or inaccurately representing what the recall test would ask (if subjects knew what the recall test would ask, they would know the "behavioral outcome" of scoring high on that test). The following statements were judged as stating

correctly what the outcome of appropriate behavior would be:

1. "I will be asked to recall reasons which support solutions I did not select."
2. "I will be asked how well I remember reasons for solutions to a problem which are different from the solution I chose."
3. "I will be asked to remember points of view which differ from mine."

A score was assigned each subject on the criterion of PC 2 on the basis of how many of these "correct" statements were chosen. Scores on the variable PC 2 ranged from zero to three.

Regarding the criterion of incentive, page three of the post test asked subjects to rate how important it was to them to do well on the recall test which they were about to take. They were asked to agree or disagree on a five point scale to the statements: "It is important to me how well I do on the final test;" and "It is not very important to me how well our group does on the final test." A score was assigned each subject on this criterion (PC 3) on the basis of their responses to these questions. Scores on the variable PC 3 ranged from two to ten.

Finally, the post test asked subjects to list solutions to the problem described in the case study other than the solution they had selected as best, and to list reasons for each solution which had been provided earlier in each subject's instructions. Responses to this section of the post test were scored independently by three judges. Each solution and supporting reason was worth from zero to two points. Each judge was to assign points on the basis of whether each answer closely approximated the substance of the solutions and supporting

reasons provided. The three judges' scores for each recall test were averaged to provide each subject a score on the variable MEM ranging from zero to 32.

III. DATA ANALYTIC PROCEDURE

The data were subjected to a multiple regression analysis (MR) method. This approach was chosen because:

- 1) The MR approach is capable of determining amounts of variance accounted for by several independent variables which may not be independent of each other. In this study, it was anticipated that dogmatism (DOG), designated constraint level (DC), and perceived constraint scores (PC 1, PC 2, PC 3), might contribute to a predictor of the dependent variable of memory (MEM). The MR analysis provides an estimate of the amount of variance accounted for by each of several variables in the event that their independence is not demonstrable.
- 2) The MR approach makes it possible to preserve the interval measurement of dogmatism; since alternative data analytic procedures would necessitate dividing subjects into arbitrarily determined levels of DOG. Thus the MR analysis method provides or preserves more information with respect to DOG, and eliminates the necessity of pre-assigning subjects to conditions on the basis of DOG scores.

In summary, this experiment was designed to test the competing hypotheses of dogmatism theory and social learning theory with respect to subjects' ability to remember information which is contrary to something they believe. In the chapters which follow, we shall examine

the results of the experiment, and offer an interpretation of those results.

CHAPTER FOUR

RESULTS

This chapter will report data generated in this study and results of data analysis. In addition, these data and results will be related to specific hypotheses from Chapter Three.

I. DATA FROM ASSESSMENTS OF DOGMATISM (DOG), PERCEIVED CONSTRAINT (PC), AND MEMORY (MEM)

Dogmatism scores (DOG) are reported in Table I. Note that DOG is a pre-test score taken from subject responses to the Rokeach E-Scale.

Table I: Dogmatism Scores (DOG)

	Mean	S.D.	Lowest Score	Highest Score	N
All Subjects	-22.276	27.052	-99	+57	105
Low Designated Constraint (LDC)	-19.778	31.364	-60	+57	36
Medium Designated Constraint (MDC)	-28.871	29.400	-99	+23	31
High Designated Constraint (HDC)	-16.842	26.423	-63	+40	38

Perceived constraint scores (PC) are reported in Table II. Note that PC 1 is the post test score reflecting subjects' ability to identify the primary task of remembering information contrary to their beliefs (individual scores ranged 0-3); PC 2 is the post test score reflecting subjects' ability to recognize what the memory test would later ask (individual scores ranged 0-3); PC 3 is the post test score reflecting subjects' incentive for scoring high on the final memory test (individual scores ranged 0-10); PC is the total of PC 1, PC 2, and PC 3. Means for PC are shown by level of designated constraint; low designated constraint (LDC), medium designated constraint (MDC), and high designated constraint (HDC).

Table II: Perceived Constraint by DC Level

Criterion Variable	DC Level	Mean	S.D	N	D.F.	F	Significance
PC Mean, all s's = 9.305	LDC	8.278	1.684	36	2/102	18.135	>.001
	MDC	8.452	2.567	31			
	HDC	10.974	2.150	38			
PC 1 Mean, all s's = 1.229	LDC	.972	.696	36	2/102	14.326	>.001
	MDC	.903	.597	31			
	HDC	1.737	.860	38			
PC 2 Mean, all s's = 1.686	LDC	.806	1.037	36	2/102	27.000	>.001
	MDC	1.613	1.230	31			
	HDC	2.579	.858	38			
PC 3 Mean, all s's = 6.390	LDC	6.500	1.682	36	2/102	1.698	Not Significant
	MDC	5.935	1.750	31			
	HDC	6.658	1.615	38			

Memory (MEM) scores are reported in Table III. Note that memory is the dependent variable; it is a post test score of the number of correct case solutions and supporting reasons (other than the solution selected by each subject). Individual scores range 0-32 (0-2 for each solution and reason). Each memory test was scored by three raters; each individual MEM score is an average of the three raters' assessments.

Table III: Memory Scores (MEM)

	Mean	S.D.	N
All Subjects	14.460	6.147	105
Low Designated Constraint (LDC)	12.556	3.908	36
Medium Designated Constraint (MDC)	12.559	5.462	31
High Designated Constraint (HDC)	17.816	7.032	38

What follows is results of analyses of the above data.

II. ANALYSIS OF DATA

A. Correlations Among Variables

Correlations among all variables (Subject N = 105) are reported in Table IV.

Table IV: Correlation Among Variables

	Correlation	Level of Significance
MEM:		
MEM X DOG	-.054	N. S.
MEM X DC	.363	>.001
MEM X PC	.444	>.001
DC:		
DC X DOG	.087	N. S.
DC X PC	.464	>.001
DC X MEM	.363	>.001
DOG:		
DOG X MEM	-.054	N. S.
DOG X DC	.087	N. S.
DOG X PC	.193	>.024
PC:		
PC X DOG	.193	>.024
PC X DC	.464	>.001
PC X MEM	.444	>.001

B. Multiple Regression Analysis of Data

Table V indicates the results of multiple regression (MR) analysis of data from all measures. The table displays coefficients of regression (b), variance (Multiple-R), degrees of freedom (DF), amount of change contributed; then overall F, significance, and variance accounted for by all variables in the analysis (R^2). PC has been separated into variables PC 1, PC 2, and PC 3. The dependent

variable is MEM.

Table V: MR, All Variables

Variable	b	Multiple-R	R ²	DF	Change	Overall
PC 1	.774	.249	.062	5/99	.062	F = 6.577 Sig. = >.001 R ² = .249
PC 2	1.024	.388	.151	5/99	.088	
PC 3	.947	.455	.207	5/99	.057	
DC	1.456	.479	.230	5/99	.023	
DOG	- .0325	.499	.249	5/99	.019	

Table VI indicates the results of multiple regression (MR) analysis of DC data. The dependent variable is MEM.

Table VI: MR, DC Only

Variable	b	Multiple-R	R ²	DF	Change	Overall
DC	2.651	.364	.132	1/103	.132	F = 15.701 Sig. = >.001 R ² = .132

Table VII indicates the results of multiple regression (MR) analysis of data from measures of PC. The dependent variable is MEM.

Table VII: MR; PC 1, PC 2, PC 3

Variable	b	Multiple-R	R ²	DF	Change	Overall
PC 1	.942	.249	.062	3/101	.062	F = 8.796 Sig. = >.001 R ² = .207
PC 3	.866	.352	.124	3/101	.062	
PC 2	1.517	.455	.207	3/101	.083	

III. DATA AND DATA ANALYSIS APPLIED TO SPECIFIC HYPOTHESES

Results of data analysis are reported in this section in response to the hypotheses of this experiment (Chapter Three).

- 1) As dogmatism scores (DOG) increase, recall of contrary information (MEM) will decrease in all situational constraint conditions.

This hypothesis was disconfirmed. No main effect of DOG was found on the dependent variable, MEM. Table IV shows a slight negative correlation (non-significant) between these variables. The MR results shown in Table V indicate that DOG accounts for an insignificant amount of the variance in MEM. In addition, a separate analysis of the data in the low constraint condition produced a correlation of $-.026$ (non-significant), indicating that there was no relationship between DOG and MEM in this condition, taken by itself.

- 2a) As designated constraint (DC) increases, recall of contrary information (MEM) will increase.

There is some (very qualified) support for this hypothesis. Table IV shows a significant correlation between DC and MEM of $.363$. Results of MR analysis reported in Table VI indicates $F = 15.701$, with 13% of variance in MEM accounted for by DC. But Table V results (of an MR analysis which includes PC, DC, and DOG) indicate that DC accounts for only 2.3% of variance beyond that accounted for by PC 1, PC 2, and PC 3. The data indicate some shared variance of DC with MEM and PC, but the only regression analysis results which confirm this hypothesis are those (Table VI) which ignore the impact of PC on MEM.

- 2b) As designated constraint (DC) increases, the ability of dogmatism scores (DOG) to function as a predictor of recall of contrary information (MEM) will decrease.

Although the data indicate that situational constraint functioned as a predictor of MEM, this hypothesis could not be confirmed because in no condition did DOG function as a predictor of MEM.

- 3a) As perceived constraint (PC) increases, recall of contrary information (MEM) will increase.

This hypothesis was confirmed significantly. The correlation of .478 (from Table IV) indicates that PC and MEM share a significant amount of variance. Results of the MR analysis from Table VII indicates that PC 1, PC 2, and PC 3 taken together are able to function as a significant predictor of MEM. Table V indicates that these three dimensions of PC are, with all variables included in the analysis, the most significant predictors of the dependent variable MEM.

- 3b) As perceived constraint (PC) increases, the ability of dogmatism scores (DOG) to function as a predictor of recall of contrary information (MEM) will decrease.

This hypothesis could not be confirmed; there was no condition perceived or designated in which dogmatism scores predicted MEM.

IV. SUMMARY OF RESULTS

The data offer no support for the expectation from dogmatism theory that DOG would provide a predictor of MEM. The MR analytic method provides preliminary correlation figures which indicate shared

variance among variables, information useful in selecting combinations of variables to try in various combinations for regression. The correlational figures between DOG and MEM indicate that no combination of variables would produce results other than those reported here. The amount of variance in MEM accounted for by DOG is insignificant.

The data offer very qualified support for the prediction from social learning theory that differential levels of designated constraint created across experimental conditions may be used to predict variance in a dependent variable such as MEM. But this support carries with it the qualification that measured levels of perceived constraint are not available or are ignored. I will argue in Chapter Five that these results are not necessarily at odds with social learning theory.

The data offer impressive support for the social learning expectation that increasing levels of perceived constraint would provide a significant predictor of the dependent variable MEM. The corollary prediction that effects of DOG would wash out as perceived situational constraint increased, while not exactly disconfirmed, could not be confirmed, either, since there was no condition for comparison in which DOG functioned as a predictor of MEM.

In Chapter Five I shall offer an interpretation of these data and suggest where and how further research should proceed.

CHAPTER FIVE

INTERPRETATION AND IMPLICATION

This chapter will argue that the results reported in Chapter Four constitute significant support for the social learning "reconceptualization" of personality. It will then offer an explanation of why a more apparent comparison of theories did not occur in this study, due to the failure of DOG to emerge as a significant predictor of MEM. Finally, this chapter will explore implications for further research in personality.

I. SUPPORT FOR SOCIAL LEARNING THEORY

The data which show perceived constraint as a significant predictor of social learning theory offer significant support for social learning theory.

The results of MR analysis reported in Tables V and VII indicate that perceived situational constraint PC functioned to predict MEM to a highly significant degree ($F = 8.796$; $Sig = >.001$) and to account for 21% of variance. MR analysis results reported in Tables V and VI also indicate qualified support for the hypothesis that DC would emerge as a predictor of MEM ($F = 15.701$; $Sig = >.001$) and account for 13% of variance. This conclusion is, as we have noted, dependent on the absence of data on PC, or the choice to evaluate DC as a predictor of MEM without respect to PC data.

But there is additional support for social learning theory here: the correlation between PC and DC from Table IV (Correlation of $PC \times DC = .464$; $Sig = >.001$) suggests the possibility that the experiment was successful in manipulating PC by creating lower and higher constraint conditions (DC). Additional qualified support for the success of this experiment in increasing PC by manipulating Mischel's

elements of constraint in DC conditions is to be found in Table II. Differences in mean PC responses from LDC to HDC are significant except with respect to PC 3. The ability of DC to function as a predictor of MEM, as we have seen, was very limited. But social learning theory argues that situational constraints exist for subjects only to the extent that they are perceived to exist. Thus the indication from these data that perceived constraint (PC) varied significantly with experimentally created constraint conditions (DC) and functioned as a predictor of MEM is highly consistent with social learning theory.

To summarize, the data confirm PC as a significant predictor of the dependent variable MEM and indicate also that PC may be manipulated through the creation of conditions designated as high constraint.

The data offer no support for the ability of dogmatism to differentiate among subjects with respect to their performance on the measure of MEM. The correlation between DOG and MEM (Table IV) shows no relationship between these variables; results of MR analysis (Table V) indicate that DOG is unable to account significantly for variance in MEM. Taking dogmatism theory at face value, it should have predicted MEM in this experiment if it were able to. And the most plausible explanation of why it was not able to comes from social learning theory which predicts that strong situations will overcome effects of dogmatism.

Further, to claim support for social learning theory is consistent with earlier research on the relationship of dogmatism to recall or memory. As we have seen, this research found dogmatism inversely related to recall, irrespective of source credibility or presence of a "yielding" component. The only plausible explanation for why the data from those experiments and the present study are different comes from

the social learning theorists' position that perceived powerful (high constraint) situations overcome the effects of traits.

It should be said that the choice of the dogmatism construct provides a particularly rigorous test of the social learning model. Mischel recognizes that of all psychodynamically-oriented personality tests, intelligence tests (those dealing with cognitive skills) have proved the strongest predictors of behavior. Their predictions have been the least vulnerable to differences in situations. Although it is somewhat speculative to say that dogmatism is related to intelligence, Rokeach (1960) has indicated his belief that dogmatism may come to be recognized as a dimension of intelligence. It is not speculative to recognize that the dogmatism model is closely related to the whole area of cognitive skills. Thus, it would appear that in this experiment the social learning model has survived a very rigorous test as it competed with a widely respected and carefully validated construct which relates closely to the area of personality theory least susceptible to the vigorous criticisms of the social learning theorists.

One additional note: A casual examination of this data might make the results appear trivial in some sense that the experimenter told subjects what to do and they did it! To be sure, setting up strong situational constraints along the lines Mischel suggests is the equivalent of introducing very explicit demand characteristics. And it is true that the trait theorist admits that persons do respond to situational (or experimental) demands. What this experiment supports, however, is the hypothesis representing the core of social learning theory which is denied by the psychodynamic trait view: that situational demands of constraints may be experimentally introduced which

will overcome the effects of differences in trait levels of persons.

II. EXPLANATION FOR DOGMATISM'S FAILURE TO EMERGE AS A PREDICTOR

There is a thorn in the rose this experiment seems to have presented to social learning proponents: the same experiment which successfully demonstrated that subjects respond to perceived high situational constraints in the way predicted, failed to make the desired comparison of theories which would have been evident had DOG proved to be a predictor of MEM in the low designated constraint condition (LDC). In other words, the data support social learning theory, but one wonders if the data disconfirm the predictions of dogmatism theory since there is no evidence in the experiment to show that the trait was functioning at all.

There are several possible explanations. One might be that something about the experiment made it impossible for DOG to predict MEM. There appear to be two ways this could occur. First, it might be argued that the experiment itself failed to manipulate subjects' belief structures, that the reasons and solutions asked for on the recall test were not really "contrary" to subjects' belief structures, because they were not really committed to any solution. In retrospect it might have been useful to include in the post test a cross-check of whether subjects at that point remained committed to the solution chosen earlier. But lacking such check, the experiment very carefully operationalizes levels of commitment in a way consistent with cognitive dissonance research. There is nothing in dogmatism theory itself which would suggest anything other than the conclusion that when people make a written, publicly announced and defended commitment, this choice enters into their belief system.

Was the failure of dogmatism to emerge as a predictor of memory due to the non-objective post test? Almost certainly not. Note again the correlation between DOG on MEM of $-.054$ (Table IV), and the correlation of LDC of DOG and MEM of $-.026$. These data might suggest that high dogmatic subjects remembered as much information contrary to their belief system as did low dogmatic subjects, even where situational constraint was at its lowest. It might be argued that certain kinds of tests might cause high dogmatic persons to fear, resent, or rebel against the test itself and thus seem to remember less. But it is difficult to imagine the kind of test which by itself (and given the tendency of high dogmatics to resist contrary information) would cause high dogmatic persons to remember more than theory would predict, recalling contrary information as much as low dogmatic subjects, which the data above suggest.

The only other basis on which one might argue that dogmatism could not function in the experiment is to admit that something intervened to overcome the effects of the trait. But as a defense of trait theory, this would amount to a capitulation to those who argue that situations intervene to prevent the prediction of behavior by traits. Further, dogmatism theory would say that if the experimental manipulation affects beliefs and the dependent variable is relevant, dogmatism must differentiate among the behaviors of subjects.

A second possible explanation of the failure of DOG to predict MEM is that the experiment unwittingly created what Rokeach calls a "silver platter" condition, in which subjects perceived the new information to come from a highly credible authority figure. In other words, if subjects saw the contrary solutions and supporting reasons as

originating with a high credible experimenter, dogmatism theory would say that the tendency of high dogmatics to accept uncritically anything their authority figures say ("party-line thinking") would account for their remembering the contrary information as well as low dogmatic persons.

There are several reasons why this explanation cannot account for the failure of DOG to predict MEM.

1) Party-line thinking rests on the "perception of irrelevance" dimension of dogmatism. High dogmatics accept their authority-figures' ideas uncritically and come to hold contradictory beliefs because they fail to see connections among them. But the theory does nothing to explain the situation when one authority figure explicitly refutes another, or when the relevance of contrary beliefs cannot be evaded. The silver platter or party-line thinking motif cannot explain how highly dogmatic persons can remember unavoidably contradictory points of view as to the solution of a problem.

2) The reasons for contrary solutions given in the experiment are presented as reasons why "some people" believe each solution is best. Thus, the source of the information high dogmatic subjects remembered was not the experimenter, but "some people," probably not a highly credible source.

3) Research does not support the party-line thinking hypothesis. The review of literature in Chapter Two points to several studies which find dogmatism inversely related to memory, even in the case of a highly credible source of information.

There is a third explanation for the failure of dogmatism to predict memory in low constraint conditions which must be advanced: the

experiment merely failed to create a sufficiently low constraint condition or situation. The possibility is provocative: it suggests that the low constraint perceived by subjects was only relatively lower, and that all conditions were higher in constraint than the "ambiguous" level at which differences in persons may function to predict behavior. Although it is impossible to prove this explanation, I will argue post hoc that it may be true, and is a plausible explanation of the experimental results.

First, the notion that the entire experimental task presented subjects with a highly constrained situation which "washed out" the effects of dogmatism is consistent with some data (gathered earlier but not reported*) from a version of this experiment which failed due to subjects' inability or refusal to complete the task. I concluded at the time that this attempt to run the experiment had failed because Mischel's advice about embedding behavioral research in the context of environments and situations familiar to subjects had not been taken

*An early attempt to run the experiment using about 150 subjects from a non-university community group produced some data, but this data was judged to be untrustworthy because: (1) Leaders of the community group were used as facilitators in each cell of subjects; these facilitators' behavior varied widely in each group from "spoon-feeding" information to subjects, to (in one case) highly vocal attacks on the experiment itself with the result that subjects in this group refused to complete the task and post test. (2) Out of a pre-tested population of 150, fewer than 50 were in attendance the night of the experiment. (3) Following the experiment several subjects indicated that the assistant who had administered the pre-test used the term "personality" with respect to the test. Subjects reported considerable anxiety about whether the experiment might indicate something good or bad about their personalities.

For these reasons the data from these subjects are not reported. The value of this experience was that several procedural changes were made in conducting the second run of the experiment.

seriously enough. Although it would be inappropriate to rely on such suspect data, it did occur to me that it would be interesting to reexamine the data for any indication in it that my speculation about the relative ambiguity of the earlier experimental setting was correct.

Appendix E displays the results of MR analysis of DOG with the dependent variable MEM from the earlier version of the experiment. In addition, it compares data regarding PC and DOG between the earlier version and the present version of the experiment. DOG emerges as a predictor of MEM in the earlier version ($F = 5.659$; $Sig = >.02$) accounting for 11% of variance. Comparisons of DOG scores between the two subject populations show no significant differences (even though one was a "community" group and the other a "university" population). Comparisons of PC levels also show no significant differences.

These data, such as they are, do not offer a strong indication that constraint was lower, allowing DOG to function as a predictor of MEM. Neither DOG nor PC scores were different enough to argue for a difference in constraint. Yet the situation certainly seemed ambiguous for the earlier subjects (as I watched the experiment disintegrate that December night). A possible answer may lie in that seeming ambiguity. In retrospect, when the earlier experiment failed, I believed I had created a task which was too unfamiliar to these subjects; a task requiring skills of following involved instructions, writing ideas, discussing relative merits of solutions, and memorizing information. Thus, I took the experiment to a group of university students for whom this is a more familiar task, because they possessed skills relevant to the task. To use Mischel's terms, the university student subjects' skills made the task (or situation) less ambiguous, and by

definition, more highly constrained. The irony is that by shifting subject populations, I may have unintentionally but effectively manipulated the one dimension of situational constraint Mischel (1973c) discusses which I intended to omit; the variable of subjects' skills relevant to the task.

This explanation of why the present study failed to create a condition in which DOG might emerge as a predictor of MEM has implications for research in social learning theory which we shall examine below. For now, it is suggested that this explanation, while not supported by reliable data, is plausible and more consistent with theory than any of the others examined above.

III. IMPLICATIONS FOR ADDITIONAL RESEARCH

One very apparent implication for additional research arising out of this study is the realization that a comparative experiment which aspires to produce data showing a trait at work in one condition and situational constraints overcoming the effects of the trait in another condition may be very difficult to design. Mischel's advice to do research which is embedded in contexts subjects find familiar, makes such aspirations difficult. If an experiment is to create both an ambiguous (low constraint) and an unambiguous (high constraint) situation for purposes of comparison, it must have one foot in and the other out of these "familiar contexts." If I am correct about the differences in perceptions of this experiment between two subject populations, taking the same experiment from one group (for whom it is unfamiliar) across town to another group (for whom it is more familiar) may effectively alter the entire experiment from a "low constraint" to

a "high constraint" condition.

Further, the experimenter who would seek to create for a subject population both low and high constraint conditions appears faced with the necessity either of finding some way to manipulate subjects' skills (relevant to the experimental task), or else finding subjects whose relevant skills are very homogeneous. Otherwise the researcher faces the likelihood of subjects' differences in relevant skills cancelling out their perception of other constraint dimensions.

On the other hand, if comparative experiments testing competing orientations are important, other studies similar to this one should be conducted using other personality variables. It may be that dogmatism is somehow atypical of personality traits and rather more vulnerable to situational demands than other traits, instead of less so, as I have argued. It may be that a population of university students is more accustomed to responding to the constraints of the university than subjects who are freer to fall back on past consistent behavior patterns due to their not being in school. This eventuality would suggest also redesigning the present experiment to adapt to non-university subjects.

Taking a longer view, some issues the present study does not address are waiting for experimental examination. Mischel's entire "reconceptualization" of personality into "person variables" (which are intended to represent subjects' styles of interpreting situations) is untested. The provocative possibility of identifying "equivalence classes" of situations would be a valuable contribution to research design: such equivalent situations would make advance estimates of

situational strength more nearly within reach than the present social learning model allows. The model now affirms the idiosyncratic nature of persons' perception of situations, but offers little that would help the experimenter deal with that reality (except for Mischel's advice that we must all lower our sights and predict the behavior of one subject at a time, since each person imposes his private reality on the experimenter's conditions). Such "equivalence classes" of situations might be an area of personality study especially suited to researchers in speech communication, since communication settings and arenas have been and are classified as to types, special constraints, particular behavioral predictions, etc.

On the other hand, Mischel points to behavioral studies which are far more accurate because they enlist the assistance and understanding of subjects in a one-to-one or one-to-few relationship with the experimenter. The methodological technology for such research should be a primary goal for future study. It may be that the field of speech communication could pursue this goal in the area of communication anxiety where more specific predictions and a much closer interaction of experimenter and subject in assessing and reconditioning situational cues would be of significant research interest and very helpful to subjects as well.

IV. CONCLUSION

The present study offers evidence that some of the changes in orientation toward personality argued by social learning theorists may be in order. Our stereotypical judgments of persons legitimized by tests which can give you the "inner structure" of anybody who happens to have a pencil, our readiness to correlate personality traits with

any old message variable or dimension of credibility we happen to think of, and in general our understandable but somewhat reprehensible desire to have persons "pinned and wriggling on a wall" appears to be up for reconsideration.

If something like the social learning model replaces the trait view, it probably will not simplify our task of understanding communication behavior, but instead will very properly complicate it. Yet we in speech communication stand to benefit from it significantly.

Among the benefits will be a view of man which points to a possible resolution of the current ambivalence with which we embrace both a radical behaviorist experimental methodology and a gee-whiz gestaltist attitude theory.

We may be able to make a unique contribution to the view of persons and situations with insights into symbol-using as a significant "person variable" which structures and predicts how persons interpret environmental cues.

And we may both contribute to and benefit from any acceptance of the social learning model in society at large: if strategies of personnel selection were based less on who applicants "are" and focused more on how people respond to situations, the resulting greater emphasis in training in the skills necessary for jobs might well place a greater premium on communication expertise. If government, education, business, religion should take seriously the realization that persons are capable of examining and remembering all information relevant to a decision, creating the situations which demand and reward such openmindedness could very well be the task and the contribution of people with speech communication training.

Finally, the social learning model of personality is a view of man which affirms that the questions of what a person is like and what the person's environment is like are really the same question. If this model is confirmed by future research it may prove to be of great value as an alternative to the more traditional western view of man-over-against-environment. It may promote strategies of educating, training, influencing, and healing persons based on changes in environments. It may offer an important synthesis in the continuing debate between Behaviorist and Gestalt-field learning theorists, and it may promote individuals' feelings of responsibility for their own physical and social environments. It is hoped that the data offered here in support of the social learning conceptualization of personality may contribute to and create interest in the task of testing and applying this important view of man.

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APPENDICES

APPENDIX A: Instructions for Low Constraint
Condition (LDC)

Your Name _____

BEFORE STARTING THE CLOCK PLEASE READ THIS PAGE

Dear Participant,

Thank you for your help in this study. I hope we will all learn something important about ourselves from it. Please work your way through these pages, follow the instructions as you understand them, and follow the suggested times very closely.

NOW PLEASE START THE CLOCK AND TURN TO PAGE 1.

BEGIN THIS PAGE AT 8:00 PM

Instructions: Please read and discuss the following case study and the five possible solutions to the problem it presents. Do not announce which solution you prefer at this time. The discussion may focus on anything else about the case you would like, such as clarifying the facts, pros and cons of the solutions or any other aspect.

(Go On To The Next Page)

THE CASE STUDY

Joan, a divorcee with one child, and Bob, a widower with two children, have been dating steadily for six months. From the beginning of their relationship, they discussed marriage--first abstractly and then in very personal terms. Without any real formal discussion they began to move toward marriage gradually. They looked for and found a home, they prepared their children, they put both their homes up for sale, got rid of excess furnishings, told their friends, ordered invitations, and made all the plans for marriage.

But two weeks before the marriage, with Bob's home sold, Joan's in escrow, and a down payment made on a new home, they began to have problems. It became more and more difficult to make the decisions and plans necessary for the merging of their families. They began to disagree on important things such as whether Joan would work, who would handle the money, what they could and could not invest in. There were arguments about styles of rearing children and public vs. private schools.

These conflicts began to give Joan and Bob new insights and knowledge of each other. But with the new knowledge came uncertainty about their plans. Both Joan and Bob began to have some serious doubts. During one particularly bitter disagreement (whether they should change the size of the down payment on their new home) Bob poured out his doubts to Joan. He told her of his fears that their differences might lead to unhappiness in their marriage. Joan then admitted that she was worried too, so they discussed it all until late into the evening. At the end of the evening they agreed to continue with their plans because their love and knowledge of these differences could "surely help."

But Joan continued to be nagged by doubts. She kept quiet about it however, because she feared the "mess" that would result if they cancelled all their plans...the losses they would take in their real estate transactions, the announcements to their friends and family, the legal entanglements resulting from Bob's home already being sold. Bob had lingering doubts too, but seemed reassured by their discussion, and thought that Joan seemed willing to go along with him on any major issues.

SOLUTIONS

1. Go through with the wedding and home purchase as planned.
2. Continue wedding and home plans, but delay everything a month.
3. Buy a home, but don't get married; just live together.
4. Back out of wedding and home plans, but continue dating.
5. End the relationship now, and pull out of real estate deals.

AT 8:15 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:15

Instructions: Now that you have discussed the facts of the case and the five possible solutions to the problem situation, please choose which solution you personally believe is best. Your decision may or may not agree with other members of your group. Do not discuss your decision with other group members yet. If you wish, look back to page 2 to remind yourself what the possible solutions are. Then write your decision in the blank below. Then, please write two or three reasons why the solution you chose is best. The solution you choose must be one of the five listed on page 2 of this booklet.

Solution Chosen (please write in full one of the five possible solutions):

Reasons Why This Is The Best Solution

- 1.
- 2.
- 3.

AT 8:20 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:20

Instructions: Now that each person in the group has selected which solution seems best to him or her, each member of the group should announce to the group which solution he or she chose, and state briefly what the reasons are for that choice. After each person has announced his or her solution and reasons, the group may discuss these choices as time allows

AT 8:40 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:40

Instructions: The next part of your task is to consider the following reasons why some people might think each of the possible solutions is the best.

(Go On To The Next Page)

REASONS FOR EACH OF THE FIVE POSSIBLE SOLUTIONS

1. Go through with the wedding and home purchase as planned.
 - a. Any relationship is risky; this one has a good chance.
 - b. Having been married before, they both know better how to make it work.
 - c. Joan and Bob's love for each other will ultimately solve their problems.
2. Continue wedding and home plans, but delay everything a month.
 - a. They still love each other but need a little time to settle their problems.
 - b. With a later wedding date and less pressure, their problems will seem smaller.
 - c. Both Joan and Bob need time to adjust to their increased knowledge of each other.
3. Buy a home but don't get married; just "live together."
 - a. They will see what marriage will be like without making the commitment.
 - b. If they do eventually marry, they'll know each other better.
 - c. Financial losses will be avoided without forcing marriage too soon.
4. Back out of the wedding and home plans, but continue dating.
 - a. They are not ready for marriage, but they have a good relationship.
 - b. The home deals will only cost money; a bad marriage will cost them each other.
 - c. To their friends a good dating relationship is better than a broken marriage.
5. End the relationship now and pull out of the real estate deals.
 - a. After marriage it will be harder to solve their problems, not easier.
 - b. Joan and Bob's problems are too serious to be resolved.
 - c. It's better to be embarrassed now, instead of unhappy later.

AT 8:50 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:50

Instructions: Please return this booklet to the enabler, then fill out a short reaction form.

APPENDIX B: Instructions for Medium Constraint
Condition (MDC)

Your Name _____

BEFORE STARTING THE CLOCK PLEASE READ THIS PAGE

Dear Participant:

Thank you for your help in this study. I hope we'll all learn something important about the way we behave in solving a problem. To give you some idea of what we'll be doing tonight, here are the steps to be followed:

- First, read and discuss a case study and possible solutions to the problem it presents.
- Second, write down which solution you believe is best and reasons for it.
- Third, tell other members of the group your solution and reasons.
- Fourth, read and remember reasons given in this booklet for solutions you did not select as best.
- Finally, return to the assembly area and fill out a short reaction form on the work you did in this group.

This booklet will take you through each of these steps. Please follow the instructions as you and your group understand them and follow the times indicated closely.

Again, thanks for your involvement tonight.

NOW, AFTER EVERYONE IN YOUR GROUP HAS READ THIS PAGE PLEASE START THE
CLOCK AND TURN TO PAGE 1.

BEGIN THIS PAGE AT 8:00 PM

Instructions: Please read and discuss the following case study and the five possible solutions to the problem it presents. Do not announce which solution you prefer at this time. The discussion may focus on anything else about the case you would like, such as clarifying the facts, pros and cons of the solutions, or any other aspect.

(Go On To The Next Page)

THE CASE STUDY

Joan, a divorcee with one child, and Bob, a widower with two children, have been dating steadily for six months. From the beginning of their relationship, they discussed marriage--first abstractly and then in very personal terms. Without any real formal discussion they began to move toward marriage gradually. They looked for and found a home, they prepared their children, they put both their homes up for sale, got rid of excess furnishings, told their friends, ordered invitations, and made all the plans for marriage.

But two weeks before the marriage, with Bob's home sold, Joan's in escrow, and a down payment made on a new home, they began to have problems. It became more and more difficult to make the decisions and plans necessary for the merging of their families. They began to disagree on important things such as whether Joan would work, who would handle the money, what they could and could not invest in. There were arguments about styles of rearing children and public vs. private schools.

These conflicts began to give Joan and Bob new insights and knowledge of each other. But with the new knowledge came uncertainty about their plans. Both Joan and Bob began to have some serious doubts. During one particularly bitter disagreement (whether they should change the size of the down payment on their new home) Bob poured out his doubts to Joan. He told her of his fears that their differences might lead to unhappiness in their marriage. Joan then admitted that she was worried too, so they discussed it all until late into the evening. At the end of the evening they agreed to continue with their plans because their love and knowledge of these differences could "surely help."

But Joan continued to be nagged by doubts. She kept quiet about it however, because she feared the "mess" that would result if they cancelled all their plans...the losses they would take in their real estate transactions, the announcements to their friends and family, the legal entanglements resulting from Bob's home already being sold. Bob had lingering doubts too, but seemed reassured by their discussion, and thought that Joan seemed willing to go along with him on any major issues.

SOLUTIONS

1. Go through with the wedding and home purchase as planned.
2. Continue wedding and home plans, but delay everything a month.
3. Buy a home, but don't get married; just live together.
4. Back out of wedding and home plans, but continue dating.
5. End the relationship now, and pull out of real estate deals.

AT 8:15 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:15

Instructions: Now that you have discussed the facts of the case and the five possible solutions to the problem situation, please choose which solution you personally believe is best. Your decision may or may not agree with other members of your group. Do not discuss your decision with other group members yet. If you wish, look back to page 2 to remind yourself what the possible solutions are. Then write your decision in the blank below. Then, please write two or three reasons why the solution you chose is best. The solution you choose must be one of the five listed on page 2 of this booklet.

Solution Chosen (please write in full one of the five possible solutions):

Reasons Why This Is The Best Solution

- 1.
- 2.
- 3

AT 8:20 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:20

Instructions: Now that each person in the group has selected which solution seems best to him or her, each member of the group should announce to the group which solution he or she chose, and state briefly what the reasons are for that choice. After each person has announced his or her solution and reasons, the group may discuss these choices as time allows.

AT 8:40 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:40

Instructions: The next part of your task is to read and remember some reasons supporting the solutions to tonight's problem which you did not choose as the best. For example, if you chose solution #2, your task is to read and remember particularly the reasons given for solutions # 1, 3, 4, and 5.

(Go On To The Next Page)

REASONS FOR EACH OF THE FIVE POSSIBLE SOLUTIONS

1. Go through with the wedding and home purchase as planned.
 - a. Any relationship is risky; this one has a good chance.
 - b. Having been married before, they both know better how to make it work.
 - c. Joan and Bob's love for each other will ultimately solve their problems.
2. Continue wedding and home plans, but delay everything a month.
 - a. They still love each other but need a little time to settle their problems.
 - b. With a later wedding date and less pressure, their problems will seem smaller.
 - c. Both Joan and Bob need time to adjust to their increased knowledge of each other.
3. Buy a home but don't get married; just "live together."
 - a. They will see what marriage will be like without making the commitment.
 - b. If they do eventually marry, they'll know each other better.
 - c. Financial losses will be avoided without forcing marriage too soon.
4. Back out of the wedding and home plans, but continue dating.
 - a. They are not ready for marriage, but they have a good relationship.
 - b. The home deals will only cost money; a bad marriage will cost them each other.
 - c. To their friends a good dating relationship is better than a broken marriage.
5. End the relationship now and pull out of the real estate deals.
 - a. After marriage it will be harder to solve their problems, not easier.
 - b. Joan and Bob's problems are too serious to be resolved.
 - c. It's better to be embarrassed now, instead of unhappy later.

AT 8:50 GO TO THE NEXT PAGE

p. 7

BEGIN THIS PAGE AT 8:50

Instructions: Please return this booklet to the enabler, then fill out a short reaction form.

APPENDIX C: Instructions for High Constraint
Condition (HDC)

Your Name _____

BEFORE STARTING THE CLOCK PLEASE READ THIS PAGE CAREFULLY

Dear Participant:

Thank you for your participation and help in tonight's study. I hope that we'll all come to know some important things about the way we process information in solving a problem. So that you will know exactly what will happen, here is a schedule of the steps you and your group will take:

- 8:00-8:15 Read and discuss a case study which presents a problem situation and five possible solutions to the problem.
- 8:15-8:20 Write down which solution you think is best and give two or three supporting reasons.
- 8:20-8:40 Announce to the group which solution you chose and your reasons.
- 8:40-8:50 Read and remember reasons given in this booklet for solutions which were not the one you selected as best.
- 8:50 Return to the main assembly area and fill out a short reaction form which will test how well you were able to remember reasons for solutions you did not select. There will be a reward for members of the group who score highest on this reaction form. Please note: It will be very difficult to score high on the final reaction form unless the instructions in this booklet are followed very carefully.

This booklet will take you through each of the above steps. Wherever necessary, the group should discuss the instructions given in the booklet to be sure everyone understands them the same way.

Again, thanks for your involvement tonight.

NOW, AFTER EVERYONE IN YOUR GROUP HAS READ THIS PAGE, PLEASE START THE CLOCK AND GO TO PAGE ONE

BEGIN THIS PAGE AT 8:00

Instructions: Please read the following case and possible solutions, looking for any and all information which should be considered in choosing a solution to the problem it describes. Then discuss the case and solutions with your group. The discussion may focus on clarifying the facts, pros and cons of the solutions, or any other aspect. Later, you as an individual will be asked to choose the best of the five possible solutions. DO NOT ANNOUNCE YOUR CHOICE OF A SOLUTION NOW, HOWEVER.

Please Note: Your primary task in this study will be to remember reasons (given later in this booklet) for solutions you do not choose as best. Now please read and discuss the case and solutions.

(Go On To The Next Page)

THE CASE STUDY

Joan, a divorcee with one child, and Bob, a widower with two children, have been dating steadily for six months. From the beginning of their relationship, they discussed marriage--first abstractly and then in very personal terms. Without any real formal discussion they began to move toward marriage gradually. They looked for and found a home, they prepared their children, they put both their homes up for sale, got rid of excess furnishings, told their friends, ordered invitations, and made all the plans for marriage.

But two weeks before the marriage, with Bob's home sold, Joan's in escrow, and a down payment made on a new home, they began to have problems. It became more and more difficult to make the decisions and plans necessary for the merging of their families. They began to disagree on important things such as whether Joan would work, who would handle the money, what they could and could not invest in. There were arguments about styles of rearing children and public vs. private schools.

These conflicts began to give Joan and Bob new insights and knowledge of each other. But with the new knowledge came uncertainty about their plans. Both Joan and Bob began to have some serious doubts. During one particularly bitter disagreement (whether they should change the size of the down payment on their new home) Bob poured out his doubts to Joan. He told her of his fears that their differences might lead to unhappiness in their marriage. Joan then admitted that she was worried too, so they discussed it all until late into the evening. At the end of the evening they agreed to continue with their plans because their love and knowledge of these differences could "surely help."

But Joan continued to be nagged by doubts. She kept quiet about it however, because she feared the "mess" that would result if they cancelled all their plans...the losses they would take in their real estate transactions, the announcements to their friends and family, the legal entanglements resulting from Bob's home already being sold. Bob had lingering doubts too, but seemed reassured by their discussion, and thought that Joan seemed willing to go along with him on any major issues.

SOLUTIONS

1. Go through with the wedding and home purchase as planned.
2. Continue wedding and home plans, but delay everything a month.
3. Buy a home, but don't get married; just live together.
4. Back out of wedding and home plans, but continue dating.
5. End the relationship now, and pull out of real estate deals.

AT 8:15 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:15

Instructions: Now that you have discussed the facts of the case and the five possible solutions to the problem situation, please choose which solution you personally believe is best. Your decision may or may not agree with other members of your group. Do not discuss your decision with other group members yet. If you wish, look back to page 2 to remind yourself what the possible solutions are. Then write your decision in the blank below. Then, please write two or three reasons why the solution you chose is best. The solution you choose must be one of the five listed on page 2 of this booklet.

Solution Chosen (please write in full one of the five possible solutions):

Reasons Why This Is The Best Solution

- 1.
- 2
- 3

AT 8:20 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:20

Instructions: Now that each person in the group has selected the solution which seems best to him or her, each person should now announce to the group which solution he or she chose, then state briefly what the reasons are for that choice. Later, when you go to page 6 your primary task tonight will be to read and remember reasons for solutions you did not choose: these reasons may be different from those presented by group members now, however. Now, the group should hear from each participant which solution he or she chose and reasons for it. After everyone has announced his or her choice, the group may briefly discuss the choices, as time permits.

AT 8:40 GO TO THE NEXT PAGE

BEGIN THIS PAGE AT 8:40

Instructions: By now you have read and discussed the case study, examined possible solutions, chosen and given reasons for one of the solutions, and announced your choice to the group. The next part of your task is very important: It will be very difficult to score high on the final reaction form if these instructions are not followed very carefully.

On the next page you will find the five possible solutions with a set of reasons why each might be the best solution (these reasons may or may not be the same ones members of the group selected earlier). Please read these solutions and reasons very carefully.

It is very important that you remember as many reasons and solutions you did not select as possible, because in just a few minutes you will be asked to answer paper-and-pencil questions about them. For example, if you chose solution #2, you will be asked to remember reasons for solutions # 1, 3, 4, and 5, and so on. Probably no one will remember all of these reasons, so just remember as many as you can. As an added incentive the group of participants who remember the largest number of these reasons will be treated to coffee and doughnuts by the experimenter.

Now, please read and remember the reasons given for each of the following solutions.

(Go On To The Next Page)

REASONS FOR EACH OF THE FIVE POSSIBLE SOLUTIONS

1. Go through with the wedding and home purchase as planned.
 - a. Any relationship is risky; this one has a good chance.
 - b. Having been married before, they both know better how to make it work.
 - c. Joan and Bob's love for each other will ultimately solve their problems.
2. Continue wedding and home plans, but delay everything a month.
 - a. They still love each other but need a little time to settle their problems.
 - b. With a later wedding date and less pressure, their problems will seem smaller.
 - c. Both Joan and Bob need time to adjust to their increased knowledge of each other.
3. Buy a home but don't get married; just "live together."
 - a. They will see what marriage will be like without making the commitment.
 - b. If they do eventually marry, they'll know each other better.
 - c. Financial losses will be avoided without forcing marriage too soon.
4. Back out of the wedding and home plans, but continue dating.
 - a. They are not ready for marriage, but they have a good relationship.
 - b. The home deals will only cost money; a bad marriage will cost them each other.
 - c. To their friends a good dating relationship is better than a broken marriage.
5. End the relationship now and pull out of the real estate deals.
 - a. After marriage it will be harder to solve their problems, not easier.
 - b. Joan and Bob's problems are too serious to be resolved.
 - c. It's better to be embarrassed now, instead of unhappy later.

BEGIN THIS PAGE AT 8:50

Instructions: Please return this booklet to the enabler, then fill out a brief reaction form and a test of how well you remember reasons for solutions other than the one you chose as best.

APPENDIX D: Post Test

*** FINAL REACTION FORM ***

Your Name _____

Instructions: Please answer all the following questions, one page at a time. Once you have completed a page of questions go on to the next page; please do not go back to pages which have been completed, and don't look ahead. Now, go ahead to the first page of questions.

Instructions: If you were to describe to someone what you were supposed to accomplish in your work tonight, what would you tell him or her? Please indicate your answer by choosing the statements below which come closest to what you would tell that person.

1. What were you supposed to accomplish tonight? (Check one)

- _____ gaining experience in solving a problem
- _____ looking at points of view other than our own
- _____ gaining experience in evaluating reasons for decisions we make

2. What were you supposed to accomplish tonight? (Check one)

- _____ seeing how well we could remember reasons for solutions to a problem which were different from the solutions we chose
- _____ weeding out false information from information we believe to be right
- _____ gaining experience in looking at all sides of a question equally

3. What were you supposed to accomplish tonight? (Check one)

- _____ gaining experience in making a decision and sticking by it
- _____ demonstrating the steps in solving a problem through group discussion
- _____ gaining experience in evaluating reasons which support solutions I did not select

Instructions: In just a few moments you will be asked to fill out the final test which deals with materials from the instruction booklet your group used. If you were to predict what this test will ask you, what would it be? Please indicate your answer by choosing the statements which come closest to your prediction.

☐ 1 Which of the following is closest to what you expect the final test to ask? (Check one)

- ☐ I will be asked to remember what steps we went through in arriving at a solution to the problem.
- ☐ I will be asked how well I was able to weed out false information from information I believe to be right.
- ☐ I will be asked to recall reasons which support solutions I did not select.

☐ 2 Which of the following is closest to what you expect the final test to ask? (Check one)

- ☐ I will be asked to defend the solution to the problem I chose.
- ☐ I will be asked how well I remember reasons for solutions to a problem which are different from the solution I chose.
- ☐ I will be asked to evaluate the various solutions to the problem.

☐ 3 Which of the following is closest to what you expect the final test to ask? (Check one)

- ☐ I will be asked to remember points of view which differ from mine.
- ☐ I will be asked whether my decision in choosing a solution was influenced by others in the group.
- ☐ I will be asked how well I remember details of the case study.

reaction p. 3

Instructions: How well do you expect to do on the final test?
Please indicate your answer by marking your agreement or disagreement with the following statements.

1. It is not very important to me how well our group will do on the final test.

☐

Strongly
Disagree

☐

Disagree

☐

Don't Know
(or Neutral)

☐

Agree

☐

Strongly
Agree

- 2 This group exercise made me want to do well on the final test.

☐

Strongly
Disagree

☐

Disagree

☐

Don't Know
(or Neutral)

☐

Agree

☐

Strongly
Agree

FINAL TEST: HOW WELL DO YOU REMEMBER?

In the spaces below please write as many of the solutions to the case as you can remember, other than the one you chose as best. For example, if you chose solution #3, please write solutions # 1, 2, 4, and 5. Then list as many reasons for each solution as you can recall. The solutions and reasons you list below should be those provided earlier in your instruction booklet.

Solution:

Reason:

Reason:

Reason:

Solution:

Reason:

Reason:

Reason:

Solution:

Reason:

Reason:

Reason:

Solution:

Reason:

Reason:

Reason:

APPENDIX E: Comparison of Data from an Earlier Version
and the Present Version of the Experiment

MR Analysis of DOG and PC, Earlier Version, Dependent Variable = MEM

Variable	b	Multiple R	R ²	DF	Change	Overall
DOG	-.060	.341	.116	2/42	.116	F = 5.659 Sig = >.001

Comparison of Dogmatism Scores (DOG)

	Earlier Version	Present Version	T-Test Results
Mean	-22.276	-15.222	T = 1.296 DF = 72.352 Sig = N.S.
S.D.	27.052	31.922	
Maximum Score	57	59	
Minimum Score	-99	-83	

Comparison of Perceived Constraint (PC) Levels

Variable	Earlier Version	Present Version	F	F-Test Results D.F. Significance	
PC	8.711	9.305	1.786	1/148	.186 (N.S.)
PC 1	1.178	1.229	.117	1/148	.733 (N.S.)
PC 2	1.600	1.686	.158	1/148	.692 (N.S.)
PC 3	5.933	6.390	2.074	1/148	.152 (N.S.)