A THEORY OF INDIVIDUAL BEHAVIOR IN THE IMPLEMENTATION OF POLICY INNOVATIONS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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* * * * * * * * *

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VITA

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CHAPTER 1. INTRODUCTION

1. What is Implementation.

Thirty years ago Herbert Simon noted that students of administration had been preoccupied with how decisions were carried out rather than with how decisions were made (Simon, 1945, p. 1). He suggested that we direct some of our energy to the study of decision-making itself. His suggestion was heeded. But, today in political science and public administration, there is a renewed interest in how decisions are carried out. Students in this area refer to their object of study as implementation.

This study focuses on policy implementation. Policy implementation has been defined as

Those actions by public and private individuals (or groups) that are directed at the achievement of objectives set forth in prior policy decisions. This includes both one-time efforts to transform decisions into operational terms, as well as continuing efforts to achieve the large and small changes mandated by policy decisions (Van Meter and Van Horn, 1975, p. 447).

In other words, implementation is the transformation of the ideas expressed in a policy statement into actions.

Implementation follows the statement of a policy by a legislative body, court, or administrator. A decision maker says that it is the intention of a unit of government that a course of action be taken, and actions to implement that course of action follow. But, if
implementation always followed expression of a policy statement, we would not be very concerned with it. Our interest stems from studies which suggest that government policies sometimes fail because they are not implemented completely or as planned (Williams, 1975; Pressman and Wildavsky, 1975). This leads us to ask how public organizations carry out policy, to what extent they carry it out, how we can assess an organization's capacity for implementing a policy, and what are "the institutional and political consequences of structuring programs in given ways" (Hargrove, 1976, p. 9).

I do not intend to address all of these questions here. The principal question that I will address is "Why do individuals cooperate or not cooperate with the implementation of public policy innovations?" In this introductory chapter I will examine the meaning of this question, discuss the practical and theoretical benefits that may accrue from the study of implementation in general, and discuss my goal for this study and the methods I have chosen to pursue that goal.

2. The Principal Research Question

This study is an attempt to answer a question about the implementation of public policy: Why do individuals cooperate or not cooperate with the implementation of public policy innovations? The asking of the question itself raises other questions. What is a public policy innovation? Why study individuals? Why not study organizations, multiorganizations or some other unit of analysis? And, finally, who are the individuals I am asking about?
2.1 What is a Public Policy Innovation?

What is a public policy innovation? I will define the concept indirectly, first, then attempt a direct definition. As an indirect definition we can say that a public policy innovation is an outcome of a political or bureaucratic innovation process. A political innovation process is a series of events during a time period which involve executive, judicial, or legislative sections of government as producers and/or objects of innovation.¹

A bureaucratic innovation process is a case involving governmental administrative organizations as producers and/or products (objects) of innovation. According to these definitions it is recognized that political units and bureaucracies can be sources of innovation, that is, may generate or invent new ideas, practices, or material artifacts, and/or can be changed by the adoption and implementation of new ideas, practices or material artifacts.

The particular outcomes of political and bureaucratic innovation processes that I am dealing with are public policy innovations.²

¹This definition and the definition of a bureaucratic innovation process are hybrids of definitions given by Backoff, 1974, (p. 179) and Bingham, 1976, (p. 217).

²In a thorough review of the literature Backoff concluded "there is no agreement as to the defining properties of an innovation within or by an organization" (Backoff, 1974, p. 324). This study does not resolve any of the problems with the general definition of organizational innovation. I accept, for purposes of this study Zaltman, Duncan and Holbek's definition of organizational innovation as "any idea, practice, or material artifact perceived to be new by the relevant unit of adoption" (Zaltman, Duncan, and Holbek, 1973, p. 10).
A public policy is defined as an intended or actual strategic course of action by a legal governmental unit.\(^3\) Strategic courses of action are major courses of action, they commit a large proportion of a government unit's resources. The word strategic is used to connote Robert Anthony's concept of strategic planning (Anthony, 1965, p. 24ff). Public policy is the outcome of the strategic planning process in political and public administrative organizations. Public policies are either intended or actual courses of action. In other words there is a distinction made between policy statements (Ripley, 1972, p. 8) and implemented policy, but both are called public policy. And, public policies are the actions or intended actions of legal government units. Legal government units are established by the federal and state constitutions, by acts of legislative bodies, or by the mandate of other legal government units. For example, a state mental hospital and a V.A. hospital are legal government units but a non-profit community hospital subsidized by a county government but not owned by the county is not a legal government unit.

A public policy innovation is a public policy which is perceived as new by the political or public administrative organization which adopts and/or implements the policy. The key phrase in this definition is "perceived as new" by the adopting and/or implementing unit.\(^4\) This phrase can be operationalized by using a subjective

\(^3\)This definition is a modification of Backoff's definition of public policy (Backoff, 1974), p. 179). For further discussion of the concept of public policy see Kerr (1976).

\(^4\)Other definitions of innovation exist. For example, Myers and Marquis (1969) define innovation as an organizational process that
measure. Individuals at various levels of the organization heirarchy could be asked how novel they feel the public policy is; very much like other policies of the organization or very unlike any other policy the organization has adopted or implemented.

Take, as an example of a possible public policy innovation, section 504 of the Rehabilitation Act of 1973 which banned discrimination against the handicapped by those receiving federal funds. In April 1977, Secretary of HEW, Joseph Califano signed a set of HEW Regulations which specified rules of compliance that must be met by federal fund recipients. In order to determine if that section of the Rehabilitation Act and the corresponding regulations were a public policy innovation we would have to gauge the perceived newness of this policy among HEW employees. In order to see if the policy constitutes an innovation for recipients of federal funds we would have to gauge the perceived newness among members of those organizations.

I have defined a public policy innovation. It is the implementation of public policy innovations that concerns me here. The next question I have to answer to describe my scope is: Implementation by whom?

"... is a complex activity which proceeds from the conceptualization of a new idea to a solution of the problem, and then to actual utilization of a new item of economic or social value." Myers and Marquis refer to a process by which a new material artifact, practice, or idea is created and put in place, whereas, the definition of public policy innovation refers to the "object" being created and put in place. Note also that "newness" has been defined differently; Becker and Whisler (1967) refer to "first or early use of an idea by one of a set organizations with similar goals." Whereas, in the definition of public policy innovation "newness" is in the eye of the adopter or implementer.
2.2 Implementation by Whom?

I am going to focus on the implementation of policy innovations by individuals. I would like to be able to explain why individuals cooperate or don't cooperate with the implementation of policy innovations. Before I say why I am interested in individuals rather than groups, organization units, organizations or multiorganizations, let me say what roles or kinds of individuals I am concerned with.

There are four, perhaps more, roles of interest in the study of policy implementation. First, there is the decision maker, who chooses the policy to be implemented. Second, there is the implementer, who actually performs the actions mandated in the chosen policy. It is the implementer role that is the focus of this study. The third role is that of the change agent. The change agent facilitates the implementation of the policy and has formal authority over the implementer. Fourth, is the change catalyst (or inhibitor) (Jones, 1969) who may either facilitate or inhibit implementation but who does not have formal authority over the implementer.

Williams makes a distinction between decision-makers and implementers:

... it is useful in discussing policy making in a complex organization to distinguish between the decision-making process and the implementation process. For example, at the top of a federal agency there will be a group concerned mainly with major decisions, while at lower levels there will be others concerned mainly with putting programs in place. ... It will also be noted that, from different organizational perspectives, an actor may be viewed by some as primarily a decision-maker and by others as primarily an implementer. An agency head will consider a bureau head responsible for implementing agency decisions.
However, organizations in the field that are funded by the bureau will see the bureau generally and the bureau head in particular as a key decision-maker (Williams, 1975, p. 538).

Williams is making the point that there is a division of labor in most federal agencies. There are those whose primary activity is making decisions and those whose primary activity is carrying out decisions made by others. But because the scalar principle is applied in federal agencies everyone, including agency heads are implementers; even the president implements congressional decisions. The point I am making is that the role of implementer can be divorced from office, even though some offices take the implementer role less frequently than do others. In the theory which I construct and in the discussion which precedes it I refer to the role of implementer and not to organizational office. The implementer may be the Secretary of State as he or she administers the President's foreign policy or the town clerk of a small Maine town as he or she carries out the policy of a Board of Selectmen.

\[\text{5} \text{I rely on Katz and Kahn (1966, p. 173) for several definitions:}

Office, by which is meant a particular point in organizational space; space in turn is defined in terms of a structure of interrelated offices and the pattern of activities associated with them. Office is essentially a relational concept, defining each position in terms of its relationship to others and to the system as a whole. Associated with each office is a set of activities or expected behaviors. These activities constitute the role to be performed, at least approximately, by any person who occupies that office.\]
2.3 The Relationship Between the Decision Maker and Implementer

The relationship between the decision maker and the implementer is a relation of agency. Mitnick defines agency:

We will say that a relation of agency exists when one party, the "agent," is acting for another party, the "principal." We take "acting for" in a very broad sense, but with the presumption that the acts of the agent are formally supposed to "benefit" the principal (Mitnick, 1975, p. 8).

In a "very broad sense" the implementer is "acting for" the decision maker when the implementer carries out the policy that the decision maker has adopted.

We must say more about the agency relation between the decision maker and implementer. The relation between the implementer and decision maker is characterized by the specification by the decision maker that the implementer will carry out the policy innovation. The implementer does not have a choice whether to implement the policy or not. In Mitnick's terminology the implementer's act of implementing a policy innovation is "other-specified" or "directed," as opposed to "self-specified" or "autonomous" (Mitnick, 1975, p. 19).

To use language that may be more familiar to those from the innovation diffusion tradition; the innovation decision of the implementer is not "optional" but is an "authority decision."

Optional decisions are made by an individual regardless of the decisions of other members of the system. . . the adopting individual has almost complete responsibility for the decision. . . (Rogers and Shoemaker, 1971, pp. 36-37).

Authority decisions are those forced upon an individual by someone in a superordinate power position, such as a supervisor in a bureaucratic organization. The individual's attitude toward the innovation is not the
prime factor in his adoption or rejection; he is simply told of and expected to comply with the innovation-decision made by an authority (Rogers and Shoemaker, 1971, p. 36).

The theory to be constructed here concerns situations where the decision maker expects the implementer to conform and the implementer perceives this expectation on the part of the decision maker. Eventhough the decision maker has specified that an implementer will carry out a policy innovation, the implementer may or may not feel an obligation to implement the new policy. The issue under study here is the extent to which they do conform.  

2.4 Why Study Individuals in Implementation Situations?

The next question that might be asked is "why study individuals?" Why not study the implementation histories of policies, or how organizations or multiorganizations implement policies? Perhaps, the question could be rephrased. Of the objects of study - units of analysis - that appear to be relevant for the study of implementation, why would it be useful to study individuals?

There seem to be two principal object units of analysis available in the study of policy implementation as I conceive it; the policy itself and the actors which implement the policy. We can either look at properties of the policy as it is implemented or at properties of those who implement the policy, or, of course, at both. By actors

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6 The terms compliance, conformity, and cooperation are used interchangeably throughout the essay to refer to behavior of the implementer which follows the directive of the decision maker to carry out the policy innovation.

7 See the definition of "object units" in Chapter 2.
I mean individuals, groups, organization units, organizations and multi-organizations. I do believe that it would be valuable to study how these collectives implement policy. It is also important to study individual behavior in implementation situations, especially the behavior of subordinates. It is almost too banal to repeat that the cooperation of subordinates is necessary for almost any action taken by an organization including the implementation of policy innovations. Even if it is not a very stimulating statement for academicians, it is an important factual statement for administrators.

Writers on organizational innovation and the implementation of judicial decisions agree. Hage and Aiken, discussing the implementation of organizational innovations, indicate the significance of getting the active cooperation of lower participants:

If the lower participants do not cooperate, the program can be largely defeated by the passive or even active resistance of those members concerned with the actual operation of it. An excellent illustration was a series of new policies implemented by the Cooperative Commonwealth Federation party in Canada. The members lower in the chain of command of the government agencies did not cooperate, and many programs were either never begun or were established only with partial success (Hage and Aiken, 1970, p. 101).

Lawrence Baum points out the variance between the assumption of Weberian organization theories about the compliant behavior of subordinates and the evidence:

In a traditional Weberian model of rational organizations delegation of the power to implement policies

has no significant effect on organizational action, because subordinates carry out policies accurately and faithfully (Gerth and Mills, 1946: Ch. 8).

... Yet students of complex organizations have shown that independent policy-making by subordinates is a standard quality of organizational behavior rather than an anomaly. Such unlikely groups as maintenance workers in factories (Crozier, 1964: Ch. 4) and attendants in mental hospitals (Scheff, 1961) may shape their organizations' outputs in fundamental ways, thereby establishing policies which deviate considerably from those desired by their superiors. Similarly, political scientists have found that subordinates in government bureaucracies may play a highly independent role in the implementation of policy (Riggs, 1967; Goodnow, 1964), even in so-called totalitarian governments like that of the Soviet Union (Fainsod, 1967; Berliner, 1957: Ch. 18) (sic) (Baum, 1976, pp. 89-90).

I have presented these quotations, with their several references to empirical studies demonstrating that subordinates do influence innovation processes in organizations to document my claim that the study of the behavior of individuals in implementation situations is important. In anticipation of some comments I will make later, let me note that despite the significance of the behavior of subordinates for successful innovation there has been no systematic theoretical explanation of their behavior. It is because of the importance of subordinate's behavior for implementation of policy innovations and the lack of a theory in this area that I have chosen to focus on the question of why individual implementers do or do not cooperate with the implementation of policy innovations.

3. Practical Benefits from the Study of Implementation.

I have yet to say why I think the study of policy implementation is worthwhile. I believe that improved knowledge of policy implementation would have both practical and theoretical benefits. Much of what
I have already said, and the quotations drawn from other authors, shows the importance of the problem encountered in translating the ideas expressed in adopted policy statements into actions. Many worthwhile policy innovations are not carried out. Graham Allison estimates that in the normal case as little as 10 percent of "the work of achieving a desired governmental action is done when the preferred analytic alternative has been identified" (Allison, 1971, p. 167). He calls for attention to implementation:

If analysts and operators are to increase their ability to achieve desired policy outcomes, they will have to develop ways of thinking analytically about a larger chunk of the problem. It is not that we have too many good analytic solutions to problems. It is, rather, that we have more good solutions than we have appropriate actions. Thus we shall have to find ways of thinking harder about the problem of "implementation", that is, the path between preferred solution and actual performance of the government (Allison, 1971, pp. 267-268).

Walter Williams makes a similar argument:

The past contains few clearer messages than that of the difficulty of bridging the gap between policy decision and workable field operations. It is a general problem spanning most policy areas. Indeed, in my area of specialization, social policy, implementation looms as the major substantive—as opposed to purely monetary or political—hurdle to better programs. We simply do not know how to implement complex new social programs or major program modifications (Williams, 1975, p. 451).

Williams points out yet one more area where implementation is a significant problem—in social experiments.

What was also increasingly evident was that conventional methodological problems of sample design, outcome measurement reliability and validity, and the appropriateness of statistical tests... simply were not the main barriers to doing better experiments... The hard truth was that we
did not know how to put an experiment into the field so that it corresponded to drawing-board plans (Williams, 1975, pp. 453-454).

Although I do not intend to deal with the implementation of social experiments it is interesting to note that the problem exists. Perhaps, now, the reader agrees that policy implementation is a significant problem and knows that implementation of social experiments is also a problem. There is at least one more area where implementation is a problem. It is difficult to implement the results of research findings about policy or administration. Students of operations research and social scientists have been examining this problem. Even though my research does not address the implementation of research findings, it would be good if it was partially generalizable and so contributed indirectly to its own implementation.

4. Theoretical Benefits From the Study of Implementation.

The study of implementation will have theoretical benefits for more than one area of research. The study of implementation has been neglected not only in policy research but also in the study of organizational innovation and the study of administration in both the public and private sectors.

The implementation of public policy has not been the focus of research until recently. According to Van Meter and Van Horn:

Some features of the policy delivery system clearly have been explored more fully than others. During the past quarter century, a disproportionate effort has been made to analyze the character of economic and racial problems, the claims made for government action, and the processes by which policy decisions are made. More recently, policy analysts have turned their attention to the impacts or effects which
policies may have on the people and problems at which they had been directed. These foci on the determinants and consequences of public policy have added much to our understanding of the policy process. Yet neither tells us a great deal about how policy decisions are transformed into public services: they tell us little about the application or implementation of public policy. In short, they have not given sufficient attention to the linkage between policy and performance. It is one thing to examine the determinants of policy decisions and to identify their impacts or consequences—it is another to provide explanations for these observed consequences (1971, pp. 446-447).

According to Pressman and Wildavsky:

Implementation in recent years has been much discussed but rarely studied—except for an excellent book by Martha Derthick, we have not been able to locate any thorough going analysis of implementation (1973, p. xiii).

Williams agrees, even though his search of the literature turned up a few more studies of implementation.

We simply do not know how to implement complex new social programs or major program modifications. This is not so surprising, because implementation is an exceedingly difficult task. What is hard to fathom is why so little has been done to investigate the process of implementation (1975, pp. 451-452).

Implementation has also been ignored until recently in the study or organizational innovation and planned organizational change. There is one notable exception—Gross, Giacquinta and Bernstein's study of the implementation of a teaching innovation. In his review of the literature on organizational innovation Backoff concludes that "the study of innovation implementation is underdeveloped relative to the decision to adopt (innovations)" (1974, p. 255). Gross et. al. arrived at a similar conclusion after reviewing the literature on
planned organizational change. Students of this topic have not ade-
quately mapped the implementation process:

Only a small part of the literature (on planned organizational change) considered the period during which the implementation effort occurred. Many studies had serious methodological or conceptual shortcomings. . . . We concluded that most social scientists have not recognized the need to conceptualize the success or failure of the implementation of organizational innovations.

Our review indicated that there was a great need for in depth studies of organizations, such as schools, trying to implement organizational innovations in order to isolate factors that inhibit and facilitate implementation (Gross, Giacquinta, and Bernstein, 1971, pp. 39-40).

The third general area in which implementation has been neglected is public administration. Since Simon pointed out how the study of decision-making had been neglected while the carrying out of decision had been emphasized, very nearly the opposite situation has prevailed (Simon, 1945, p. 1). Although the study of public administration, and administration in general, has grown quickly since 1947, it seems that everything but the implementation of policy decisions was studied. A look at the Handbook of Organizations (published in 1965) and a scanning of major journals containing administrative research of the last 30 years turns up very little that treats the carrying out of decisions.

The conjunction of the terms implementation and public adminis-
tration above will prod some to wonder what is the difference between these two terms. It would be fatal for the study of policy imple-
mentation to suggest that they were synonymous. If policy implementa-
tion is administration then we students of policy implementation would be in effect proposing a new paradigm for the study of administration.
That is not my intent. I see a clear distinction. I reserve the term implementation for the carrying out of innovations in organizations; whether the innovation be a new idea, process, or material artifact. Therefore, policy implementation, as I use the term, refers only to the carrying out of new policies and not to the ongoing business or routine activities of public administration.

I do not intend to sink us all in a discussion of the definition of public administration or administration. Let me merely suggest that the term administration includes reference to the carrying out of both new policies and established ones, while the term implementation refers only to carrying out new policies. This conforms with usage in most of the recent literature on policy implementation and, of course, all of the literature in organizational innovation. The focus in the studies of policy implementation is on how non-routine activities are carried-out—on how we translate a new policy idea into action, on how we establish new routines, not how we perform established routines. But, I have strayed from the principal point, which was that implementation of policy innovations has been neglected by students of public administration.

In addition to filling these gaps in the literature of policy research, organizational innovation, and public administration; a theory of implementer behavior would indirectly contribute to at least two other research areas. The first is resistance to change.  

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9 For a sample of the literature on resistance to change see: Dorwin Cartwright, "Achieving Change in People: Some Applications of Group Dynamics Theory," Human Relations, Vol. 4, No. 4 (1951), pp. 381-392; Lester Coch and John French, Jr., "Overcoming Resistance to
The theory to be presented here can be viewed as an attempt to predict the degree and type of resistance to behavioral change mandated by a policy innovation. The theory will predict a range of behaviors from active cooperation with implementing the policy (conforming behavior) to active resistance. The theory is a more systematic statement about the determinants of resistance to behavior change than what is currently found in the literature.

Furthermore, theories of implementation in general, and a theory of individual behavioral responses to implementation in particular, can contribute to an economics of organizational change (Likert, 1961). An economics of organizational change would provide a way of estimating the costs of introducing innovations into organizations using various change strategies. The cost of innovation can be measured as Wilson suggests by calculating the extent to which a manager has to 1) redistribute incentives among groups and organization members and 2) increase the supply of incentives to groups and members in order to get an innovation adopted and implemented (Wilson, 1966, p. 33).

Assuming that greater resistance to change is related to greater need to redistribute and increase the supply of incentives (Wilson, 1966, pp. 37-38), a theory constructed to predict

resistance-cooperation with change would contribute directly to an economics of organizational change. Such an economics would have clear theoretical and practical value.

I have surveyed several of the theoretical benefits that may accrue from the study of implementation in general and from a theory of implementer behavior in particular. We can expect advances in our knowledge of the policy process, organizational innovation, planned organizational change and an economics of organizational change.

5. Limitations of This Study.

The theoretical and practical benefits of this study are limited by the scope of theory I will present. The theory has several limitations. First, the theory applies to implementation of policy innovations only and not to the continuing implementation of policies that have become routinized. As I have explained in preceding pages the focus on implementation of new policies is characteristic of the recent literature on policy implementation. The theory presented here does not predict how persons will respond to efforts to get them to continue to implement a policy that has become routine. It predicts behavioral response of implementers to efforts to get them to perform new behaviors. In the former case we would be asking why/how is behavior is/is not sustained, in the latter case we would be asking why/how new behavior is/is not produced. Concern with the motivation of sustained behavior may be as important for understanding and improving public administration as is concern with the motivation to change behavior, however, it is not the subject of this study.
The implication is that a theory of sustaining behavior would be different from a theory of behavior change. The factors that lead someone to continue to perform a behavior are not completely different from those that lead someone to change behavior. Let us limit our discussion to three characteristics of the individual alone: motivation, knowledge, and ability. Clearly motivation is a factor in sustaining behavior as well as behavior change. However, knowledge and ability do not operate in the same way in both cases. Sustaining behavior assumes that knowledge and ability to perform the behavior existed at some point. Knowledge and ability may decay over time. For example, physical or emotional fatigue may hamper ability. (If circumstances change and knowledge and ability are no longer appropriate we no longer have the problem of sustaining behavior but that of changing it.) In the case of predicting or explaining behavior change we cannot assume that knowledge and ability needed to perform the new behavior exist. We would not use the concepts of "knowledge decay" or "ability decay," but concepts like "extent of knowledge needed to perform the new behaviors" and "ability to perform the new behaviors."

We can see with this rough sketch that by only limiting our inquiry to characteristics of the individual and ignoring properties of the context (interpersonal relations, communication, resources, etc.) that a theory of sustaining behavior to implement routine policies would be quite different from a theory of behavior with regard to new

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10 Knowledge is distinguished from ability in this way. Knowledge is possession of information; ability refers to the capacity to apply the information.
policies. The theory I will present only examines the latter question and not the first.

A second limitation of theory is that it applies only to implementation situations where there is an authority relation between the implementer and the decision maker. What I mean by this is that the theory applies only to cases where 1) the decision directs the implementer to carry out the policy innovation and expects the implementer to comply and 2) the implementer perceives that his/her role as defined (Katz and Kahn, 1966, Chap. 7) obliges him to perform actions specified by the decision maker. In other words, the theory does not apply to cases where either the decision maker or implementer (or both) perceives implementation of the policy to be optional for the implementer. The implication of this limitation is to exclude from consideration in this version of the theory two interesting cases. First, the case where the decision maker expects the implementer to comply, but the implementer does not believe that his/her role as defined obliges him/her to carry out the policy. Second, cases where the implementer does not believe that the decision maker has the authority to direct him/her to carry out a policy. Later versions of the theory could encompass these cases (See Chapter 11).

A third limitation of the approach made to implementation by the theory I will construct is that it will not focus on prediction of the behavior of other individuals in the implementation situation, that is, decision makers, change agents, and change catalysts. Furthermore, the theory is limited to two levels of analysis, the individual level and the level of interpersonal interaction (change agent with
implementer). This may seem to be a serious limitation to those who prefer to study implementation by organizations and multiorganizations. I have already argued the worth of studying individual implementer behavior. I agree that this theory would be improved if it demonstrated how interorganizational relations impacted on implementer behavior and demonstrated how the behavior of individual implementers contributed to the overall pattern of implementation in an organization of multiorganization. I think we'll have to work a bit more to have such a theory.

A fourth limitation of the theory is that it is limited temporally in two ways. First, the theory takes a static or snap-shot approach rather than a dynamic one. The behavior of an implementer is predicted for a point in time. Sequences of behaviors are not considered formally in the theory although they are discussed briefly. That is, it is recognized that an implementer's initial response to a directive might be delay, for example, followed by conformity at a later point, but the theory does not contain statements that predict sequences. To do so the theory would have to take account of changes in the implementation situation that might alter the implementer's behavior and the effect on the implementer's choice of behavior of feedback from previous behaviors.

The second way in which the theory is limited temporally is that it only comprehends a portion of the process of implementation, viz., the implementation stage. Since the theory focuses only on the prediction of implementer behavior and not on the behavior of decision-makers and change agents, the period preceding the implementation
stage is not treated.\footnote{See Chapter 5 for definitions of the concept "implementation process."}

The result of these limitations of the theory is that the theory falls short of providing a conceptual map of the whole territory of implementation. It is only a map of a small area of that territory. The theory does not provide a guide by which the complexity of case studies of implementation (Pressman and Wildavsky, 1973; Radin, 1977; Ripley, 1977) can be systematically explained. It does, however, take a first step toward systematic prediction of the behavior of a key factor in implementation situations. It does provide a foundation on which a theory of implementation that overcomes the limitations I have outlined can be built.

6. **The Goals and Methodology of the Dissertation.**

The last question to be addressed in this introductory chapter is what do I intend to do? And, how do I intend to do it? Generally, my goal is to construct a testable theory which will predict the behavior that results when implementers are directed to implement a new policy. The two methods that I employ are a systematic critique of the theoretical/conceptual literature on implementation and a method of theory construction.

6.1 **Goal of the Study.**

The goal of this study is prediction of implementer behavior. I do not intend to provide an explanation of their behavior or prescriptions for effective strategies for producing cooperative
behaviors by implementers. I have chosen the goal of prediction rather than explanation and prescription for two reasons. First, anyone with even slight exposure to the philosophy of science realizes that there is no consensus about what constitutes adequate scientific explanation. It is not now possible to compare two theories explaining the same phenomenon and reach a conclusion about which is the better explanation and expect consensus to form around that conclusion. This is not a problem unless one agrees that a degree of consensus in general, and consensus about exemplars (Kuhn's shared problem-solutions, see Kuhn, 1974, pp. 186ff) in particular, is essential for progress in science.

Second, it is necessary to have effective prediction of implementer behavior before we can construct effective prescriptions for producing cooperative implementer behavior. We need a theoretical model of implementer behavior that can be used to simulate the effects of alternative strategies of implementation. If we cannot predict implementer behavior we cannot predict the results of implementation strategies, nor prescribe effective strategies.

In prescribing implementation strategies we are faced with problems similar to those which HEW encountered in trying to prescribe welfare policies. What was needed was answers to questions about the outcomes of alternative welfare policies in terms of:

Who would win and who would lose—under alternative plans, and to compare them (the plans) in terms of cost, effectiveness in reducing poverty, effect on incentives, and other factors, so that informed choices could be made. . . . What was needed was a behavioral model of the population—at least of the low-income population—that would make it possible to
simulate the effects of alternative policies (Rivlin, 1971, p. 32).

What we need, in order to prescribe implementation strategies, is a behavioral model of implementers. With such a model we can predict the effectiveness of strategies for producing cooperating behavior and the likelihood that non-cooperating behaviors will occur. We would have a way of gauging implementation feasibility in terms of implementer behavior.

6.2 Systematic Critique of the Literature.

Two methods will be used to generate a theory of implementer behavior: a systematic critique of the theoretical/conceptual literature on implementation and a procedure of formal theory construction. These methods will be introduced in detail later so I will only outline them to provide a guide to the methods I will use. I have referred to a systematic critique of the literature on implementation and not a literature review. What I mean by a systematic critique of the literature is the application of criteria for evaluating social science theory (Backoff, 1974, p. 24ff) and the classification of the literature according to its usefulness for the particular theory I am constructing. Most reviews of the literature are discursive. These reviews have some utility but they are not the most effective or efficient way to analyze existing work and assess its utility for constructing a particular theory. It seems appropriate to construct a discussion of the literature so that it feeds concepts, approaches, criticisms, propositions and so on, directly into the theory construction process. This is the purpose of the critique presented in
Chapters 3 and 4 and the framework for classifying theories of implementation presented in Chapter 2. At the end of Chapter 4 the reader has an idea about the extent to which the domain of implementation research has been covered and about the place of a theory of implementer behavior in this domain. In addition, the reader has seen how the implementation literature stands up to a set of criteria for evaluation of social science theories. The critique is not performed to chastise authors but rather to demonstrate paths which may be taken in improving a theory of implementation.

6.3 Formal Theory Construction.

The second and principal method employed here is a technique of formal theory construction devised by Jack Gibbs. According to Gibbs a formal theory consists of a set of intrinsic statements; axioms, postulates, propositions, and so on, interrelated according to a clearly specified logic; and a set of extrinsic statements which includes definitions, formulas, procedural instructions, and so on. The "intrinsic" part comprises statements in the form of empirical assertions and the "extrinsic" part defines the terms of the intrinsic statements (Gibbs, 1972, p. 111). The details of the procedure will be discussed in Chapter 8.

Because formal theory construction is not a popular methodology in public administration, policy studies, or in studies of organizational innovation perhaps I should make some effort to justify my choice of this method. First, it is generally agreed today in the social sciences that theory and empirical research ought to be linked together. Even so, there is not much effort at theory construction
apart from modest lists of propositions and discussions of "conceptual frameworks" or "approaches". I think that it is important, especially in new areas of research like implementation, that theories be advanced that put order into the investigation of the phenomenon.

Second, but still varying on the same theme, theory construction can provide an orderly way of drawing together the concepts, statements, and empirical findings from areas on the fringe of a domain of inquiry. For example, this study focuses on policy implementation primarily, but some relevant research on implementation has been done in the study of organizational innovation. A formal theory can provide the framework needed to cull relevant concepts and statements from a neighboring research area and systematically relate them to concepts and statements about the principal area of inquiry.

Third, a formal theory, one that logically relates lower level statements to more general, higher level statements, permits greater efficiency in empirical research. Since lower level statements are logically derived from higher level statements, tests of lower level statements allow inferential judgement about the validity of the higher statements. The validity of the higher statements is indirectly tested with the same research resources being used to test lower level statements. Finally, again because of the logical relation of statements, one can derive statements that were initially unanticipated by the theorist. There is a potential for discovery through the theory itself. These are my principal reasons for choice of formal theory construction as a method.
7. Summary.

This introductory chapter contains many disparate topics. In discussing my principal research question--Why do individuals cooperate or not cooperate with the implementation of public policy innovations?--I defined several key concepts: political innovation process, bureaucratic innovation process, and a public policy innovation. I discussed the roles of the decision-maker, change agent, change catalyst and implementer and indicated that I would focus on implementer behavior. I tried to point out why the study of individual behavior was important for increasing our understanding of implementation and that there are several practical and theoretical benefits that may accrue from the study of implementation. I concluded the chapter with a discussion of my goal and the methods I will employ.

8. Outline of This Study.

The heart of this study is the formal theory of implementer behavior in policy implementation situations which is presented in Chapters 10 and 11. Leading up to the theory is the critique of the literature on policy implementation and implementation of organizational innovations. The framework for this critique is presented in Chapter 2, the substance of it in Chapters 3 and 4. Chapter 4 is a discussion of definitions of implementation. Chapter 6 presents the concept of an "implementation situation" which plays a crucial role in organizing the concepts of the theory of implementer behavior and in designing tests of the theory. In Chapter 7 I introduce a typology of implementer behaviors. This is a key chapter since these nine behavior types are the "dependent variables" which the theory is
intended to predict. Chapter 8 contains a model of implementer behavior which is used as an introduction to the theory. The model contains the core concepts of the theory and so provides a simplified introduction to the theory. Chapter 9 is a review of a miscellany of items pertaining to the structure of the theory. Here I introduce the technical aspects of the theory in order that Chapter 10 and 11 contain nothing but a discussion of the concepts and statements of the theory of implementer behavior. The theory itself is fragmented for ease of communication. Nine sub-theories, one for each of the nine types of implementer behavior, are presented. Some of the theoretical material, which would have cluttered and confused the discussion of the theory, is relegated to an appendix. The study closes with a discussion of procedures for testing the theory, a discussion of the theory's contribution, and suggestions for further research, all found in Chapter 12.
CHAPTER 2. A FRAMEWORK FOR CLASSIFYING AND EVALUATING
THEORIES AND CONCEPTUAL FRAMEWORKS OF IMPLEMENTATION.

1. Introduction.

The objective of this chapter is to lay out a framework for
classifying and evaluating the theories and conceptual frameworks to be
reviewed in chapter 3. When the framework is applied to the existing
literature on implementation the result will be a map depicting roads
researchers have already travelled and unexplored areas. This will
provide us with one view of the gaps in the implementation literature.
The framework has the additional value of allowing me to pinpoint my
own theoretical effort. This chapter presents the framework, and the
next chapter will present the material that fills it out. The frame-
work has two dimensions: the units of analysis employed in the theory
(or conceptual framework) and the themata underlying them. Both of
these dimensions will be explained. In addition, a set of criteria
for evaluating theories in social science will be discussed. These
will be applied in Chapters 3 and 4 to the theories of implementation
of organizational innovations and policy implementation.

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1Additional dimensions could have been employed but these are
sufficient for differentiating the items reviewed. As work on imple-
mentation grows, more dimensions may be needed to describe the
differences among theories and conceptual frameworks.
2. **Units of Analysis Employed in a Theory.**

A theory or conceptual framework can be classified according to the units of analysis that it employs. Units of analysis are the objects which we observe and about which we theorize. There are two types of units of analysis (Eulau, 1969, pp. 1-16). Object units are the units whose behavior is to be explained (Eulau, 1969, p. 8). Subject units are units "observed in order to explain the behavior of an object unit" (Eulau, 1969, p. 8). It is possible that the subject and object units coincide in the same concrete object. For example, it is possible to be explaining a property of an organization by referring to another property of organizations. But, it is also possible to explain the properties of an object with the properties of a subject unit that does not coincide in the same concrete object. An example would be to explain an organizational property by referring to properties of the organization's environment. This terminology replaces the restrictive terms "dependent" and "independent" variables. There is no implication with the new terminology that the properties of subject units are independent.

The units of analysis used in a theory can be used to type theories. We can distinguish theories that employ different object or subject units. For example, James Q. Wilson has written some "notes toward a theory of innovation in organizations" (Wilson, 1966). The object units of analysis of his theory are the organization and its members. To explain innovation in organizations Wilson uses other properties of organizations. Some of these properties are from the organizational level of analysis, other properties of organizations
are constructed by referring to the properties of subunits of the organization and individual members of the organization. Therefore, Wilson's theory involves two object units of analysis, the organization and individuals and three subject units of analysis; the organization, organization subunits, and individuals.

To classify existing theories of implementation by unit of analysis will require specifying the following types of units: 1) individuals, 2) groups, 3) organizational subunits, 4) organizations, 5) multiorganizations, and 6) the environment. A multiorganization is a group of interacting organizations which are treated as a whole. The federal government or various segments of it are good examples of a multiorganization. Existing theories of implementation draw their object and subject units of analysis from these types.

2.1 Types of Properties of Units of Analysis.

There are two aspects of properties (properties of properties) of units of analysis that will be used in this essay. The first aspect is called the mode of the property. Properties may be in either an action mode or a state mode. When a unit acts we can specify action properties of the unit (McGrath and Altman, 1966, p. 15). For example, an individual may vote; voting is an action property. Collective units do not act. When we say that a legislature voted we are referring to an aggregate property of the collective. That is we are attributing the property of the aggregate behaviors of legislators to the legislature as a collective. Likewise individual adoption or implementation of innovations are action properties of individuals.

We may also say that a group, organization or multiorganization adopts
or implements, with the understanding that we refer to the aggregated behaviors of members of these collective units.

An action property depicts "an event that occurs during a temporal interval. Thus actions are noncumulative in time" (McGrath and Altman, 1966, p. 15). A state property, on the other hand, is cumulative in time (McGrath and Altman, 1966, p. 15). It is a summary of events up to a point in time. We can attribute state properties to all of the units of analysis mentioned above. For example, we can talk about the degree of integration in an organization or group; we can attribute an attitude toward an innovation to an individual; or we can attribute a distribution of attitudes of group members about an innovation to a group. All of these are state properties of units of analysis. Implementation behavior is an action property of a unit (individuals, groups, organizational subunits, organizations and multiorganizations). Both state and action properties can be employed to explain implementation.

The other aspect of a property does not have one name as does the mode of a property. This aspect of properties is based on the level of analysis of the property and the type of unit of analysis. This aspect applies differently to individuals than it does to collectivities of individuals so we must treat individuals separately (Barton, 1968, pp. 211-215).

2.1.1 Properties of Individuals.

Integral properties of individuals are characteristics of the individual per se, and are not attributed to the individual on the basis of his or her relationships with other individuals or on the
basis of the individual's context (or environment). Examples of integral properties of individuals are

"a) motivational variables (need for achievement, affiliation, power, ego support, status, and recognition, affection, acquisition, b) attitudinal variables (including values and norms), c) aptitude variables, d) perceptual variables, e) temperament variables, f) ascriptive variables (background variables--sex, age, race, etc.)" (Backoff, 1974, p. 33)

These are all state properties of individuals. Action properties of individuals that are also integral properties encompass the whole range of individual actions.

Relational properties of individuals are properties attributed to individuals by virtue of their relationships with other individuals.

... they include popularity, measured by number of choices received on sociometric questions; participation in an occupational community, measured by the number of friends who belong to the same occupation; supportiveness of political environment, measured by the proportion of his associates who vote the same way as the respondent; cosmopolitanism, measured by the number of extra-organizational contacts he has, and so on. (Barton, 1968, p. 335)

Contextual properties of individuals are properties attributed to individuals by virtue of their being members of groups, organization subunits, organizations or multiorganizations. Examples are "being a member of a work group where a high proportion (of members) are dissatisfied" or "being a member of a conflict ridden organization."

2.1.2 Properties of Collective Units.

Collective units may include groups, organization subunits, organizations, and multiorganizations. There are several types of properties of collective units that are analogous to individual
properties; viz., integral, relational and contextual properties of collectives. In addition, there are two types of properties unique to collective units; viz., aggregate and relational-pattern properties.

**Integral properties** of collectives are properties of the group or organization as a whole and not of the individuals comprising it. Integral properties of collectives are state properties. Examples of state properties are age, wealth, size, membership criteria (Eulau, 1969, p. 42); formal rules, budgets and programs (Barton, 1968, p. 335). Action properties of collectives are discussed below.

**Relational properties** of collective units are derived from the relation of the collective with other collective units. These can also be either state or action properties.\(^2\) Examples of state properties of relations of collective units one with another are: homogeneity, domain consensus, awareness of other parties, stability, resource distribution, number of resource sources, and so forth (Van de Ven, et al., 1973, p. 116-117). Action properties of relations refer to the interaction of one collective unit with another. Collective units communicate and transact with one another. Properties that can be attributed to these interactions include the degree of formalization, standardization, intensity, and reciprocity (Van de Ven, et al., 1973, p. 117).

**Contextual properties** of collective units are properties attributed to units on the basis of the units of which they are parts.

\(^2\)The same distinction between relational state properties and relational action properties can be made for individual relational properties.
For example, a state can be given the property of "belonging to a federal system," or "belonging to an economic development region." Or, contextual properties can be derived from characteristics of the unit's environment (Eulau, 1969, p. 45). Environmental properties of units might include the degree of stability or homogeneity of the environment (Thompson, 1967, p. 72).

To this point the properties of individuals and collectives are similar; both exhibit integral, relational and contextual properties. But collective units can also be characterized by the properties of their parts. Collective units can be described in terms of aggregate (or distributive) properties and relational-pattern (or structural) properties.

**Aggregate properties** of collective units characterize the whole collective unit on the basis of its parts. Any integral property of an individual (or a part of any kind) can be aggregated in some way. Recall that examples of integral properties of individuals were attitudes, perceptions, performances, etc. These properties can be aggregated to arrive at rates, means, or proportions for the collective. This is the simplest type of aggregate property. In a more complicated manner we may speak of the distribution of properties, variances, standard deviations, and correlations among properties (Barton, 1968, p. 335).

All action properties attributed to collectives must be aggregate properties since it is only the members of a collective and not the collective itself which acts. To put it another way, actions are not integral properties of collectives, but rather aggregate properties.
To treat action properties as integral properties of a collective is to commit the fallacy of reification. Reification consists of failing to recognize that the proper subject unit for attributing action properties to a collective is the individual. Thus, when we attribute action properties to a collective we aggregate the actions of individuals in some manner.

Relational-pattern (or structural) properties of collectives are also the result of aggregating the properties of the parts of collective units. Instead of aggregating integral properties of the parts to get properties of the whole, as we do with aggregate properties, we aggregate relational properties of the parts.

But, whereas relational properties of individuals can be either state or action properties, structural properties of collectives are cumulative over time and so are state properties. Thus, we can observe instances of communication among members of a collective and so derive a map we might call a communication structure. Or we can tally the instances of lower participant participation in decision-making and get a measure of "centralization."

We have completed our necessary diversion from the task of elaborating the dimensions of a framework for the classification of theories of implementation. We can now discuss the thematic dimension of our classification.

3. **Thematic dimension.**

Theories and conceptual frameworks of implementation can be classified by the type of themata that guides the author's thinking. Gerald Holton has identified an aspect of the process and product of
science which he calls the "thematic component" (Holton, 1973, 1975). Themata are scientists' presuppositions or underlying philosophical assumptions about the concepts and methods they use and the propositions they form. If Holton were reviewing the themata of social science he might recognize that social scientists have several terms for this thematic component. For example, J. D. Thompson discusses "strategies" for studying organizations (Thompson, 1967, p. 22), A. Etzioni reviews the "languages" of social science (Etzioni, 1968, p. 70ff), others talk of "approaches," "models," or "points of departure."

According to Holton, themata perform several functions for science:

In many (perhaps most) past and present concepts, methods, and propositions or hypotheses of science, there are elements that function as themata, constraining or motivating the individual and sometimes guiding (normalizing) or polarizing the scientific community. In the scientists' own public presentations of their work, and during any ensuing scientific controversy, these elements are usually not explicitly at issue. The discussion seems to concern chiefly the empirical content, that is, the repeatable phenomena and the propositions concerning logic and mathematics. By way of a very rough analogy, I have suggested that those two elements be considered the x and y coordinates of a plane within which the discussion seems chiefly to proceed, since the "meaningfulness" of concepts is tested by the resolution of concepts or propositions into those elements... The themata that appear in science can, in our very rough analogy, be presented as lying along a dimension orthogonal to the (xy) plane in which reification and falsification can take place, hence somewhat like a z axis rising from it (Holton, 1975, p. 330).

We get a clearer notion of what Holton means by themata when he gives examples. He describes the lengthy debate between R. A. Milikan and Felix Ehrenhaft over the "existence of a postulated 'subelectron'." On the surface it seemed that the opponents could
have reached agreement easily "on how and what was being observed through the telescope and ultra microscope when a particle was seen to move in the view field, and whether and how to amend the equation for Stoke's Law for the fall of small objects by extrapolation of a correction term" (Holton, 1975, p. 330). But, says Holton, there appears to have been a more fundamental source of disagreement between the two men.

Analysis of the published research reports, of the expressed motivations, and of the ever hardening attitudes of the protagonists on opposite sides of the question shows here, as in other cases, the strong role of an early, unshakable commitment to opposite themata on the part of the opponents; the one to the themata of discreteness as the fundamental explanatory principle operating in electricity, the other to the thema of the continuum and hence antitatomism. In Miliken's case the commitment to an atomistic explanation of electricity predated his experimental verification and indeed helped him to pick his way through initially indifferent data to support his contention. In the other, the growing dedication to the antithema led to a veritable flood of counter-experiments (Holton, 1975, p. 330).

Holton has begun to catalogue themata in the physical sciences in an effort to understand the historical development of knowledge in those sciences. But, as Holton mentions, the confrontation of the themata underlying science also has utility for the current advancement of knowledge, especially in the newer sciences, as well as for understanding developments of scientific knowledge in the past (Holton, 1973, p. 64).

I think that a lot of confusion occurs in social science because of the multiplicity of themata in use. The confusion would be reduced if we were explicit about the themata that we see in our own work. Even in a field as little explored as implementation of
innovations I will show that there is a variety of themata underlying different theories. There are several theories with multiple themata. I would like to present a small list of themata here as a beginning for this study in the social sciences.

Holton identifies three different uses of themata:

The thematic concept, or the thematic component of a concept (examples I have analyzed are the use of the concept of symmetry and of the continuum); the methodologized thema (such as the preference for expressing the laws of science where possible in terms of constancies, or extrema, or impotency); and the thematic proposition or thematic hypothesis (exemplified by overarching statements such as Newton's hypothesis concerning the immobility of the center of the world, or the two principles of special relativity theory) (Holton, 1975, p. 331).

The themata I will identify are examples of the thematic concept. James G. March and Amitai Etzioni identify several thematic concepts.

I believe that James March has identified several of the themata of current social science (March, 1972). He has called them models, but I think this term ought to be reserved for another concept. I agree with Leonard Hawes that:

A model is a relatively well developed analogy. Given two objects or processes which are dissimilar in many respects, one is an analogue of the other to the extent that the physical or logical structure of one re-presents the physical or logical structure of the other. . . . A model is the result of taking the structure or function of one object or process and using that as a model for the second (Hawes, pp. 136-137).

I think March would agree that he has listed a set of themata in use by social scientists. Amitai Etzioni has also produced a list of themata. In The Active Society he describes, in detail, the characteristics of "three major languages (or meta-theories) of social science . . . and a fourth which arises out of their convergence"
(Etzioni, 1968, pp. 61-67). Whereas March's list of themata includes those applicable to individuals and collectivities Etzioni's list only pertains to collectivities.  

Holton believes that a complete catalogue of themata for the physical sciences might contain 50 items (Holton, 1975, p. 331). It seems likely that current social science is based on more. An interesting question is the extent to which the themata of social science and physical science overlap. The combination of the lists of themata of March and Etzioni yields nine distinct themata. These nine are described briefly below. There is one thema that applies to individuals alone, two apply to both individuals and collective units of analysis, and the remaining six apply only to collectives.

3.1 Individual Themata.

**Individual Choice**

"The process by which individuals choose among alternatives, make decisions, and solve problems. For example, investment behavior, gambling, voting, occupational choice, consumer behavior, the selection of mates" (March, 1972, p. 67). The SEU (subjective expected utility) model of decision theory, expectancy theory of work motivation, and attitude-behavior theories are examples of particular theories in which an individual choice thema is put to use.

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3 The reader will note that Etzioni refers explicitly to societies only, but it is my judgement that he is referring more generally to collective units of analysis.
3.2 Themata Applied to Both Individuals and Collectives.

**Structural-Collectivistic**

This thema focuses on regularities among state properties of units. When applied to the state properties of individuals the thema has resulted in models of structural regularities in beliefs, attitudes, and cognitions (March, 1972, p. 69). When applied to collectives, models for structural regularities in groups, organizations, and societies result. Etzioni discusses the results of applying the structural thema to acting collectives. According to Etzioni the collectivistic approach views properties and processes of collective units of analysis as the consequences of quasiorganic relationships among the components . . . of the whole (Etzioni, 1968, p. 61). The central assumption of this approach is that the units under study hang together and are tied to each other with powerful bonds. The resulting entity has a 'structure,' 'pattern,' or 'character,' or provides a 'gestalt' or a 'context;' the term used depending upon the specific theory (Etzioni, 1968, p. 65).

**Adaptation**

"Modification of behavior by individuals and collectivities in response to experience." The themata has been applied to learning, personality development, socialization, organizational change, attitude change and cultural change (March, 1972, p. 68). The operant conditioning or behaviorist approach to psychology is a famous example of the application of this thema to the individual.
3.3 Collective Themata.

**Diffusion**

The image of the spread of a disease underlay the early uses of this thema. The thema is used in models and theories treating the spread of behaviors, attitudes, knowledge, information, fads, innovations, rumors, political allegiances, emotions, and ideas (March, 1972, p. 68-69).

**Collective Choice**

"The ways in which collectivities of individuals reach mutually satisfactory joint decisions" (March, 1974, p. 68). This thema is applied to problems like choice within committees, groups, organizations, and societies. The themata has been used in the innovation literature to treat innovation adoption by communities.

**Exchange**

Exchange is a special case of individual and collective choice. The uses of the themata listed by March concern the ways in which mutually acceptable trades are made in the market, the cold war, small groups, marriage and politics (March, 1972, p. 68).

**Atomistic**

This thema is a view of the properties and processes of collective units as outcomes "of mechanistic relations among a large number of micro-units. . . . The atomistic view stresses attributes of units and inter-unit relations to the neglect of supra-unit properties" (Etzioni, 1965, p. 61). Examples of the macro-atomistic thema appear in the economist's model of perfect competition and the balance of power theory of international relations (Etzioni, 1968, p. 61).
Voluntaristic

This theme views properties and processes of collective units as if they were the expressions of one macroscopic will or mind . . . The voluntaristic orientation focuses on a supra-unit and tends to neglect unit properties and inter-unit relations (Etzioni, 1968, p. 61).

The (voluntaristic) view does not take into account the fact that societal units are composed of many sub-units and actors, and that the action of any one of them — if it is to have macroscopic consequences requires either winning others' support or forcing their compliance . . . Discerning few external or internal constraints on action, the voluntarist's view is hyperactive (Etzioni, 1968, p. 68-69).

According to Etzioni the voluntaristic theme emphasizes the role of communication; "When communication links have been laid out effectively and given valid information inputs, the actors are expected to move toward their goals" (Etzioni, 1968, p. 70).

Collective Action

This theme combines elements of the collectivistic and voluntaristic themata:

The language of societal action . . . renders the collectivistic approach more active and the voluntaristic one less hyper-active. In collectivistic language (the collectivistic theme) social units are assumed to be bound into supra-units in such a way that no unit can move significantly without the movement of the others. Furthermore, the supra-unit has a structure of its own which limits the movement of all the units together (Etzioni, 1968, p. 70).

You will recognize a common assumption of general systems theory. The collective action theme does reflect this assumption but "add(s) the conception of mechanisms that are able to guide macroscopic processes and changes" (Etzioni, 1968, p. 71). In other
words there are actors which can cause "movement" of the units. Under certain conditions the structure of the supra-unit "which limits the movement of all the units together" can be overcome.

On the other hand, the collective action theme avoids the hyperactivism of the voluntaristic theme. You recall that this theme was the image of society as a person.

Most voluntaristic theories are a-structural: Their actor is a man (a great man), or a group of men who like one man (the power elite), or Man writ large—"American sensibilities were offended"—as though societies or corporations were giant-sized individuals. . . . The $\pi$-structural view does not take into account the fact that societal units are composed of many subunits and actors, and that the action of any one of them—if it is to have macroscopic consequences—requires either winning the others' support or forcing their compliance (Etzioni, 1968, p. 68-69).

We see that the collective action theme is a convergence of the voluntaristic and collectivistic (structural) themata. The collective action theme emphasizes the power of actors. Not all acting units are equally powerful; some can build consensus among members more easily than others. The ability to activate units through consensus-formation is the power to change the properties of the supra-unit or collective unit. Here we see the variance from the collectivistic-structural theme which does not account for directed change. On the other hand, "societal units frequently face their own pasts as a barrier or cost; changes can be made but the energy spent in doing so is drawn from the amount available for action directly related to the actor's goal. Thus, we do not assume a capacity for facile action . . . " (Etzioni, 1968, p. 73). And here we see the "hyper-activism" of the voluntaristic theme avoided.
3.4 Summary and Comment on the Themata of Implementation Studies.

These are the themata that March and Etzioni have identified. There are, no doubt, many more themata in use in social science today. Perhaps new themata are emerging. We may even find that in the short history of social science that we have already abandoned some themata.

While this discussion is fresh in the reader's mind, I would like to return to comments I made in Chapter 1. I pointed out through several quotations that the study of the behavior of subordinates in implementation situations was an important question, because, contrary to traditional views in organization theory, subordinates do wield power in organizations and, therefore, can influence the success of policy innovation implementation. Why had the power of subordinates in organizations been ignored by theorists until the early 1960's? I think the answer lies in the thema that underlay Weber's concept of bureaucracy, and administrative management. Organizations were viewed as expressions of the executive's mind. A voluntaristic thema was employed. The informal aspect of organizations was overlooked, and the formal emphasized. Power and authority were assumed to almost always coincide. Therefore, the executive's policies were implemented.

We now understand that a collective-action thema may be more appropriate for the study of organizational processes. In order for us to even ask research questions about implementation we must assume that the will of the executive can be thwarted. Researchers might consider employing the thema in studies of implementation.
This concludes my discussion of themata. I recognize its exploratory nature. We now turn to presenting a set of criteria that will be used to evaluate theories of implementation reviewed on the next chapter.


In this section I present five major criteria for evaluating the literature on implementation. Some of the criteria have been borrowed from Mario Bunge (1967), and others from Jack Gibbs (1972). I have also benefited from the example of Zaltman, Pinson and Angelmar (1973) who applied a similar set of criteria to theories of consumer behavior, and from Robert Backoff's discussion of criteria (1974, pp. 24-55). The five criteria are testability, range, linguistic exactness, inclusiveness of types of temporal relations, and falsifiability. In addition to the evaluative use of the criteria I hope that application of the criteria may lead to some insights about improving our systematization of knowledge about implementation.

A. Testability: There is general agreement among social scientists that theories ought to be presented in a testable form. This is not to say that a theory that is presently not testable has no value. Such theories are often very useful for the conceptual development of an area. But constructing testable theories is our goal. I will apply these minimal criteria of testability to the literature on implementation. First, at least some of the concepts of the theory must be defined in such a way that they permit measurement of their properties. In common terminology the concepts ought to be made operational. This
is not a controversial criterion. Tests of theories require measurement, measurement requires specification of measures. This is the minimum criterion for testability. Two other criteria enhance the testability of a theory.

The second is that the statements of the theory ought to be stated explicitly. This is not a call for formalization of theories. Although I find formal theories useful, I am only suggesting that theoretical statements be set out from the general discussion in a piece of work so that someone working with the theory has no question about where theory begins and general discussion ends.

The third criteria refers to the relationship between statements in a theory. Does each statement stand alone or is there some logic of inter-relation? If the theorist is not explicit about the relationships between the statements in his/her theory we do not know if finding one statement false casts any doubts on the validity of other statements. Much theoretical work in the psychological and social sciences consists of constructing isolated statements. It would be better to have sets of explicitly interrelated statements because this permits efficiency in empirical tests of the sets of statements. Since falsification or support of one statement reflects on the other statements in the interrelated set it would not always be necessary to test all statements in the set. Furthermore, systematic interrelation of the statements in a theory permits the use of non-operational concepts in some higher-level statements because these concepts receive their empirical import through their relation with statements containing operational concepts.
B. Range of the theory: This property of a theory is sometimes called "generality." One theory is more general than another if it refers to a more inclusive set of phenomena than another. A theory of implementation in all formal organizations is more general, that is, has greater range than, a theory of implementation in public organizations. Of course, in order to be compared on this criterion, the referent sets of phenomena of the two theories must intersect. This criterion can only be applied to tested theories, otherwise the criterion must be called the intended range of a theory.\(^4\)

C. Linguistic Exactness: There are two subtypes of this criterion; intensional and extensional vagueness. "The intension of a concept consists of those properties subsumed and synthesized by the concept" (Zaltman, Pinson, and Anglemar, p. 95). Intensional vagueness is a result of incomplete specification of the properties "subsumed or synthesized by a concept" (Zaltman, Pinson and Anglemar, p. 95). This is a criterion that engenders much debate among researchers since it is difficult to know when it is useful (serves some goal of scientists) to include or exclude a property of a concept. A defining property for one is, if included at all, a mere accompanying property for someone else. Intensional vagueness is abolished only by explicitly specifying the properties which one sees as related to each concept.

"The extension of a concept is the applicable domain or set of objects to which the concept can apply" (Zaltman, Pinson, and Anglemar, p. 95-96). A concept is extensionally vague if its user

\(^4\) I thank Robert Backoff for pointing out the distinction between actual and intended range.
does not make clear what referent objects the concept is linked to. I can think of an example of extensional vagueness from the literature on resistance to change. Some authors are not clear about what kind of unit of analysis can be observed resisting change. Does an organization resist change? Or, is it only useful to think of individual organization members resisting change?

Unless the unit of analysis to which the concept refers is made explicit the concept is extensionally vague and the theory which employs it is apt to spread more confusion than understanding.

D. Inclusiveness of Types of Temporal Relations: There are basically two types of temporal relations that can be expressed in the statements of a theory; cross-sectional (synchronic) and longitudinal (diachronic) relations.\textsuperscript{5} A statement that relates two properties in the same time period is cross-sectional. For example, the greater the organizational centralization at \( t_1 \) the greater the organizational formalization at time \( t_1 \). A longitudinal relation, on the other hand, relates two properties (of the same or different unit(s)) at different time periods: The greater the organizational centralization at \( t_1 \), the greater the organizational formalization at \( t_2 \).

A theory that contains both cross-sectional and longitudinal relations in its statements is more valuable than one that only contains one type. This type of theory has potentially greater power to systematize the phenomena in question than a theory which includes only one type of relation.

\textsuperscript{5}Gibbs specifies more types of temporal relations than these; (see 1977, p. 197 ff).
E. **Falsifiability:** This criterion is met when a theory is presented in a way that permits exposure of the theory to rigorous tests of its validity. Falsifiability of a theory is a function of a set of other criteria, among them; testability, range, and precision of statements. If we enhance the testability of a theory we enhance its falsifiability. But falsifiability is something more than testability. We would like to maximize the probability that the theory will be proven false. This gives us confidence that the reason that the theory was upheld was not because of the lack of rigorous testing.

The greater the intended range of a theory, the greater its falsifiability. If the statements of a theory are stated in general terms they are more likely to be falsified. Also, a theory of individual behavior that is intended to be true across several contexts is more falsifiable than a theory of behavior in one context.

Finally, the precision of theoretical statements is related to a theory's falsifiability. If we say "centralization of organizational decision making is related to the job satisfaction of organization members" we are not taking much of a risk. We learn more by testing statements like "centralization of organizational decision making is inversely related to the job satisfaction of organization members in firms but, not in government agencies."

As I said when I introduced this section, my purpose in applying the criteria is not to find fault with the author's works but to point in directions along which our knowledge of implementation can be further ordered and enhanced. These criteria are not assumed
to be the ultimate touchstones of scientific worth but are only tools for the advancement of knowledge.

5. **Summary.**

   In this chapter we have discussed the two dimensions along which theories and conceptual frameworks of implementation can be placed; the units of analysis employed in the theory, and the themata that underly the theory or conceptual framework.

   In addition we discussed types of properties of individual and collective units. Individuals can be characterized by integral, relational, and/or contextual properties, while collectives can have these types of properties attributed to them plus aggregate and relational-pattern properties. Both the integral and relational properties of individuals and collectives can also be either action or state properties. All of the other properties of individuals and collective units are state properties. Finally, we discussed several criteria for evaluating theories of implementation.
CHAPTER 3. THE IMPLEMENTATION OF ORGANIZATIONAL INNOVATIONS

1. Introduction

In the next two chapters I review selected works that deal with 1) the implementation of organizational innovations, and 2) the implementation of public policy. My review falls far short of encompassing all the literature that explicitly treats implementation. I have decided to limit the review to the above mentioned areas. I have excluded literature in the following three areas: planned organizational change, the implementation of technological innovations, and the implementation of operations research/management science. I will describe each of the excluded areas briefly and will explain my reason for not including them in the review.

First, there is a substantial literature on planned organizational change (see, e.g., Alderfer, 1968; Leavitt, 1964; and Bennis, Benne and Chin, 1961). Students of this area have not emphasized production of explanatory or predictive theories, but have usually made prescriptive statements about how to effectively implement changes in organizations. On the other hand, the literature on organizational innovation processes consists of attempts to explain or predict the success of innovations in organizations. I have chosen to review the literature on organizational innovation processes rather than that on planned organizational change because my goals are compatible with
the former literature. I intend to build a predictive theory of implementer behavior, not a prescriptive one.

In addition to the literature on planned organizational change there has been work done on the study of the implementation of technological innovations. Judging from the literature with which I am familiar, this is a conceptually underdeveloped area. However, Ettlie has studied the implementation of numerically controlled machine tools and there have been several studies of the adoption and implementation of computer technology (e.g., Mintzberg, 1975; Danziger and Dutton, 1977; Perry and Kraemer, 1978). Recently, a research team headed by Duchesneau has conducted a panel study of technological innovation in the shoe industry which included study of implementation (Duchesneau). I do not review this literature because it is extensive and often the distinction between the adoption of an innovation and its implementation is not made clearly.

Finally, there has been interest in implementation among management scientists. They have focused their efforts on the question of why operations research/management science models are not adopted or implemented (Radnor, 1970; Schultz and Slevin, 1975). As in the literature on the implementation of technological innovations, the distinction between adoption and implementation is not always clearly drawn. This makes the research of doubtful utility for the study of implementation as I define it in later chapters.

This literature review has three sections. Part one (Chapter 3) consists of a critique of items in the literature in the domain of organizational innovation that purport to explain or predict implementation phenomena. This review is intended to be exhaustive of
major explanatory and predictive statements on implementation of innovations in organization through 1974. Part two (Chapter 4) contains a review of explanatory and predictive efforts on the subject of policy implementation that is intended to exhaust the significant pieces on this topic published before the end of 1975.

The scope of the review is limited to those items that are essentially conceptual - theoretical treatments of implementation. This scope suits my objectives in reviewing the literature. First, I wished to set the theory of individual behavior toward implementation of innovations against existing conceptual - theoretical efforts in order to show what gaps in previous work this theory hopes to close. Second, by criticizing existing conceptual - theoretical work I hope to offer suggestions for extension of existing work and specify how the theory I construct builds on and extends existing work on implementation.

To this end I have excluded from the review (although, not from some consideration in other chapters) 1) items in the organizational innovation literature that do not treat implementation of innovations, e.g., March and Simon's theory of innovation (see Backoff, 1974, for summary and extension) 2) items that are essentially descriptions of implementation (e.g., Pressman and Wildavsky's case study of EDA's Oakland project) and, 3) items that are essentially prescriptive. This excludes from consideration the bulk of the literature on planned organizational change, which is largely prescriptive rather than explanatory or predictive (Gross, Giacquinta, and Bernstein, 1971, p. 31).
The third part of the literature review (the last part of Chapter 4) makes use of the framework for classifying theories and conceptual frameworks of implementation which was developed in Chapter 2. Each of the theories reviewed is classified according to the object and subject units of analysis employed and the themata underlying the work. I discuss the relation of the theory of implementer behavior to the literature reviewed in this chapter. Then, the place of a theory of individual behavioral responses to implementation is specified. This is done to demonstrate the relation of my work to existing work on implementation.

I will turn now to the literature itself. First, the work of organization theorists on the topic of implementation.

2. Theories and Models of Organizational Innovation that Treat Implementation.

There is a considerable amount of literature available on the process of innovation in organizations. For the most part, discussions of implementation of innovations in organizations are embedded in this literature. Speaking generally, implementation is defined by these students as activities, engaged in after a decision to adopt an innovation, that integrate the innovation with the organization's routine. Particular definitions will be examined as we proceed.

There are five theories and models of organizational innovation that meet the criteria for inclusion in this review mentioned at the beginning of the chapter: 1) Hage and Aiken's theory of program change, 2) Wilson's theory of innovation in organizations, 3) Gross, Giacquinta and Bernstein's (GGB) theory of implementation of
organizational innovations, 4) Berman and McLaughlin's model of implementation of innovations in schools, and 5) Zaltman, Duncan, and Holbek's (ZDH) theory of innovation in organizations. These are the theories and models of organizational innovation and implementation that I will review.

I will do the following things when the item I am reviewing permits. This is the set of activities that I have referred to in the introductory chapter as a systematic critique of the literature. I will attempt (not always in this order):

1. To report explicit statements contained in the item. When explicit statements are not made I make my best effort to discern the author's meaning and to construct explicit statements. I then provide a path - diagram of the theory.

2. When possible, I report the author's model of the stages of the organizational innovation process.

3. I evaluate the item according to the five criteria I have discussed. I reiterate that this critique is aimed at pointing out directions for refinement of these theories and not as evidence that they are inferior or unworthy of further development.

4. When possible, I discuss the author's use of the term implementation.

5. I review the object and subject units of analysis that the author employs along with the properties of the subject units.

6. The most speculative assessment I made is the classification of each item according to the themata which seem to underlie it.
2.1 Hage and Aiken's Theory of Program Change.

2.1.1 Propositions.

Hage and Aiken have constructed a theory which explicitly considers properties of organizations which may influence the implementation of innovative programs in organizations\(^1\). In addition to their statements about the correlates of program change, Hage and Aiken attempt to account for the tendency of organizations to move toward one of two basic styles, a static or dynamic style. I will not be reviewing their discussion of the determinants of movement toward one or the other style but, I will treat the implications of the characteristics of the two styles for program change.

The two styles of organization are "ideal types" and Hage and Aiken emphasize that no organization will be found to exactly match the characteristics of either style. The dynamic style is characterized by high organizational complexity, low centralization, low stratification, low formalization, high job satisfaction, an emphasis on quality of product or service rather than on production (quantity), and low emphasis on efficiency (1970, pp. 65-67\(^2\)). On the other hand, the static style is characterized by the opposite values on these organizational properties: low organizational complexity, high centralization, high stratification, high formalization, low job satisfaction, high emphasis on production (quantity) rather than

\(^1\)My discussion of Hage and Aiken's theory draws on the review of the theory contained in Backoff.

\(^2\)Page numbers cited below refer to Hage and Aiken (1970) unless noted otherwise.
quality of the product or service, and a high emphasis on efficiency (1970, pp. 67-69).

The relationship between the two types of organization style and the rate of program change is simple. The greater the degree to which an organization approximates the dynamic style, the greater the rate of program change it will experience. A successful program change includes both successful initiation and implementation. Therefore, Hage and Aiken hold that the same organizational properties that facilitate or inhibit initiation of innovations influence implementation in the same direction.

They explicitly state the relationships between the set of seven organizational properties that describe the styles and the rate of program change:

1. The greater the complexity, the greater the rate of program change. (1970, p. 33)
2. The higher the centralization, the lower the rate of program change. (1970, p. 38)
3. The greater the formalization, the lower the rate of program change. (1970, p. 43)
4. The greater the stratification, the lower the rate of program change. (1970, p. 45)
5. The higher the volume of production, the lower the rate of program change. (1970, p. 49)
6. The greater the emphasis on efficiency, the lower the rate of program change. (1970, p. 51)
7. The higher the job satisfaction, the greater the rate of program change. (1970, p. 53)
Complexity

Centralization

Formalization

Stratification

Rate of program change

Volume of production

Emphasis on efficiency

Job satisfaction

Figure 3-1. Path Diagram of Hage and Aiken's Theory
2.1.2 Model of the innovation process.

Nearly every study reviewed here employs a model of the stages of the innovation process in organizations. Hage and Aiken use a model with four stages: evaluation, initiation, implementation and routinization. Evaluation "is a period of study and assessment of the need for a new program" (1970, p. 92). The initiation stage begins with the decision to adopt a new program. Two of the major activities in this stage are finding qualified persons to fill the new positions created by the program and finding financing for the program. The implementation stage isn't given a specified beginning point. During this period "the program becomes a reality" (1970, p. 100). The characteristics of this stage are organizational disequilibrium and conflict. During the routinization stage "the organization attempts to achieve a new equilibrium" (1970, p. 104).

At some point the elite of an organization must decide whether or not the new program is meeting the organizational need for which it was designed. If they decide to keep the innovation, a period of consolidation is begun. What was a new activity becomes integrated into the existing structure. If the innovation is abandoned, the organizational structure may revert to the pattern that existed prior to the initiation stage. If the program is continued, rules and regulations must be developed, which may not only include the writing of a rules manual but perhaps a detailed job description for each of the new positions involved in the new activity. The decision to standardize a program marks the beginning of the

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\[3\] The specification of a decision by the organizational elite as the temporal marker of the routinization stage's beginning raises a minor problem for applying this stage to public administrative organizations since the decision to reject or retain the innovation may often be made by decision-makers outside of the organization. For example, judges, legislative bodies, or a higher-level of government.
routinization stage. ... Perhaps the best sign of the routinization of the new program occurs when the men involved in implementing the program are replaced. ... Another sign of routinization is the development of job training programs for the new replacements. Training programs, of course, become possible only when the rules or guidelines of operation have been institutionalized (1970, pp. 104-106).

Hage and Aiken specify the activities of the routinization stage much more clearly than they do those of the other stages.

2.1.3 Evaluation

A. **Testability.** There is no doubt that Hage and Aiken have proposed a testable theory, since they have already tested it (Hage and Aiken, 1967). The concepts are operational and the statement explicit. The theory's testability could be improved if the relationships between the seven "independent" variables were specified. This would link the statements including these variables together. There is a discussion of the relation of complexity and centralization to the other "independent" variables buried in their discussion on the static and dynamic styles (1967, p. 64ff). It would be better if these statements were explicit.\(^4\)

B. **Intended Range or generality.** This is a comparative property of theories, so, we will have to weigh Hage and Aiken's theory against the other theories reviewed here. Hage and Aiken have gathered data to test their statements in welfare agencies and so probably intend that their statements hold for formal organizations. In that case

\(^4\)For a judgement about the other "hidden" statements in Hage and Aiken's work see Backoff, 1974, p. 266.
their theory would have a range similar to that of ZDH, greater range than Berman and McLaughlin's and GGB's work with school organizations, but lesser range than Wilson's theory, which is intended to apply to organization subunits and voluntary organizations, as well as formal organizations.

C. Linguistic Exactness: Evaluation of the linguistic exactness of Hage and Aiken's work depends largely on their 1967 article. In this article most of the concepts that appear in the propositions listed on the preceding page have been given an explicit intension. Extension of the concepts is not a problem, all concepts refer to an organization as the object unit of analysis.

For Hage and Aiken the term implementation refers to a set of actions that organization members engage in with respect to new products and services after their initiation. Organization members attempt to carry out the innovation. Although Hage and Aiken are not clear about the extension of "implementation" it would be consistent with their other concepts if implementation was a property of the organization, as something organization members do collectively (See pp. 31-32, 108-109). The intension of the concept is not clear. Implementation does refer to behavior, and is therefore an action property of an organization. Just what collective behaviors constitute implementation is not clear.

In addition to the use of the term implementation to refer to an organizational action property Hage and Aiken also refer to an implementation stage which follows the initiation of an innovation. I assume that the stage takes its name from the collective behavior
of organization members during that period.

D. Inclusiveness of types of temporal relations: The concepts in Hage and Aiken's 1967 work are given temporal referents. The rate of program change is measured over a five-year period, while the other organizational properties (complexity, aggregate job satisfaction, etc.) are measured at a point in time. The statements in the 1970 book, however, do not contain temporal referents, but, we can infer that they follow the same pattern as the 1967 piece.

E. Falsifiability: Hage and Aiken's theory has a relatively high degree of falsifiability because it is testable, has an intended range that includes all formal organizations, and has relatively precise statements. Falsifiability could be enhanced by including statements of both the cross-sectional and longitudinal relationships among the "independent" variables of the theory.

2.1.4 Classification of Hage and Aiken's Theory.

I will close my discussion of Hage and Aiken's theory by noting how it fits into the framework constructed in Chapter 2. The object unit of analysis is the organization; Hage and Aiken are interested in explaining the initiation and implementation of innovations by organizations. The subject unit of analysis which is observed to explain innovation is also the organization. Both integral and aggregate properties are employed. The object and subject unit and the corresponding properties are listed below.
Table 3.1 Properties in Hage and Aiken's Theory.

<table>
<thead>
<tr>
<th>OBJECT UNIT</th>
<th>PROPERTIES</th>
<th>SUBJECT UNIT</th>
<th>PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>1. Rate of program change, initiation of new products and services, implementation</td>
<td>1. Organization</td>
<td>1.1 complexity, centralization, formalization, stratification, production emphasis, efficiency emphasis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.2 job satisfaction</td>
</tr>
</tbody>
</table>

A structural theme is central to Hage and Aiken's theory of organizational innovation. They discuss the theme that molds their thinking.

We conceive of an organization as a social system; that is, in a state of moving equilibrium. Perhaps the reader can best visualize this by making the analogy to a basket of nervous ping-pong balls, full of unreleased energy, suspended in a given configuration. Should something happen to upset the position of any one of these, all will ultimately be affected, and a new equilibrium will eventually occur (p. 32).

The phrase "suspended in a given configuration" is a clue that they employ a structural theme. Structural notions are at the heart of their explanation for successful innovation. A certain type of structure, a "dynamic style", is conducive for innovation, whereas another structure the "static style", inhibits innovation. They want to understand organizational innovation by finding configurations, empirical regularities in the arrangements of variables, that are associated with initiation and implementation of innovations in organizations. They look for these configurations, or structures, among properties of organizations because they believe that properties
of collectives (such as the initiation and implementation of innovations in organizations) are best explained with reference to other collective properties (such as centralization and complexity of organizations) (p. 123-124). 5

2.2 Wilson's "Notes Toward a Theory"

2.2.1 Classification of Wilson's Theory.

Wilson constructed a theory to explain why organizations have differing rates of innovation. Therefore, the principal object unit of analysis is the organization. However, Wilson also addresses individual behavior so an individual object unit is included. Wilson employed three subject units of analysis to explain organizational innovation: organizations, organization subunits, and individuals. The object units, subject units and properties are listed in the table below. Wilson's predominant goal appears to be to increase understanding of organizational innovation but he does offer some prescriptions for managers. Four themata underly Wilson's theory; structure, individual choice, exchange, and collective action. Wilson sees the rate of organizational innovation as a function of the impact of organizational structural factors (diversity of the organization and

5 In their discussion of the tendency of organizations to move toward one of two basic styles, a static or dynamic style (see section 2.1.1), Hage and Aiken may employ an adaptation thema. An equilibrium thema may also be employed. Note that an equilibrium thema was not mentioned by either March or Etzioni (see Chapter 2). However, only the structural thema is related to their treatment of implementation.
<table>
<thead>
<tr>
<th>OBJECT UNIT</th>
<th>PROPERTIES</th>
<th>SUBJECT UNITS</th>
<th>PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>1. conception, proposal, and adoption and implementation of innovations</td>
<td>1. Organization</td>
<td>1. scarcity of incentive supply, number of tasks, proportion of nonroutine tasks, complexity of organization task structure, amount of decentralization, complexity of organizational incentive system, diversity of organization, conflict about merits of innovation</td>
</tr>
<tr>
<td>2. Individuals</td>
<td>2. conception, proposal, adoption and implementation of innovations</td>
<td>2. Organization subunits</td>
<td>2. Number of organization subunits, number of sources of incentives in organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Individuals</td>
<td>3. Cost in scarce inducements of getting the innovation adopted and implemented; manager's difficulty in using incentives to resolve conflict; differential effect of innovation on members; manager's need to redistribute incentives to resolve conflict; manager's amount of control over member behavior, manager's ability to make distribution of rewards dependent on changing behavior, likelihood of finding allies to support innovation; social distance between proposer of innovation and</td>
</tr>
</tbody>
</table>

6
Table 3.2 (continued)

<table>
<thead>
<tr>
<th>OBJECT UNIT</th>
<th>PROPERTIES</th>
<th>SUBJECT UNITS</th>
<th>PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>decision-maker; perceived threat from proposing innovations; availability of organizational incentives to manager; value of extra-organizational incentives to members, clarity of behavior required by extraorganizational sources of incentives.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[6\] Wilson's article is very suggestive of factors that may influence the innovation process. This list of properties does not exhaust the factors mentioned by Wilson.
complexity of the organizational incentive system) on individual choice processes, viz., choices to conceive, propose, and adopt and implement innovations. The exchange theme enters with the concept of incentives. Incentives influence the behavior of conceivers, proposers, adopters, and implementers of innovations and are also to be used by managers to elicit cooperation at the adoption and implementation stages of the innovation process. That is, incentives are exchanged for cooperation with innovation.

Managers’ use of incentives to promote change is also evidence of the collective action theme. Organizational change is brought about by the efforts of several actors who are not all powerful (as they are in the voluntaristic theme). On the other hand, change in the structure of the system is possible (Etzioni, p. 71). The presence of a collective action theme is what underlies the marked difference between Hage and Aiken’s (structural-collectivistic) theory and Wilson’s that I illustrate below.

2.2.2 Stages of the Innovation Process.

Wilson’s discussion of the stages of the innovation process is brief: “Innovation in an organization occurs in three stages: the conception of the change (strictly speaking, this is invention, not innovation), the proposing of the change, and the adoption and implementation of the change” (Wilson, p. 34).

2.2.3 General Description of Wilson’s Theory and Propositions.

Wilson’s theory of innovation in organizations is noteworthy because it posed new questions for theorists and a dilemma for
managers. Taking the theorist's realm first, please recall that Hage and Aiken supposed that the same factors that facilitated (or inhibited) initiation of innovations also facilitated (or inhibited) their implementation. Wilson's theory calls this view into question. According to Wilson, the very characteristics of an organization that facilitate the conception and proposal of innovations work to inhibit the adoption and implementation of innovations. The question that Wilson raised for theorists was; how, if it is true that the same values of properties of organizations facilitate conception and proposal of innovations, but inhibit their adoption and implementation, do organizations manage to produce innovations at all? The answer is that managers are not passive observers of the impact of organizational characteristics on the behaviors of their subordinates but are capable of actions that enhance or attenuate the impact or organizational characteristics on individual behavior.

Hage and Aiken typify managers as passive observers, or at the very least, allow this notion because they exclude the actions of managers from their theory. Therefore, we assume that they view managers as either unaware of the effect of organizational characteristics on innovation processes, or, as incapable of moderating their effect, or both. Wilson has a more optimistic view. But, Wilson needs an optimistic view about the capabilities of managers to explain why innovations succeed. Hage and Aiken, because they saw no "innovation dilemma" had no need of concepts referring to managers. If Wilson is correct, the manager who wants to promote innovation must be able to either alter the characteristics of the organization at
will, or be able to counteract their influence on the innovation process because the same structure of organization would not produce both conception and proposal of innovations and their adoption and implementation. This is quite a dilemma for a manager. Before I discuss this point in more detail, perhaps I should introduce some of the concepts Wilson uses, his central propositions and a path-diagram of his theory.

As I said, Wilson's object unit of analysis is the organization. He postulates two primary properties of the organization at the organizational level of analysis. For Wilson the "central analytical attribute" of an organization is its economy of incentives.

An incentive is any gratification, tangible or intangible, in exchange for which persons become members of the organization. . . . And, once in the organization, contribute time, effort, or other valued resources (Wilson, p. 32).

From this idea he generates the concept of complexity of an organization's incentive system, which is one of the two primary properties of the organization at the organizational level of analysis.

The other primary variable at this level of analysis is the complexity of the organization's task structure. These two variables combine to determine the diversity of the organization. The other variables contained in the article (and in the diagram below) are not so clearly defined as those just mentioned. The failure to define more of the terms in the theory may be a reason why there have been no tests of the theory.

Wilson defines an innovation as:

... fundamental change in a 'significant' number of tasks. What is 'fundamental' and 'significant' cannot
Figure 3.2 Complete Path Diagram of Wilson's Theory
be given a precise, a priori definition, for in our scheme the meaning of these terms can only be determined by the organizations themselves (Wilson, p. 32).

Here Wilson demonstrates awareness of the importance of subjective views of innovation properties as determinants of behavior toward innovations (See Rogers and Shoemaker, 1971, p. 137). Wilson mentions only one property of innovations; the cost in scarce inducements of getting the innovation adopted and implemented. He seems to equate cost in scarce inducements with radicalness of the innovation.

There are three stages in Wilson's concept of the organizational innovation process: conception of innovations, proposal and adoption and implementation. Wilson's central hypothesis refers to the different effects organizational diversity has at each of the stages of innovation.

The greater the diversity of the organization (in either its incentive system or its task structure or both), the greater the likelihood that some members will conceive major innovations, the greater the likelihood that some members will propose innovations, and the less likelihood that the organization will adopt (and implement) the innovations (p. 35). 7

This hypothesis is diagrammed below. As I said earlier, the central problem Wilson raised for theorists, assuming that he was correct about the differential effects of organizational diversity on conception and proposal and adoption and implementation, was how organizations that have high diversity manage to adopt and implement innovations successfully. Wilson's implied answer seems to be this: The

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7 Wilson has been unclear on one point. He lumps adoption and implementation together in some statements but not in others. This as we will see has caused confusion for others using his work.
executive of an organization can promote conception and proposal of innovations just by fostering or allowing diversity in the organization. There is no need to manipulate incentives to get conception and proposal of innovations - organizational diversity will produce them. But, promoting adoption and implementation requires manipulation of the incentive system. That is, organizational diversity would prevent adoption and implementation if the executive did not provide incentives to those who are reluctant to agree to adopt and implement an innovation. Diversity of the organization is reflected in diversity of

\[
\begin{align*}
\text{Organizational Diversity} & \quad + \quad \text{Probability of Member's Conception of Innovations} \\
& \quad + \quad \text{Probability of Member’s Proposal of Innovations} \\
& \quad - \quad \text{Proportion of Innovative Proposals Adopted and Implemented in the Organization}
\end{align*}
\]

Figure 3-3. *Path Diagram of Wilson's Explicit Core Hypotheses*

individual interests. These interests must be appeased to get cooperation for adoption and implementation. The manipulation of incentives by the executive is the means by which organizations manage to innovate despite organizational diversity.

To rephrase the dilemma and Wilson's solution: A state property of organizations, viz., organizational diversity, fosters conception and proposal but inhibits adoption and implementation. An organizational action property, viz., manipulation of incentives by the executive, is the way in which successful adoption and implementation
are explained. An interesting feature of Wilson's theory is that a structural theme is relevant in all the stages of the innovation process. And, the exchange theme is added in to the explanation of the adoption and implementation stage. Wilson notes this when he says: "The process of adopting innovations can be looked upon as essentially a political one characterized by bargaining" (Wilson, p. 38).

Finally, Wilson makes one point that has been insufficiently considered by other theorists of innovation in organization. The point is this; when looking for the effects of organizational variables on innovation one must be careful to specify what unit of analysis is to be effected. For example, Wilson related high organizational diversity to high conception and proposal of innovations for the organization as a whole. But, he has not said that high organizational diversity is positively related to the conception and proposal of innovations in any sub-unit of the organization. Wilson explains it this way:

A highly diversified organization may also be a decentralized organization, that is, one in which authority over a predetermined range of choice is delegated to a particular sub-unit. A certain proposal may more easily be adopted if it is dealt with by a sub-unit rather than by the organization as a whole because in the sub-unit there are fewer wills to concert. This fact might lead one to suppose that decentralization (and thus diversity) increases, rather than decreases, the probability of adoption of innovations. This supposition, however, is unwarranted, for it is based on a confusion of levels of analysis. The diversity of the organization must be determined for the unit or level to be affected by the innovation; the problem of adoption is a problem for the executive(s) of the unit affected. That a sub-unit of a decentralized organization can adopt a proposal does not mean that diversity has facilitated adoption, for the diversity of the whole organization is irrelevant to the politics of the sub-unit so long as the adoption of the proposal is irrelevant to the whole organization (Wilson, p. 38).
In other words, degree of organizational diversity is related to degree of organizational innovativeness. On the other hand, there might be a property of sub-units -- sub-unit diversity -- that corresponds to organizational diversity. We would then expect sub-unit diversity to be related to sub-unit innovativeness. Wilson's point is that he is not making a contextual statement, in the sense that the organization is the sub-units' context. Rather, he is making a statement of the relationship between two properties of the same unit of analysis (the organization), viz., organizational diversity and organizational innovativeness. I emphasize this point because I think that a lot of confusion can be avoided by clear specification of the unit of analysis to which a concept refers (i.e., its extension).

2.2.4 Evaluation

A. Testability. Wilson's theory has minimal testability in its current form. a) None of the concepts are operationalized. This does not appear difficult to remedy. b) Only three of the many statements made in the article are explicit. My path diagram (see figure 3.2) of some implicit statements contained in Wilson's article adds at least 27 statements to the three "core hypotheses." But, how are we to know that my diagram reflects Wilson's meaning accurately? c) Finally, all three of the explicit statements seem to be based on the reasoning in the body of the article. My path diagram is an interpretation of Wilson's reasoning. Are some of the statements I have searched out of a different type than the hypotheses? Are they the "postulates" or axioms from which the hypotheses are derived, or vice versa? What would tests of the three core hypotheses
indicate about the validity of the other statements Wilson makes? The answers to these questions would help to extend Wilson's theory.

B. Intended Range: Wilson's theory has the greatest intended range of any of the works in this review. Wilson's referent set includes public and private organizations, formal as well as voluntary organizations, and, Wilson gives some indication that his theory refers also to organizational sub-units (Wilson, p. 38). The actual range of the theory cannot be determined without tests.

C. Linguistic Exactness. Considering the extension of Wilson's concepts; it is clear that they refer to collectives, viz., organizations and possibly organization sub-units. No operational definitions are given for the concepts used in the core hypotheses, although Wilson's discussion of the determinants of organizational diversity points a path to an operational definition for that concept.

The concept of an innovation needs further intensional and extensional specification, as do the dependent variables in the core hypotheses; conception, proposal, adoption and implementation of innovations. Wilson's notes toward a theory could be taken a step closer to being a "full-fledged" theory with some attention to the definitions of these concepts.

D. Inclusiveness of Temporal Relations. Wilson does not give temporal parameters to the concepts in his statements so we cannot determine whether he is referring to synchronic or diachronic relations between concepts. Another advance would be to attempt to include both synchronic and diachronic relations in the theory.

E. Falsifiability. As I have noted, Wilson's theory is not testable. Until it is made testable, the question of its degree of falsifiability
is meaningless.

2.2.5 Wilson's Contribution.

Wilson's contribution to the conceptualization of the innovation process has not yet been fully recognized. His hypothesizing the innovation dilemma would have been valuable enough alone. However, Wilson has said much more than this. His short article deserves careful attention. It would be worthwhile to develop Wilson's "notes" into a full-fledged theory.

2.3 Gross, Giacquinta, and Bernstein's Theory.

2.3.1 General Description and Propositions.

Gross, Giacquinta, and Bernstein (GGB) present a theory of implementation of organizational innovations which they developed as a consequence of a case study of the implementation of an educational innovation in an elementary school. The innovation studied was a new definition of the teacher's role which they called the "catalytic role model." "The innovation was conceived of as a solution to the problems of motivating lower-class children and of improving their academic achievement" (Gross, Giacquinta, and Bernstein, 1971, p. 10).8

The dependent variable in their study was called "degree of implementation." The term referred to the extent to which, at a given point in time, the organizational behavior of members conforms to an organizational innovation. Put another way, degree of implementation refers to the extent to which organizational members have changed their

8 Unless otherwise noted, the pages cited below refer to Gross, Giacquinta and Bernstein.
behavior so that it is congruent with the behavior patterns required by the innovation (1971, p. 16).

Below I list the properties GGB use in their theory and relate them to object and subject units of analysis. As has been the case with the other studies, it is left to the reader to discern the units of analysis to which the concepts refer. This task is less uncertain in this case because GGB's theory arises from empirical work. Therefore we can be fairly certain of the subject units they intend because we can follow their description of how they measured certain properties. As the reader can see in the table below, this means that there are some integral properties of organizations (properties measured on the organizational subject unit) and some aggregate organizational properties (properties measured on individual subject units and aggregated to get an organizational measure).

The path diagram on the following page is my interpretation of the discursive account GGB give to their theory of implementation (1971, p. 202-203). The propositions that can be isolated from that account are listed below.

1. The greater member resistance to innovation, the lower the degree of implementation.

2. The greater the managerial effort to overcome original resistance to innovation, the lower the member resistance to innovation.

3. The greater the members' clarity of understanding of the innovation, the greater the degree of implementation.

4. The greater the managerial efforts to clarify member understanding of the innovation, the greater the members' clarity of understanding of the innovation.

5. The greater the members' possession of knowledge and skills required to implement the innovation, the greater the degree of implementation.
<table>
<thead>
<tr>
<th>OBJECT UNIT</th>
<th>PROPERTIES</th>
<th>SUBJECT UNIT</th>
<th>PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>1.1 Aggregate degree of implementation</td>
<td>1. Organization</td>
<td>1.1 Availability of required materials and other resources necessary for implementation, compatibility of organizational arrangements prior to introduction of innovation</td>
</tr>
<tr>
<td>2. Individual</td>
<td></td>
<td>1.2 Extent of management provision of adequate feedback mechanisms, extent of management efforts to overcome initial member resistance to change, extent of management efforts to clarify members' understanding of the innovation, extent of management efforts to establish training programs, extent of management efforts to provide materials and other necessary resources, extent of management efforts to make organizational arrangements compatible with the innovation, extent of management efforts to provide rewards and punishments to motivate cooperation.</td>
<td></td>
</tr>
<tr>
<td>(Manager)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Individual</td>
<td></td>
<td></td>
<td>Members' original resistance to innovation, members' clarity of understanding of innovation, members' possession of knowledge and skill to perform required behaviors, members' willingness to expend time and effort to implement the innovation, members' opportunities to air problems about implementation.</td>
</tr>
<tr>
<td>(Intended User)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. The greater the extent of managers' efforts to establish training programs for members, the greater the members' possession of knowledge and skills required to implement the innovation.

7. The greater the availability of required materials and other resources necessary for implementation, the greater the degree of implementation.

8. The greater the managers' efforts to provide materials and other resources required for implementation, the greater the availability of required material and other resources necessary for implementation.

9. The greater members' willingness to expend time and effort to implement the innovation, the greater the degree of implementation.

10. The greater the managerial efforts to provide rewards and punishments to motivate cooperation with implementation, the greater will be member willingness to expend time and effort to implement the innovation.

11. The greater the compatibility of organizational arrangements with the innovation prior to its introduction, the greater the degree of implementation.

12. The greater the managers' efforts to make organizational arrangements compatible with the innovation, the greater the compatibility of organizational arrangements with the innovation prior to its introduction.

Examination of the path diagram reveals two things. First, the variables are divided into the dependent variable, barriers to implementation, and managerial implementation strategy variables. This division reflects the way GSS view implementation; there are barriers to successful implementation but managers can act to overcome them. Second, I discovered another variable in their discussion that was not included in their summary of the theory. They indicate (1971, p. 192) that the provision of adequate "feedback mechanisms" would improve the degree of implementation. By this they mean that communication about the innovation and its implementation ought to be fostered.
Managerial Implementation Strategy Variables

Manager provision of feedback mechanisms
Manager efforts to overcome original resistance to change
Manager efforts to clarify member understanding of innovation
Manager efforts to establish training program
Manager efforts to provide material and other resources
Manager efforts to provide rewards and punishments to motivate cooperation
Manager efforts to make organizational arrangements compatible with innovation

Barriers to Implementation

Member opportunity to air problems about implementation
Member original resistance to innovation
Member clarity of understanding of innovation
Member possession of knowledge and skills to perform required behaviors
Availability of required materials and other resources
Member willingness to expend time and effort to implement
Compatibility of organizational arrangements prior to introduction of innovation

Dependent Variable

Figure 3.4 Path Diagram of Gross, Giacquinta and Bernstein's Theory of Implementation
Page 82 is missing
have linked this variable to a "barrier" variable that I have called "members opportunity to air problems about implementation," which is positively related to the degree of implementation. It seems that GGB slipped over this conclusion when they summarized their theory.

Turning to the central theme of the work, I believe that an argument can be made that GGB's theory is based on a collective action theme (See Chapter 2, section 3.3). The determinants of successful implementation are the actions of managers taken to overcome antecedent conditions and to cope with the problems members face in carrying out the implementing behaviors. Implementation is not merely the consequence of a configuration of structural variables as is the case from Hage and Aiken's viewpoint, nor is the intention of managers to implement an innovation translated automatically into action as in the voluntaristic theme. Rather, as does Wilson, GGB recognize that it is the action of managers which are the essential ingredients of successful implementation.

2.3.2 Evaluation.

A. Testability: GGB's theory is testable. They propose operational statements for most of their concepts in an appendix to their book. The statements of the theory are reasonably explicit. The statements are not interrelated explicitly so that testing would not have any implications for higher level, more-general statements.

A glance at figure 3.4 will show the reader that quite a few hypothesized relationships among the "barriers to implementation" could be made. For example removal of the barrier to "opportunity air problems about implementation" may be related to several of the other
barriers.

D. **Range**: GGB seem to intend that their theory refer to implementation of innovations in all formal organizations. Tests will have to be performed to discern the theory's actual range.

C. **Linguistic Exactness**: The intension and extension of the concepts of the theory is sufficient as I have indicated above. They define organizational innovation as

> Any proposed idea, or set of ideas, about how the organizational behavior of members should be changed in order to resolve problems of the organization or to improve its performance (1971, p. 16).

An innovation, as an idea, is therefore a state property of an individual or, if shared among several individuals, a state property of a collective. Note that they do not employ the property of "newness" to define an organizational innovation. This sets their definition apart from most definitions of innovation.

I have already mentioned the concept "degree of implementation." GGB have admirably specified the intension and extension of this concept. Individual intended users are the referent objects and their actions, their changed or unchanged behaviors, are the intensional aspects of the concept.

D. **Inclusiveness of temporal relations**: The concepts included in the statements of theory are not given explicit temporal referents. The theory could be extended by including both synchronic and diachronic statements.

E. **Falsifiability**: The theory is somewhat falsifiable. It could be made more so by making the statements of the theory more precise. Perhaps the best way to do that is to give the concepts temporal
2.3.3 Gross, Giacquinta, and Bernstein's Contribution.

This case study is an important contribution to the study of implementation in several ways. From my point of view the definition of the concept "degree of implementation" and the identification of the types of behavior managers may employ to help subordinate's implementation efforts are two of the most significant contributions I have found in this review.

This concludes my review of Gross, Giacquinta, and Bernstein's theory.

2.4 Zaltman, Duncan, and Holbek's (ZDH) Theory

ZDH (1973) have constructed a theory of innovation in organizations that builds on elements of the theories proposed by Wilson and Hage and Aiken which we have already discussed. They emphasize the innovation dilemma posed by Wilson, that is, some of the same organization properties that facilitate conception and proposal of innovations inhibit efforts to secure adoption and implementation of innovations. They attend to some of the same structural properties of organizations as determinants of innovativeness as do Hage and Aiken. They extend the organizational innovation literature by beginning to integrate organizational and individual resistance to change with the innovation literature. I will not be discussing their treatment of resistance to change in this chapter because it is not integrated well with the rest of their theory. However, I do include properties of individuals and organizations that they discuss under the topic of
resistance to change in the tables of concepts in this review.

Another extension of the organizational innovation literature to their credit is their treatment of the properties of innovations. Again, these properties are not as well integrated in their theory as we would like. My review is limited to ZDH's statement of their theory in Chapter 4 of their book. I will not try to include the several partial theories they present in earlier chapters.

2.4.1 Object and Subject Units of Analysis.

The object unit of analysis in their theory is the organization. The properties of the organization they attempt to explain are initiation and implementation of innovations. There are two subject units: the organization and the individual. The properties of these units are listed in Table 3.4. The properties are taken from the charts on pages 159, 166, and 167. I have classified the properties as observed on either individuals or organizations, and so may have mistaken ZDH's intent, but they left room for ambiguity. Anyone trying to test their theory will have to interpret their work also.

2.4.2 Themata.

ZDH cover a lot of material in their book, but expend relatively little effort distilling that material into theory. Therefore, several themata are touched on but not carried into the theory. For example, if one examined their discussion on collective innovation decisions,

9Unless otherwise noted all page numbers refer to Zaltman, Duncan and Holbek.
<table>
<thead>
<tr>
<th>OBJECT UNITS</th>
<th>PROPERTIES</th>
<th>SUBJECT UNITS</th>
<th>PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>1. Initiation and implementation of innovations</td>
<td>1. Organization</td>
<td>1. Complexity formalization centralization, capability for effective interpersonal relations, capability for dealing with conflict, coding scheme barrier, division of labor, hierarchical and status differences, physical separation of relevant parties, forces altering the innovation, conflict, continued conflict, occurrence of unintended dysfunctional effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Individual</td>
<td>2. Need for stability, local pride, felt need, feigned acceptance and utilization, passivity, perceived manipulation, felt mistrust of subordinates by superiors, disillusionment because of false expectations, selective processes, primacy, habit, illusion of impotence, dependence, self-distrust, insecurity, regression, anxiety, homeostasis</td>
</tr>
</tbody>
</table>
he might discover a collective choice theme. On the other hand, a look at the discussion of how the organization's environmental properties influence organizational innovativeness suggests an adaptation theme. But, only two themata survive in the theory propounded by ZDH as far as I can tell; the structural and collective action themata. ZDH depend heavily on structural properties to explain innovation initiation and implementation by organizations. This will become clear for the reader shortly. However, they recognize that management can mediate the impact of structural factors on the innovation process, thereby implying a collective action theme.

2.4.3. The Theory.

Leaving aside their treatment of resistance to change, the essence of ZDH's theory can be displayed in a path diagram like the one below. Those familiar with ZDH's work will see that I have interpreted the theory, that is, I am not reporting its contents "verbatim." Their model is included below for comparison.

The core concept of their theory, as I see it, is the ability of an organization to alter its structure in order to facilitate progress through the innovation process. They say that

... the organizational variables of effective interpersonal relationships and conflict resolution capabilities are mediators in the organization's being able to differentiate its degree of complexity, formalization and centralization in the initiation and implementation stages of innovation (p. 159).

In other words, if an organization can effectively deal with the conflict and interpersonal problems that inevitably accompany innovation then they will be more successful innovators.
Organizational capability for effective interpersonal relations +

Organizational ability to alter organizational structure +

Organization initiation and implementation of innovations +

Organizational capability for dealing with conflict +

Key: + : Direct relation

Figure 3.5 Path Diagram of Zaltman, Duncan and Holbek's Theory

Table 3.5 Structural Variables and Mediating Factors Affecting the Initiation and Implementation of Innovations. (ZDH, p. 159)

<table>
<thead>
<tr>
<th>Initiation Stage</th>
<th>Mediators</th>
<th>Implementation Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher complexity</td>
<td>High capability for effective interpersonal relations</td>
<td>Lower complexity</td>
</tr>
<tr>
<td>Lower formalization</td>
<td>High capability for dealing with conflict</td>
<td>Higher formalization</td>
</tr>
<tr>
<td>Lower centralization</td>
<td></td>
<td>Higher centralization</td>
</tr>
</tbody>
</table>

The reader can see that ZDH take a different approach to solving the innovation dilemma than that implied by Wilson. Wilson seems to suggest that to have a high rate of innovation one needs high organizational diversity (to use ZDH's variables; low centralization, low formalization and high complexity (Wilson, p. 41, 44 and 45)). According to Wilson, one copes with that organizational diversity at the adoption and implementation stage by manipulating
incentives. ZDH, on the other hand, suggest that organizations that innovate successfully do so by manipulating the structure of the organization, that is, they provide high organizational diversity for the initiation of innovations and low diversity for implementation, while confronting conflict and being open in their interpersonal relations.

These two views, if we can assume that there is some empirical validity to both of them, offer interesting questions for empirical research: Given that organizations must cope with organizational diversity (measured by formalization, centralization and complexity):

1) What proportion of organizations in the organization universe employ a strategy of manipulating incentives and what proportion employ a strategy of manipulating organizational structure? 2) Are there other strategies employed? 3) What are the correlates of the use of different organizational strategies for coping with organizational diversity during innovation? 10

To this point I have ignored a subtle difference between Wilson and ZDH. To make their differences clear I need to outline the stages of the innovation process as ZDH see them (See Table 3.6). For ZDH there are two principle stages of innovation; an initiation stage and an implementation stage. The initiation stage consists of three sub-stages: knowledge-awareness, formation of attitudes toward the

10 That Etzioni's types of compliance structure might be correlated with different strategies of change has been suggested by G. Jones in Planned Organizational Change. In light of the alternatives uncovered here, further research along the lines Jones has undertaken might prove interesting.
innovation, and decision. The implementation stage has two substages: initial implementation and continued-sustained implementation. The point to notice is that for ZDH the decision to adopt the innovation is part of the initiation stage, whereas implementation is a stage unto itself. Wilson, on the other hand, lumps adoption and implementation together in one stage. So what? The "innovation dilemma" does not mean the same thing for Wilson as it does for ZDH. Wilson's innovation dilemma is the assumption that high organizational diversity facilitates conception and proposal of innovation and hinders adoption and implementation (Wilson, p. 35). If we assume that Wilson's conception of high diversity is related to ZDH's concept of high complexity then we can conclude that ZDH misunderstood Wilson's dilemma, because ZDH claim that high complexity facilitates adoption.

Table 3.6 Comparison of Stages

<table>
<thead>
<tr>
<th>ZDH's Stages</th>
<th>Wilson's Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Initiation stage</td>
<td>I. Conception</td>
</tr>
<tr>
<td>2. Formation of attitudes toward innovation</td>
<td></td>
</tr>
<tr>
<td>3. Decision</td>
<td></td>
</tr>
<tr>
<td>II. Implementation stage</td>
<td>II. Proposal</td>
</tr>
<tr>
<td>1. Initial implementation</td>
<td></td>
</tr>
<tr>
<td>2. Continued-sustained implementation</td>
<td></td>
</tr>
<tr>
<td>III. Adoption and implementation</td>
<td></td>
</tr>
</tbody>
</table>
Assuming that Wilson's concept of diversity is similar to ZDH's concept of complexity, we see that ZDH and Wilson arrive at opposite conclusions about the effect of the variables on adoption. For Wilson, high organizational diversity inhibits the decision to adopt an innovation, for ZDH high organizational diversity facilitates the decision to adopt an innovation. This follows from statements made by ZDH 1) that the decision substage is part of the initiation stage (p. 158), and 2) that higher complexity facilitates the initiation of innovations, and 3) my assumption that the term diversity (Wilson) is equated with high complexity (ZDH).

Moving on, ZDH attend to the properties of innovations in a more thorough manner than any of the other authors considered. They discuss each property and speculate about which properties might be important at the different stages of the innovation process (See Table 3.7). Unfortunately, they fail to integrate innovation properties into their theory.

Had ZDH stated their propositions explicitly they may have taken the following form:

1. The higher the complexity of the organization, the greater the rate of initiation of innovations.
2. The lower the complexity of the organization the greater the rate of implementation of innovations.
3. The lower the formalization of the organization, the greater the rate of initiation of innovations.
4. The higher the formalization of the organization, the greater the rate of implementation of innovations.
Table 3.7 Probable Interaction of Innovation Properties with Innovation Process Substages

<table>
<thead>
<tr>
<th>Attributes of Innovations</th>
<th>Initial Implementation</th>
<th>Sustained Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge</td>
<td>Attitude</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Cost</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Returns to investment</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Efficiency</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Risk and uncertainty</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Communicability</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Compatibility</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Complexity</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Scientific status</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Perceived relative advantage</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Point of origin</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Terminality</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Status quo ante</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Commitment</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Interpersonal relationships</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Public versus private Gatekeeper</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Susceptibility to</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>successive modification</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Gateway capacity</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Gateway innovation</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

11 Zaltman, Duncan, and Holbek, p. 164.
5. The lower the centralization of the organization, the greater the rate of initiation of innovations.

6. The higher the centralization of the organization, the greater the rate of implementation of innovations.

7. The greater the organization's capability for effective interpersonal relationships the greater the organization's ability to differentiate its degree of complexity, formalization, and centralization in the initiation and implementation stages of innovation.

8. The greater the organization's capability for dealing with conflict, the greater the organization's ability to differentiate its degree of complexity, formalization, and centralization in the initiation and implementation stages of innovation.

I would like to make one final point about ZDH's theory before I turn to evaluating it. ZDH leave some degree of ambiguity about whether the properties of organizations that they include (see the concepts in the propositions) refer to actions or state properties of organizations. It is not clear from their discussion whether centralization is a property of the collective setting in which implementation occurs or whether it is a strategy employed by a change agent to facilitate implementation. When organizational theorists use these terms they typically refer to state properties of organizations. I think that ZDH use the terms in this traditional manner but refer to centralization, formalization, and complexity as strategies (action properties, manipulable variables) as well, as this quotation may indicate:

Once again the strategy for reducing the innovation dilemma is to utilize different degrees of
centralization during the different stages of innovation. During initiation more autonomy can be given to participants to facilitate the awareness and knowledge of innovations. Then during the implementation stage the decision process would become more coordinated and centralized as specific innovations are selected for implementation (1973, p. 161).

Attention to the intension and extension of these concepts would solve the problem for the reader.

2.4.4 Evaluation.

A. **Testability.** ZDH's theory is not testable in its present form because none of its concepts are given operational definitions.

B. **Range.** The intended range of ZDH's theory is more modest than Wilson's. Whereas Wilson's theory supposedly applies to informal or voluntary organizations as well as formal organizations, ZDH limit their theory to formal organizations.

C. **Linguistic Exactness.** Under the testability criterion I noted that ZDH have no operational definitions of their concepts, therefore, the intension of the concepts of the theory is incompletely specified. ZDH go further toward specifying the intension of the concept of innovation than any of the authors reviewed in this chapter, but they do not provide operational definitions for the properties of innovations. Moreover, ZDH do not specify the intension of their stages of the innovation process completely. For our purposes, this means that we have doubt about how to discern the beginning and end points of the implementation stage. Finally, I have already referred to the ambiguity about whether the concepts of centralization, complexity and formalization refer to organization state or action properties or,
perhaps, action properties of individual managers. Aside from the problem of the extension of these concepts, ZDH's discussion of resistance to change could be made more heuristically useful if we knew the referents of the concepts (See their table 4.4, p. 166).

D. Temporal Relations. There are no temporal referents supplied for most concepts. Some of the stages of the innovation process are given temporal anchors but others are not. This leaves us in doubt about whether the statements of their theory refer to synchronic or diachronic relations between concepts.

E. Falsifiability. Until the theory is made testable there can be no assessment of its falsifiability.

This brings our review of theories of organizational innovation that refer to implementation to a close. We turn now to models of policy implementation.

3. Conclusion.

In this chapter we have reviewed selected models and theories of organizational innovation which treat implementation. One way to briefly summarize the authors' work is to examine the research questions they ask. Three of the models/theories reviewed are answers to similar research questions. Hage and Aiken, Wilson, and ZDH ask roughly the same questions. "Why are some organizations more likely to initiate and implement innovations than other organizations?" GGB focus only on the implementation of innovations and ask "What influences the degree to which an innovation is implemented in an organization?"

Aside from GGB, who ask a different research question than the others, there is an interesting variation in the models/theories
advanced to answer the research questions. I think the variation can be "explained" largely by the differing conceptual themata underlying the authors' approaches to the phenomenon of organizational innovation. Hage and Aiken, Wilson and ZDH all employ a structural (collective) themata. If the other authors had used only a structural thema I believe the resultant theories would be much more similar. The same structural notion found in Hage and Aiken's work can be seen in ZDH, but it has been embellished with the realization that structures can be altered, though not with great ease, by organizational actors. Wilson's "notes toward a theory" encompass an even more elaborate set of themata. The structural and collective action themata are there but also the exchange and individual choice themata. With the inclusion of these themata Wilson's few pages of "notes" present a very rich description of the phenomena of organizational innovation. I will come back to these ideas again at the end of the next chapter. Chapter 4 will be a review of several models of policy implementation. At its end I will classify the literature reviewed in both Chapters 3 and 4.
CHAPTER 4. MODELS OF POLICY IMPLEMENTATION

4.1 Introduction.

Policy implementation is the phase of the policy process in which the intentions of policy makers are transformed into practices. The implementation phase begins after a policy statement has been made in the form of legislation, regulation or judicial decree and funds have been committed (Van Meter and Van Horn, 1975, p. 448).

Policy implementation has been receiving an increasing amount of attention recently. Some of the interest in the topic can be attributed to the belief that one of the reasons many programs fail to have intended impacts is that the practices enacted by implementing agencies do not reflect the intentions of policy makers. Another reason for current interest in implementation is that the implementation phase of the policy process is one of the poorly charted areas of the policy process.

Nevertheless, a beginning has been made. We do have quite a few descriptions of how policy-maker’s intentions are translated into practices. Also, in the interest of prescribing for more successful implementation, policy analysts are beginning to think about how to evaluate the extent to which policies are implemented and are suggesting measures for improving planning for implementation. Finally, several articles aimed at explaining and predicting implementation
success and failure have appeared. It is this last type of literature on policy implementation with which I am concerned in this review. Reviewed here are the model of implementation of judicial policy by Baum, Berman and McLaughlin's model of implementation in local education agencies, Van Meter and Van Horn's conceptual framework for the study of policy implementation and two more limited studies by Smith and Bunker.

The policy implementation literature differs from the organizational innovation literature in several ways. Students of organizational innovation treat implementation as a stage of an innovation process, theorize about innovations which are initiated (not necessarily invented) within the organization, and therefore do not examine interorganizational relations that influence implementation very thoroughly. On the other hand, students of policy implementation usually conceive of implementation as a stage of the policy process, do not explicitly limit their study to innovative policies, usually theorize about the implementation of policies which are initiated outside of the implementing organization, and therefore, treat interorganizational relations (relations within a federal system) that influence implementation within the implementing organization. Berman and McLaughlin evidence this different approach and I begin the review with their work.
4.2 Berman and McLaughlin's Model of Implementation in Local Education Agencies

4.2.1 General Discussion

Berman and McLaughlin have constructed a conceptual "map" for launching empirical research and theory construction efforts on the subject of implementation in local education agencies (LEA's). They do not attempt to construct a general theory of implementation in organizations, predicting that "a number of theories grounded in various discrete organizational realities might emerge" (p. vi).¹ In the area of educational innovation they suggest that research

. . . should have multiple foci - namely, analysis of processes within LEA's (state education agencies), and within the federal level and the links among the different levels - and ideal with two central inquiries: (1) the impact of innovative projects on the structure and processes of LEA's in order to identify those aspects of the educational system susceptible to being changed; and (2) the effects of aspects of the LEA's structure and processes on the implementation of the innovative project both by kind and by degree (p. vi).

Berman and McLaughlin present two ways of looking at the educational innovation process. They see these ways as complementary. One way employs the concepts of "process," "decision points" and "implementation paths." They give that approach little attention because they would rather address the research question of

. . . how to systematically explain the variability in "outcomes" of innovation projects in terms of variations in the forces affecting projects (p. 18).

¹Unless otherwise noted, the pages cited below refer to Berman and McLaughlin (1976). Unfortunately, this review is limited to Vol. 1 of their study. At the time of writing I did not have access to the later volumes.
The model that they construct consists of predominantly state properties, whereas, the other approach, (i.e., considering the concepts of decision points, process, and implementation paths) if developed further, may have emphasized the action properties of education agencies as they implemented innovative projects.

4.2.2 Berman and McLaughlin's Concept of Implementation.

Berman and McLaughlin want to turn their attention away from the "administrative" meaning of implementation, which is

To implement is to carry out a directive. In this sense, implementation is a problem of obtaining compliance with a command in an organization, with a law in a political system, or with a set of procedures on a project (p. 13).

They claim that this line of inquiry "misconceives the essence of the implementation of an innovative project in a complex policy system such as American public education" (p. 13). In their view, the essence of implementation in this kind of system is that, as the implementation stage occurs, both the innovation and the organization implementing it change.

The process of implementation in the instance of educational innovation is essentially a two-way process of adaption, in which the innovative strategy is modified to suit the institution, and the institution changes in some degree to accommodate the innovation (p. 10).

This perspective leads them to define implementation not as the actions of actors in carrying out an innovation but, "as the change process that occurs when an innovative project impinges upon an organization" (p. 13). The reader should realize that Berman and McLaughlin are talking about the implementation of innovations by
many organizations. They are not predicting that any particular organization will change an innovation or be changed itself in the implementation process, but that out of all of the local education agencies and/or state education agencies implementing an innovation there will be many which do not implement the innovation as it was originally conceived and many that will undergo organizational change. That is, the "mutation phenomenon" that they discuss will occur in many, but not all of the implementing organizations.\footnote{Wilson also recognized that changes in the organization are likely to occur as a result of innovation but did not discuss adaption of the innovation itself. According to Wilson the executive of an innovating organization may use the promise of other innovations in the organization to win support for the current innovation with the result that "in the short run, . . . there will be a chain reaction; viewed retrospectively, innovations will seem to have occurred in clusters (Sofer, 1961). This is, in part, because the price of obtaining the consent of members to one innovation is often to adopt other innovations that will benefit them (or at least reduce the cost to them of the original change). A "package deal" will be negotiated. The chain-reaction effect may also be in part the result of a temporary lowering of the resistance to change . . ." (Wilson, 1966, p. 38-39).}

4.2.3 Stages of the Innovation Process.

Berman and McLaughlin make the following appraisal of models of stages of innovation:

Many models of stages of innovation formulated in the literature assume a reality in which rational choices can be made, in which technological innovations can be transferred invariantly from adopter to adopter, and in which change is internally desired and generated (p. 16).
Their observations on the differences between the innovation process in school systems and the technological innovation process are very important.

... experience suggests that the institutional nature of school districts is quite different (from the situation described in the literature on technological innovation). Rather than rational choice, bureaucratic incentives and constraints and political opportunities and conflicts are the norm; rather than invariant transfer, innovative projects usually are adapted to the local setting; rather than internally generated pressures for change, educational systems typically initiate innovations because of outside forces (p. 16).³

Based on these factors, Berman and McLaughlin propose a three stage model of the innovation process in education agencies including support, implementation, and incorporation stages.

The support stage includes more than the familiar concepts of "search," "needs assessment," and "selection." The introduction of an innovative project into a school or district requires a series of decisions by individual actors within the local policy system to support the proposed project. The decisions and considerations central in the support stage are essentially political; "cost" and "benefit" considerations at this stage are predominantly institutional and personal, not budgetary (p. 16-17).

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³Apparently, Berman and McLaughlin believe that these differences between implementation in school districts and implementation in other organizations are so great as to require more than one theory of implementation. No general theory is possible, or perhaps, if it were created it would be so abstract that it would not be able to predict or generate prescriptions. I am not so pessimistic, but value their insight highly.
Apparently this stage is called the support stage because
support is the key variable in the preimplementation phase:

Without a high level of institutional support
within the system for an innovative idea, it is
unlikely that the process of innovation will
take off, despite the prima facie merits
of the proposed change. Clearly, the commit-
ments made in the support stage affect what
happens when project implementation begins
(p. 17).

Berman and McLaughlin have alerted us to add a new variable(s)
to our model of implementation, viz., degree of institutional support.
Degree of institutional support can be indicated by the intention of
the decision-makers and change agents of the implementing unit to
support implementing the innovation.

The next stage of the innovation process is the implementation
stage. Unfortunately Berman and McLaughlin have said no more about
this stage than it is "the change process that occurs when an innova-
tive project impinges upon an organization" (p. 13). The last stage
is called incorporation:

... the point at which an innovative practice
having been implemented loses its "special
project" status and becomes part of the routinized
behavior of the institutional system. ... federal
"seed money" is withdrawn and decisions must be
made about not only whether but also what components
of and on what scale a project should be incor-
porated into standard district practice (p. 17).

4.2.4 Berman and McLaughlin's Model

Berman and McLaughlin present a model of the change process
that occurs during the innovation process in LEA's. Contrary to the
theories we have reviewed so far, the model that produce focuses on
the change of the innovation and the change of the innovating
Figure 4.1 Schematic diagram of factors affecting change in the LEA. (Berman and McLaughlin, 1974, p. 19)
organization. Hage and Aiken, Wilson, and Gross, et al. have not examined this question, but have ignored the "mutation phenomenon" or assumed that, for the innovation types they were studying, the phenomenon was inconsequential. Also, these authors have focused on the determinants of successful innovation. They have tried to explain why some organizations innovate more frequently and/or more successfully. But, Berman and McLaughlin do not address this question. Let me discuss their model by presenting the concepts in it and their interrelations.

The path diagram of their model generally "flows" from the top down. At the top of the diagram we see two antecedent conditions of the innovation process: the initial characteristics of the institution and the initial characteristics of the innovation, or initial project. A third antecedent condition consists of the set of student's innate attributes, and the student's family and peer group.

Properties of the innovating institution (initial institutional characteristics) are divided into three types: organizational status, attributes of principal actors, and organizational capacity to innovate.

Organizational status measures might include: wealth, level of pupil expenditure, amount of budgetary slack, pattern of resource use, size, age and condition of facilities, racial and socio-economic status composition, pupil per teacher ratio, staff mobility patterns, staff age patterns, number of graduates entering college, dropout rate (p. 20).

Attributes of principal actors (e.g., the superintendent, principal and project directors) include:

innovativeness propensity (on index of (1) the number and rate of widely diffused educational
practices in the district and (2) the nature and number of simultaneous new educational practices in the district), locus of decision-making (for budget decisions, curriculum, and allocation of resources and personnel), research and development capacity, (and) leadership styles (authoritarian, democratic, etc.) (p. 20).

Berman and McLaughlin do not give examples of properties in the category of organizational capacity to innovate.

The define the initial project as "a plan consisting of a statement of goals and means. . ." (p. 20). The characteristics of the initial project (the innovation) are divided into four types: (1) perceived educational objectives, (2) perceived personal consequences, (3) perceived institutional effects, and (4) project techniques and strategies. They give examples of the properties falling in two of the categories:

(1) perceived educational objectives: no properties listed

(2) perceived personal consequences: no properties listed

(3) perceived institutional effects: Berman and McLaughlin favor categorizing the perceived institutional effects of a project by the type of change being attempted. They use Pincus' (1974) classification of types of change:

change that increases the level of resource use only, change that affects the resource mix, change that affects instructional process or methods without deterring resource level or mix, change that affects administrative management without significant alterations of the organizational power structure, (and) change that affects either the organizational structure of the school or the school's relation to external authority (p. 21).

(4) project technique and strategy properties:

prior planning and testing, specificity of goals and means, flexibility, complexity, selection of resources, (and) staff development (p. 22).
Initial institutional characteristics and initial project characteristics partially determine the amount of support generated for the innovation. Support here refers to the outcomes of the support stage. Support is a state property of the LEA;

Support...might be operationalized in terms of various measures of (1) resource commitment of the LEA to the innovative project (local funding allocated to the project and the quantity and quality of staff development) and (2) the personal backing of individual actors (superintendents and principals expressed support and teacher's voluntary willingness to participate (p. 18).

Characteristics of federal and state policy and of the community also partially determine the support that the innovative project receives. Dimensions of federal and state policy that they consider important are "incentives to the local school district to support innovative projects" (p. 18) which seem to include "levels of funding, guidelines, or restrictions" (p. 18). These "policy inputs" will influence the amount of support generated in the school district.

Demographic and political properties of the community including:

Urban-rural composition, ethnic and racial composition, community size, median age of residents, and tax base represent relevant demographic characteristics...; the level of unrest in the community, the level of community involvement in school affairs, and the type of school board are relevant political characteristics (p. 19).

also influence the amount of support.

Support, in turn, is a partial determinant of two other properties of the model; changed and unchanged institutional
characteristics and implemented project characteristics. Changed and unchanged institutional characteristics may be indicated by the degree of alteration in routinized procedures, in the loci of decision-making, in the roles of individual actors, and in the creation of specialized and differentiated staff (p. 21).

It seems that implemented project characteristics are to be operationalized in the same way as initial project characteristics (p. 20-21). You will notice in the diagram that changed and unchanged institutional characteristics are influenced by properties of the community, initial institutional characteristics as well as support. Berman and McLaughlin also indicate that implemented project characteristics and changed and unchanged institutional characteristics are interrelated. The determinants of implemented project characteristics include changed and unchanged institutional characteristics, as just mentioned, and support, and initial project characteristics.

The objective of educational innovations is to change student outcomes. Berman and McLaughlin probably include the concept student outcomes in their model, not because they are interested in assessing the effectiveness of the innovative project, but because the degree of success of the innovation in affecting student outcomes will be a factor in the decision about whether to incorporate an innovation in the ongoing program of a school district.

Observing the diagram we see that student outcomes are determined by the community, changed and unchanged institutional characteristics, implemented project characteristics and the student's innate
attributes, family and peer group. As I have said, student outcomes in turn influence the decision to incorporate the institutional change.

In addition to student outcomes, changed and unchanged institutional characteristics, federal and state policy, community, and implemented project characteristics all influence the degree to which an institutional change is incorporated. Incorporated institutional change seems to have aspects of both an action and state property of an organization judging from the following:

One indicator of incorporation might be the decision of the LEA to continue an innovative project after federal funds have been exhausted. However, in using this indicator, care has to be taken to differentiate which aspects are being continued and to what extent. At a more abstract level, incorporation might be measured by the degree to which it involves (1) incremental changes to established routines, (2) expansions of the existing repertoire by new elements, or (3) replacement of previous institutional patterns of behavior (p. 22).

This concludes my review of Berman and McLaughlin's model. Let me now turn to fitting their effort into the conceptual framework I developed in Chapter 2.

4.2.5 Classification of Berman and McLaughlin's Model.

Here I will discuss the object and subject units that Berman and McLaughlin employ and the themata underlying their approach. The object unit of analysis Berman and McLaughlin's model is the innovating organization or multiorganization (the LEA). Properties of the object unit are probably measured on two levels of analysis: the organizational (integral) and individual (aggregate). On the organizational level the properties are: "changed and unchanged institutional
characteristics", "implemented project characteristics", and "incorporated institutional change", and "support." On the individual level "student outcomes" are aggregated to get an organizational measurement. The subject unit of analysis is also the innovating multiorganization or organization with measurement probably on three levels of analysis: organizational (integral), environment (contextual), and individual (aggregate). Integral measures include: "initial institutional characteristics", "initial project characteristics", "changed and unchanged institutional characteristics", "implemented project characteristics", and "support." Contextual properties are "community" and "federal and state policy." "Innate attributes," "family", and "peer group" and "student outcome", are the aggregate properties of the subject unit.

It is difficult to uncover the themata that underly Berman and McLaughlin's thinking about implementation because their conceptual framework is relatively underdeveloped. This is evident when their model is compared with the items reviewed so far; those of Hage and Aiken, Wilson, and Gross, Giacquinta and Bernstein. However, I venture that an adaptation thema is important in their thinking. You will recall that the adaptation thema was characterized as "modification of behavior by individuals and collectivities in response to experience" (March, 1972, p. 68). Berman and McLaughlin's thema seems to be a variant of this type. Focus on changes in the innovation and the organization as the implementation state progresses is central to their approach to implementation.
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<tr>
<td>1. Multiorganizational or organization (the LEA)</td>
<td>1.1 Changed and un-changed institutional characteristics, implemented project characteristics, incorporated institutional change, support</td>
<td>1. Multiorganizational or organization (the LEA)</td>
<td>1.1 Initial institutional characteristics, initial project characteristics, support, changed and unchanged institutional characteristics, implemented project characteristics</td>
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<td>1.2 Community, federal and state policy</td>
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<td></td>
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<td></td>
<td>1.3 Innate attributes, family, peer group, student outcomes</td>
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4.2.6 Evaluation

A. **Testability:** Berman and McLaughlin's work has been tested. The results are reported in volumes two through five of their study.

B. **Range:** The range of Berman and McLaughlin's model is intentionally limited to implementation processes in education (p. vi).

C. **Linguistic Exactness:** As I have indicated in Table 3.4, there is some confusion with regard to the proper referent unit of analysis for several of the properties in the model. The intension of the model's concepts has been specified in part. In particular, there is confusion about stages of the innovation process. The implementation stage is not discussed in any detail in Volume One.

D. **Temporal relations:** The model's concepts have no explicit temporal referents.

E. **Falsifiability:** Since I do not have access to all of the volumes of the study I will reserve my comments on the falsifiability of Berman and McLaughlin's model.

4.2.7 Contribution

Berman and McLaughlin's major contribution to the study of implementation is their introduction of a dynamic model of implementation. In their model both the innovation unit and the innovation may undergo change during the implementation process. Innovation theorists can now extend this notion to the other stages of the innovation process. Rather than assuming a static innovation being passed through the idea generation and elaboration stages, through
adoption and implementation, we may now allow for alteration of the innovation. And, in some, if not all, of the stages we may allow for change in the innovating unit itself.

4.3 Van Meter and Van Horn's Conceptual Framework.

4.3.1 The Framework.

Van Meter and Van Horn (VM and VH) present a conceptual framework for the study of policy implementation which has been influenced by organization research. For them a conceptual framework means a listing of the general categories of properties that may influence implementation and a list of the general relationships among the categories of properties. They define policy implementation this way:

Policy implementation encompasses those actions by public and private individuals (or groups) that are directed at decisions. This includes both one-time efforts to transform decisions into operational terms, as well as continuing efforts to achieve the large and small changes mandated by policy decisions (1975, p. 417).  

Implementation is clearly an action property of individuals or groups. Implementation actions produce outcomes which VM and VH term performance. They view implementation as the "linkage between policy and performance" 1975, (p. 447). Performance is defined as "the degree to which anticipated services are actually delivered", (p. 449).

VM and VH are interested in explaining policy performance. This is the "dependent variable" in their model. Since it appears that the process of implementation is such an important factor in

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4Unless otherwise noted, page numbers refer to Van Meter and Van Horn.
explaining policy performance in (the process of implementation) becomes the central aspect of their model. We can phrase their research question as "What determines policy performance?" or, "What is the influence of the implementation process on policy performance?"/

Note that VM and VH imply that successful implementation can be defined as successful program performance or, to paraphrase: actual delivery of anticipated services. They point out that successful implementation must be distinguished from the success of a policy. We can successfully put a program in place, assure that anticipated services are delivered, but still fail to bring about the intended impact or consequences of the policy. In their language:

We recognize that some services could actually be delivered without having any substantial impact on the problem to which the policy is supposed to be related. A policy may be implemented effectively, but fail to have a substantial impact because it was ill-conceived or because of other circumstances. Hence, successful program performance may be a necessary--but not sufficient--condition for the attainment of positive ultimate outcomes (p. 449).

Since VM and VH are presenting a conceptual framework and not a theory, their article contains no explicit statements (hypothesis, propositions) about the relationships between the categories of variables influencing performance. However, a glance at figure 4.2 will show which categories of variables are related to policy performance.

Before discussing their model in depth, I would like to compare the research question that VM and VH ask with those of the preceding authors. It is useful to do this because it helps explain the
Figure 4.2 Van Meter and Van Horn's Model of the Policy Implementation Process, (p. 463).

differences in the models and theories and because it gives some indication of whether there is any complementarity in the various models. Models constructed to answer the same research question may complement one another.

Hage and Aiken, Wilson, and ZDH all ask similar research questions. They are concerned with the degree of innovativeness of organizations. They ask: "Why do the incidence of successful innovation vary across organizations? Why are some organizations more innovative than others?" Their unit of analysis is the organization, their research question concerns an organizational property, viz., innovativeness or rate of adoption and implementation of innovations. Because these researchers ask similar research questions their work is complementary. You will recall how ZDH have built on the work of Hage and Aiken and Wilson.

It is clear that Berman and McLaughlin are asking a quite different question. They are examining the interaction of two units
of analysis in the implementation process; the innovation and the organization. They ask: "How do we describe and explain the change process (change in both the innovation and the implementing organization) that occurs during implementation?" Because Berman and McLaughlin ask a different research question we would not expect their model to complement those of the preceding authors, and it does not. Berman and McLaughlin do not employ a structural theme and so do not include organizational structure variables that are found in Hage and Aiken, Wilson, and ZDH.

GGB and VM and VH ask essentially similar research questions, albeit with different terminology. You will recall that GGB asked: "What influences the degree to which an innovation is implemented in an organization?" Whereas VM and VH ask: "What is the influence of the implementation process on policy performance?" Both are asking whether an idea is translated into action. They stop short of asking whether the innovative program or the policy produces the desired effects; they merely want to know what determines whether the new program or the policy are put in place.

I would like to discuss one other topic before I describe VM and VH's framework. I would like to point out a similarity between VM and VH's focus and that of Berman and McLaughlin. The theories of Hage and Aiken, Wilson, and Gross, Giacquinta and Bernstein treat implementation in an intraorganizational context. On the other hand, VM and VH, Berman and McLaughlin, Baum, and Bunker (the last two yet to be reviewed) all focus on situations where the decision to adopt
a policy innovation is made in one organization and the actual implementation of the policy occurs in another.

Implementation in interorganizational and/or intergovernmental situations is more complex than most cases of intraorganizational innovation. If we wish to explain or predict the success of implementation in these cases we must introduce concepts which comprehend the interorganizational relationships that influence implementation. Van Meter and Van Horn do this as the reader will see below. Let me now turn to a description of the concepts in their framework and their interrelations.

Beginning on the left of the diagram we find two aspects of policy: standards and objectives and resources. Policy standards and objectives "elaborate on the overall goals of the policy decision" (1975, p. 464). The key attribute of these standards and objectives is their degree of ambiguity and contradiction (1975, p. 466). The clarity of standards and objectives is related to the quality of interorganizational communication which I discuss below. Policy standards and objectives is the only variable which does not have a direct influence on the disposition of the implementer toward carrying out the policy.

The second aspect of the policy which influences its implementation is resources. Policy resources include "funds or other incentives in the program that might encourage or facilitate implementation" (1975, p. 465). Resources influence interorganizational enforcement activities, economic, social and political conditions and the disposition of the implementor. The reader should notice that
this is the first model of those reviewed which explicitly includes characteristics of the innovation (the policy). Recall that I criticized ZDH for discussing innovation properties but not integrating them in their theory.

The second category of variables in the framework is interorganizational communication and enforcement activities. Interorganizational communication and enforcement activities are influenced by policy standards and objectives, policy resources and characteristics of implementing agencies. In turn, interorganizational enforcement activities influence the disposition of the implementors and the characteristics of the implementing agencies. There are two important types of interorganizational enforcement or follow-up activities: the provision of technical advice and assistance and the use of positive and negative sanctions (1975, p. 467). Technical advice and assistance includes the provision of aid "in interpreting federal regulations and guidelines, structuring responses to policy initiatives, and obtaining the physical and technical resources required to carry out a policy (1975, p. 467). Enforcement activities can be classified according to Etzioni's distinction between normative, renumerative, and coercive power (1975, p. 469).

Adequacy of interorganizational communication is indicated by two properties of communications 1) the accuracy with which policy standards and objectives are communicated to implementers and, 2) the
consistency or uniformity with which standards and objectives are communicated to the implementers by various sources of information (1975, p. 466).

The third major category of variables is the characteristics of the implementing agencies. Van Meter and Van Horn suggest that the following properties of implementing agencies will have influence on implementer's dispositions or directly on policy performance:

a) the competence and size of an agency's staff;
b) the degree of hierarchical control of subunit decisions and processes within the implementing agencies;
c) an agency's political resources (e.g. support among legislators and executives);
d) the vitality of an organization;
e) the degree of open communications (i.e. networks of communication and a relatively high degree of freedom in communications with persons outside the organization) within an organization;
f) the agency's formal and informal linkages with the "policy-making" or "policy-enforcing" body (1975, p. 471).

The fourth major category is economic, social, and political conditions. The following properties are noted:

a) are the economic resources available within the implementing jurisdiction (or organization) sufficient to support successful implementation?
b) to what extent (and how) will prevailing economic and social conditions be affected by the implementation of the policy in question?
c) what is the nature of public opinion; how salient is the related policy issue?
d) do elites favor or oppose implementation of the policy?
e) what is the partisan character of the implementing jurisdiction (or organization); is there partisan opposition or support for the policy?
f) to what extent are private interest groups mobilized in support or opposition to the policy (1975, p. 472)?

The fifth and most central category is the dispositions of the implementers. The disposition of the implementer seems to be the key to policy performance. If the implementers don't know what to do,
don't know how to do what the policy mandates, or refuse to do what they are expected to do, the degree of policy performance (extent to which delivered services conform with anticipated services) will be low. In sum, in order for implementation to be successful, the implementer must be willing and able to carry out the policy (VM and VH, 1975, p. 742, see also Kaufman, 1973, p. 2). The three properties of the implementer that VM and VH believe are indicators of willingness and ability to implement are:

a) implementer's understanding, comprehension of the policy
b) the direction of the implementer's response to the policy (acceptance, neutrality, rejection)
c) the intensity of the response (1975, p. 472)

The last category in the framework is policy performance. VM and VH do not elaborate indicators of policy performance. They do provide a definition, which I have pointed out: "the degree to which anticipated services are actually delivered" (1975, p. 449).

In addition to the above mentioned categories or clusters of variables VM and VH discuss two other properties of policies which they believe help predict policy performance: 1) the amount of change involved in the policy and, 2) the extent to which there is goal consensus among participants in the implementation process (1975, p. 458). The extent of goal consensus is expected to have more influence on implementation success than the amount of change involved. The combination of the two properties results in a two dimensional matrix of policies. Four types of policy result:

1) minor amount of change, low goal consensus
2) major amount of change, low goal consensus
3) minor amount of change, high goal consensus
4) major amount of change, high goal consensus

Goal Consensus

Figure 4.3 Dimensions of Policy Affecting Implementation (1975, p. 460)

Based on their assumption that goal consensus has a more significant influence on implementation success than does the amount of change implied by the policy, VM and VH develop the following hypotheses.

1. If goal consensus is high and only marginal change is required then implementation will be most successful.
2. If goal consensus is low and amount of change is high the implementation will be most doubtful.
3. Major change/high consensus policies will be implemented more effectively than policies involving minor change and low consensus (1975, p. 461-462).
I have two criticisms of this typology. First, Van Meter and Van Horn choose two (actually only one if my criticism is accepted) properties of policies out of a myriad of aspects of policies. Their criterion for choice is not clear. There have been many properties of innovations identified (for example see ZDH, 1973, pp. 16-50), some of these properties might be useful in predicting the success of policy implementation. Second, Van Meter and Van Horn fail to integrate their typology into the conceptual framework. The hypothetical properties of policies could have been included in the categories of the conceptual framework but they were not. It seems that the amount of change implied by a policy is a property that would fit in the cluster of variables they label policy; and, the amount of goal consensus would probably be clustered with characteristics of the implementing agency. It is not clear why VM and VH presented these properties independently from their model.

4.3.2 Classification of VM and VH's Model.

Here, as I have done previously, I will discuss the units of analysis employed and the themata suggested by VM and VH's conceptual framework. Since VM and VH are sketching a framework it is difficult to determine what object and subject units of analysis they would employ if they were to proceed to develop a theory. Therefore, what follows is tentative. One way to proceed would be to employ two object units of analysis: an organizational and an individual unit. The organizational unit would have four types of properties: integral, relational, contextual and aggregate. Integral properties would include the "characteristics of the implementing agency," and "policy
performance." The relational property would be "interorganizational communication and enforcement activities." Contextual properties would be "policy standards and objectives", "policy resources", and "economic, political and social conditions." The aggregate property would be the "disposition of the implementers." The individual as object unit could be observed on the integral level as well. We could examine individual implementer's "dispositions toward implementation."

We might employ the organization as the only subject unit of analysis and observe the following types of properties: integral ("characteristics of the implementing agency"), relational ("interorganizational communication and enforcement activities"), contextual ("policy standards and objectives", "policy resources", and "economic, political, and social conditions"), and aggregate ("disposition of implementers"). Table 4.2 portrays these relationships.

Since VM and VH employ two object units of analysis; the organization and the individual we would expect an individual and a collective theme to underly their thinking. The image (themea) that corresponds with the individual unit is that of individual choice. VM and VH view the implementer as one who may choose to implement or not. The implementer's behavior is not determined entirely by the environment, some independence is retained. The themea that VM and VH seem to assume when thinking about the organization is the collective-action themea. I reach this conclusion by noting the following aspects of VM and VH's framework. Structural properties are important influences on program performance—see the properties of the
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<td>1. Organization</td>
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<td>1.1 Characteristics of the implementing agency</td>
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<td>1.3 Policy standards and objectives, policy resources, economic, political, and social conditions</td>
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<td>2. Individual</td>
<td>2.1 Disposition of implementers</td>
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Table 4.2 Properties of Van Meter and Van Horn's Framework
implementing agency. Structure is an attribute of the collective action theme. If VM and VH believed that program performance were determined solely by structural properties we would suspect they employed a structural theme. However, program performance is not determined by structure alone. Policy makers are able to influence program performance by the way they draw up policy standards and objectives, by the kind and amount of resources they provide, and by their communication and enforcement activities. However, policy makers and program managers are not the sole determinants of program performance. If VM and VH built a model that focused almost exclusively on the behaviors of these actors we would discover a voluntaristic theme. But VM and VH do not see either structure or actors as the sole determinants, rather, they view program performance as the outcome of actions by policy makers and program managers who are constrained by structural properties of organization and environment. Based on this reasoning I think that VM and VH employ a collective action theme on the organizational level of analysis.

4.3.3 Evaluation.

Since VM and VH do not present a model that is as fully developed as the others we have reviewed it is not appropriate to criticize their framework thoroughly. With attention to range, intension and extension of concepts, and temporal referents VM and VH's framework could be developed into a testable theory.
4.4 Smith's Model of the Implementation Process

Smith's treatment of implementation, like that of Douglas Bunker (which I discuss next), is not as comprehensive as those I have reviewed so far. However, I think their work deserves some mention, largely because there has been so little work done on policy implementation.

Smith's model of the policy implementation process has four components: 1) the idealized policy 2) the implementing organization 3) the target group and 4) environmental factors. Smith's treatment of the implementing organization, environmental factors, and the policy is not as sophisticated as VM and VH's. However, his inclusion of the target group of a policy is an interesting suggestion. Three properties of the target group are considered important: 1) the degree of organization or institutionalization of the target group, 2) the attitude of the target group's leadership toward the policy, and 3) the prior policy experience of the target group (1973, p. 204).

Van Meter and Van Horn's conceptual framework might be enhanced if they included such a concept.

Smith is obviously concerned with implementation of policy innovations. Yet he does not recognize that his model would benefit from research on organizational innovation. Smith is not alone in failing to make good use of the organizational innovation literature. Even Van Meter and Van Horn's conceptual framework would benefit from more attention to the organizational innovation literature. For example, both Smith and Van Meter and Van Horn could treat the
properties of policies more adequately if they were aware of discussions of properties of innovations (see for example, Rogers and Shoemaker, 1971; and ZDH, 1973).

4.5 **Bunker's Discussion of Implementation**

Douglas Bunker discusses two aspects of policy implementation: 1) identifying individuals or collectives that may be leverage points for implementation, choosing the proper strategy for influencing those actors to cooperate with implementation and 2) the issue of implementation in federal systems. I will discuss the former in some detail here.

Organizational behavior toward innovations is difficult to think about without some simplification (abstraction). Bunker suggests that although the activation of a policy or plan is a gross process involving large numbers of people either as actors or as affected constituents, it is useful to think of the implementation process as being influenced at a finite number of key leverage points (1972, p. 75).

In other words, in order to make sense of the implementation process we focus only on the activities of the individuals or organizations (or other collective units) that are important to the aspects of the process we are interested in; usually those units that can influence the success or failure of implementation.

Bunker constructs a three-dimensional model designed to illuminate the action strategies available "to managers of implementation" (1972, p. 76). We can use this model for both
identifying which actors (individuals, or organizations) are keys to implementation success as well as for suggesting strategies. Three properties are attributed to each actor (1972, p. 76).

1) **Issue Salience**
   refers to the centrality of an issue for a particular actor, how much attention it commands, how important the actor (person or organization) considers it to be.

2) **Power Resources**
   is a vertical dimension defined by the number and potency of political resources and actor has available. Resources include legitimate institutional power, economic benefits, patronage, prestige, good will among other key actors, etc.

3) **Agreement**
   a bipolar scale with a neutral midpoint, provides a way to map the position of an actor relative to the position of a positive advocate of the policy to be executed (1972, p. 76).

Figure 4.4 Bunker's Model
Bunker proceeds to use these concepts to suggest some strategies for dealing with actors in the implementation process.

Bunker explicitly suggests that the model can be applied to individuals, groups, organization sub-units and organizations. Therefore, all these units could be object units of analysis. Except for the individual unit it would require much speculation on my part to specify what subject units of analysis Bunker might employ. Therefore, I will specify the individual as the only subject unit of analysis, and that only when paired with an individual object unit. Bunker's goal for his model appears to be to suggest ways to increase control over the implementation process.

4.6 Baum's Model of Judicial Implementation.

4.6.1 The Model.

Baum introduces a model of judicial implementation which is "based on a framework of organizational hierarchy." The model applies to the implementation of "an appellate court's decisions by its judicial subordinates" (1976, p. 88).\(^5\) The model may also apply to the implementation of judicial decisions by administrative agencies where "an agency's activities are "law-oriented" and its actions are reviewed frequently by a superior court" (1976, p. 110). It is clear that Baum is building on VM and VH's conceptual framework. The term implementation is not defined explicitly, but Baum does discuss a two stage implementation process in which a definition is implied.

\(^5\)Unless otherwise noted all page numbers refer to Baum.
Implementation is depicted as involving two stages, the transmission of appellate decisions to lower-court judges and their response to those decisions. The dependent variable on which the analysis focuses is the extent to which appellate directives are implemented faithfully, carried out as intended, in the lower courts (1976, p. 91).

Baum lists the following hypotheses and discusses the empirical evidence supporting each:

H₁: The greater the clarity which which appellate decisions define what subordinates are to do, the more faithful will be the implementation of those decisions.

H₂: The greater the accuracy with which decisions are communicated to subordinates, the more faithful will be their implementation.

H₃: The more the subordinate's interests are favored by faithful implementation of appellate decisions, the more faithful their implementation will be.

H₄: The greater the consistency between an appellate decision and a subordinate's policy preferences, the more faithful will be his implementation of that decision.

H₅: The greater the authority attached to an appellate decision by subordinates, the more faithful will be their implementation of that decision.

H₆: The more powerful the mechanisms of influence utilized by appellate courts, the more favorable will be subordinates motivations to implement decisions faithfully.

In elaboration on the sixth hypothesis Baum discusses three mechanisms of influence used by organizational superiors which may influence implementation of judicial decisions by subordinates.

The first is insulation, selective hiring and firing of subordinates and the removal of recalcitrant subordinates from the implementation process. The second is sanctioning, the use of rewards and punishments to induce faithful implementation of directives. The third is persuasion, the creation of attitudes favorable to the implementation of directives (1976, p. 103).
The significance of these influence mechanisms is questioned in appellate courts since the courts have limited powers of insulation, lack powerful sanctions, and have little opportunity to persuade subordinates (1976, pp. 104-107).

4.6.2 Classification and Evaluation of Baum's Model.

The individual is both the object and subject unit of analysis in Baum's model. The properties of these units are listed below in Table 4.3. The theme used is one of individual choice.

The properties of "extent subordinate's interests favored by faithful implementation" and "consistency between an appellate decision and subordinate's policy preferences" are relational properties. The theme that Baum seems to employ is one of individual choice. The subordinate will choose how faithfully the superior's decision will be implemented. Baum does not operationalize his concepts, but he does provide explicit statements of his hypotheses. The hypotheses are not interrelated in a hierarchical way. The statements would be testable if the researcher provided his/her own operationalization of the concepts.

I have already mentioned that Baum's intended range includes the implementation of appellate court decisions by judicial subordinates. He suggests that it may also apply to "administrative treatment of judicial decisions" (1976, p. 88). The extension of Baum's concepts is clear—we have properties of individual superiors and subordinates. Remarking on the testability criterion I noted that no operationalization of the concepts is given, therefore the intention of the concepts could be improved. As for temporal relations; no
Table 4.3 Properties, Subject and Object Units of Baum's Model.

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<td>1. Individual</td>
<td>1.1 Accuracy of decision communication, power of influence mechanism employed, subordinate's motivation to implement decisions faithfully, extent subordinate's interests favored by faithful implementation, consistency between and appellate decision and subordinate's policy preferences, authority subordinate attaches to decision.</td>
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temporal referents of concepts are given, therefore, we do not know whether the hypotheses refer to synchronic or diachronic relations. Finally, the falsifiability of the statements is low until they are made testable by the provision of indicators for the concepts employed.

5. Classification of Theories and Models of Implementation.

Now that we have reviewed several theories and models of organizational innovation and policy implementation in some detail, what can be said about them generally. I would like to summarize this research in terms of three properties: themata employed, research questions asked, and object and subject units of analysis employed. You should understand that this endeavor requires that I interpret what these authors have tried to do. I may err, but my error may prod those researchers or others to further elaborate their statements about implementation. This would be worth the risk of error.

5.1 Themata

Table 4.4 lists the themata employed by the various authors. As I said earlier this classification of themata is admittedly subjective but hopefully suggestive. A more objective analysis of social science themata (and physical science themata for that matter) awaits operational definitions of the various themata. With operational definitions content analysis could be undertaken to provide replicable identifications of themata.

Van Meter and Van Horn; Zaltman, Duncan and Holbek; and Wilson use more than one themata, the rest use only one. Wilson's theory seems to employ four themata and Zaltman, Duncan, and Holbek, Van Meter
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<tr>
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<th>Policy Implementation</th>
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<td>Van Meter and Van Horn, Baum</td>
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<tr>
<td>Adaptation:</td>
<td>None</td>
<td>Berman and McLaughlin</td>
</tr>
<tr>
<td>Diffusion:</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Collective Choice:</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Exchange:</td>
<td>Wilson</td>
<td>None</td>
</tr>
<tr>
<td>Atomistic:</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Voluntaristic:</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Collective Action:</td>
<td>Wilson; Gross, Giacquinta, and Bernstein; Zaltman, Duncan, and Holbek</td>
<td>Van Meter and Van Horn</td>
</tr>
</tbody>
</table>

and Van Horn two each. What are the implications of this? I don't know. It may be that theories that employ more themata yield more "satisfying" explanations than do those that use fewer. I did not engage in this analysis of themata to reach any such conclusion. You will recall that my purpose was to show why there were such
differences of approach to theorizing about implementation. I said that it was likely that author's who employed different themata were likely to produce quite different theories or models. I think the diversity in approaches has been demonstrated. The extent to which this diversity stems from employment of different themata is difficult to say. Diversity in theorizing may be explained by the variety of themata, but also by the types of innovation studied, by the type of object unit of analysis employed, and by the research question(s) asked. I would like to look at the types of object and subject units employed next.

5.2 Object and Subject Units Employed

Our interest in object and subject units stems in part from curiosity about how diversity in theoretical approaches comes about. But in addition to this interest we summarize object and subject units employed to get a notion of where gaps in the literature on implementation might be. I discuss the problem of identifying gaps in the literature in the next section.

Since there had not been much theory-based research on implementation at the time of this review (Hage and Aiken's 1967 study being the only example) authors have not been forced to think about the problem of object and subject units. Hence, we almost always have to guess about the units of analysis author's have in mind for their theories and models. The reader should remember that as he or she peruses the summary given below.
Table 4.5 Object and Subject Units of Analysis Employed in Organizational Innovation and Policy Implementation Models and Theories

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Object Unit</th>
<th>Subject Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hage and Aiken</td>
<td>Organization - - -</td>
<td>Organization</td>
</tr>
<tr>
<td>2. Wilson</td>
<td>Organization,</td>
<td>Organization, Organization</td>
</tr>
<tr>
<td></td>
<td>Individual - - -</td>
<td>sub-unit, Individual</td>
</tr>
<tr>
<td>3. Gross, Giacquinta, and</td>
<td>Organization - - -</td>
<td>Organization and Individual</td>
</tr>
<tr>
<td>Bernstein</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Zaltman, Duncan and Holbek</td>
<td>Organization,</td>
<td>Organization, Individual</td>
</tr>
<tr>
<td></td>
<td>Individual - - -</td>
<td></td>
</tr>
<tr>
<td>5. Berman and McLaughlin</td>
<td>Multiorganization</td>
<td>Multiorganization or</td>
</tr>
<tr>
<td></td>
<td>or Organization</td>
<td>Organization</td>
</tr>
<tr>
<td>6. Van Meter and Van Horn</td>
<td>Organization,</td>
<td>Organization</td>
</tr>
<tr>
<td></td>
<td>Individual - - -</td>
<td></td>
</tr>
<tr>
<td>7. Baum</td>
<td>Individual - - -</td>
<td>Individual</td>
</tr>
</tbody>
</table>

What can be concluded from this summary. First, most of these students of implementation have been focusing their efforts on implementation efforts by organizations. Several author's employ the individual as an object unit of analysis but as we have seen only Wilson, Baum, and Van Meter and Van Horn have asked questions about the behavior of individual implementers. Second, most of the author's employ more than one object and subject unit of analysis. Although we cannot be certain, it is likely that attempts to predict implementation may require attention to more than one unit of analysis. We do expect that a theory that attempts to explain organizational, multiorganizational, or individual implementation will provide a more
satisfactory explanation of implementation (however it is defined) if multiple object units are employed. This is the case because a theory which structures (ties together) more of the implementation situation is likely to provide a more satisfactory explanation than one which structures less (Gibbs, 1972, p. 67). The more complete the pattern of relationships among properties of the various object units that comprise an implementation situation, the more satisfying the explanation (Kaplan, 1964, p. 333). Reflection on complete patterns of explanation of implementation leads us to consider ways of specifying the gaps in our study of implementation. But before we do this let's examine the research questions asked by the author's I have reviewed.

5.3 Research Questions About Implementation.

I find that by trying to discover the general question that an author is asking in his or her research I can get to the core of a model or theory rather quickly and can discover fundamental differences among them. In the last two chapters I have reviewed 7 major and 2 minor statements about implementation, some of which are quite different than others. Uncovering the general research question being asked, in addition to analyzing a piece to discover its unit of analysis and themata, allows a deeper insight than is afforded by examining definitions of concepts, hypotheses and path diagrams.

In Table 4.6 I have listed the general research question that I believe was being asked in each model or theory. As I noted earlier Hage and Aiken, Wilson, and ZDH are asking similar questions. They ask about how the property of "innovativeness" varies across
organizations. Why do some organizations innovate frequently while others don't? The models and theories they construct are intended to answer this question.

Both Gross, Giaquinta, and Bernstein and Van Meter and Van Horn ask a different question. Both ask about the determinants of degree of implementation. This question differs from the questions asked by Hage and Aiken, Wilson, and ZDH in two ways. First, there is a focus on the implementation stage whereas the students of organizational innovation focused on the entire innovation process (i.e., stages before and after implementation). Second, there is a focus on explaining successful implementation rather than the frequency or rate of adoption and implementation.

Table 4.6 General Research Questions Asked in the Literature on Organizational Innovation and Policy Implementation

1. Hage and Aiken: Why are some organizations more likely to initiate and implement program innovations than other organizations?

2. Wilson: Why are some organizations more likely to conceive, propose, adopt and implement innovations than other organizations?

3. Gross, Giaquinta, and Bernstein: What influences the degree to which an innovation is implemented in an organization?

4. Zaltman, Duncan, and Holbek: Why are some organizations more likely to initiate and implement innovations than other organizations?

5. Berman and McLaughlin: What are the determinants of the change process undergone by the innovation and the implementing organization during the implementation stage?

6. Van Meter and Van Horn: What is the influence of the implementation process on policy performance?

7. Baum: Why are some judicial decrees implemented by some subordinates to the appellate court while others are not?
Baum's research question is quite similar to that asked by GGB and VM and VH. The only difference, aside from the fact that Baum is asking about judicial implementation and GGB and VM and VH about programs, is the unit of analysis. Baum asks about the implementation by individuals whereas all the others ask about the implementation by organizations. Last, Berman and McLaughlin ask a question that is unique. They ask about the change process that occurs during implementation.

Based on the foregoing discussion of themata, units of analysis, and research questions let us turn to the question of identifying gaps in the literature.


In an underdeveloped research area like implementation gaps in the literature are research questions that haven't been asked. We lack a general theory that provides a map of the region we are exploring. If we had a general theory of implementation (or, more broadly, of innovation or of the policy process) gaps in the literature would be gaps in the theory: areas in which the theory had not been tested or in which anomalies had been found.

Lacking a general theory we take stock of our situation in terms of object and subject units employed and underlying thematic assumptions. By crossing these dimensions we can get the rough coordinates of the gaps in the literature. We then proceed, incrementally, by mapping the areas contiguous to the boundaries of existing research, always with reference to criteria which social science theories ought to meet (testability, explicitness of definition, etc.).
6.1 Object Units.

In both the organizational innovation literature and the policy implementation literature the emphasis is on explaining implementation by organizations. Several of the items reviewed in both areas include the individual as an object unit. Several of the items reviewed could be enhanced by inclusion of an individual object unit. The organizational innovation students have not studied implementation in multi-organizations, however, Berman and McLaughlin and, perhaps VM and VH, among the policy implementation students, have done this. In neither area has attention been paid to implementation in organizational sub-units or small groups. Finally, a serious limitation of the conceptual literature on policy implementation is the lack of public policy by private individuals and organizations (Levine, 1972; Schultze, 1968, Chapter 6).

6.2 Subject Units of Analysis.

It is difficult to make general statements about the extent of use of different types of subject units in the literature reviewed since so few of the authors were explicit about the units of analysis to which properties could be attributed. This in itself is a gap in the literature in both organizational innovation and policy implementation studies. Suffice to say that considerable expansion in the types of subject units employed in the several theories and models is possible. Most of the items reviewed employ the same unit for both object and subject unit of analysis. As noted, the organization is most frequently chosen. Six of the seven items reviewed employ
the organization as both object and subject unit. Four employ the individual as subject unit and object unit.

6.3 Themata.

I will not argue that any particular themes be employed for the study of implementation. Rather, the problem that I will mention here is that, generally speaking, too few themata are employed. The conceptual literature on implementation is, as a result, thin rather than thick (Geertz, 1973). The description of the events of the implementation process is less rich than it would be if more themata were employed. With these brief comments on research questions not asked in the literature I have reviewed I move on to examine the relation of this study to the literature I have reviewed.

7. The Relation of This Study to the Literature Reviewed.

The research question that I ask is similar to Baum's question: "Why do individuals implement or not implement policies that they are directed to carry out?" I have had the temerity or foolishness to cast the question more broadly than Baum does. The intended range of my theory is any person who takes the implementer role in a public organization, whereas Baum limits his statements to the judicial subordinates of appellate courts. My theory can be seen as an extension of Baum's to more types of implementers.

The reader will also find a close correspondence with GGB's concepts, I found their discussion of the role of the manager in implementing organizational innovations very useful.
I employ several object and subject units of analysis in my theory, however the principal object units are the policy innovation and individuals. Those studies that discuss characteristics of policies, innovations, and of managers (change agents) and implementers serve as a foundation for my effort. I draw most heavily on Van Meter and Van Horn, Gross, Giacquinta and Bernstein, Zaltman, Duncan and Holbek, and Baum.

Of the themes discussed that which figures most clearly in my theory is individual choice. I view the implementer as faced with decisions about whether to carry out various aspects of a policy innovation. But I do not stop at the point of choice to implement or not to implement, but go on to consider what determines the behavior of the individual implementer.

With this brief glimpse at the relationship of my theory to the literature I have reviewed I conclude this review. I turn now to questions about the concepts necessary for the study of implementation.
CHAPTER 5. CONCEPTS FOR THE STUDY OF POLICY IMPLEMENTATION

1. Introduction

The study of implementation of innovations, and of policy innovations in particular, needs conceptual clarification. This chapter consists of review of existing definitions and proposal of several new definitions. I begin with discussion of implementation as action and as a process. I try to define the concept "implementation process." I discuss the concept of "degree of implementation" and various definitions of "successful implementation." Finally, I try, by devising a "typology of discretionary situations," to show how different definitions of successful implementation arise.

2. Implementation as Action or Process.

2.1 Implementation as an Action Property.

Williams and Van Meter and Van Horn view implementation as an action property of individuals, groups, organization subunits, or organizations. Implementation is viewed as something that is done, caused by the implementing unit. Implementation for these authors has the character of intentional action. Williams definition is:

The term "implement" has two principal meanings: to provide or equip with the means of carrying into effect, and to carry into effect. Implementation in an organization can involve both a continuing effort
over time to raise the capacity of that organization or associated organizations to carry out programs or projects, and a one-time effort to put an organizational decision into place (Williams, 1975, p. 451).

Implementation is an action property of an organization whether it involves a continuing effort or a one-time effort. Van Meter and Van Horn define "policy implementation" as encompassing:

Those actions by public and private individuals (or groups) that are directed at the achievement of objectives set forth in prior policy decisions. This includes both one-time efforts to transform decisions into operational terms, as well as continuing efforts to achieve the large and small changes mandated by policy decisions (Van Meter and Van Horn, 1975, p. 447).

The units of analysis are public and private individuals or groups. Policy implementation is clearly an action property of these units.

2.2 Implementation as Process.

Opposed to the definition of implementation as action, is the view that implementation is a process. Recognizing that several books have been written on the definition of the concept "process," let me say only that by process I mean a series of events occurring over time not entirely under the control of humans; a set of events that includes intended as well as unintended outcomes.¹ Berman and McLaughlin have a perspective on implementation as a process which has these connotations. They describe the implementation of educational innovations like this:

¹ Actions are types of events, but not all events are actions. Actions are performed by "acting systems," events are changes in patterns. (See Alired Kuhn, 1974, p. 21).
The process of implementation in the instance of educational innovation is essentially a two-way process of adaption, in which the innovative strategy is modified to suit the institution, and the institution changes to some degree to accommodate the innovation. Therefore, the implementation of an educational innovation can be thought of as an organizational process whose end product, in the case of a successful innovation, would be an altered institutional arrangement and an innovative strategy modified to suit that arrangement (Berman and McLaughlin, 1974, p. 10).

Their unit of analysis, of which the implementation process is a property, is an organization. Implementation as they define it is not merely the action of organizations or of their individual members, actions are included along with changes in the innovation and the implementing organization.

You can begin to see then, that these two definitions are compatible and not opposed. The implementation process is a series of events over a time period. The implementation activity of implementing units makes up some of these events but not all of them. Perhaps it would be better to use the term implementation activity for the concept of implementation as an action property and to reserve the term implementation for the broader process.

The concept of "policy implementation process" is further defined by reference to a concept presented in Chapter 1. The policy implementation process is a component of the "political innovation process" which was defined as "a series of events during a time period which involve executive, judicial, or legislative sections of government as producers and/or objects of innovation." The policy implementation process follows the act of adoption of a policy innovation by a decision maker (see Chapter 1 for definitions of policy innovation...
and decision maker).

Whether or not the policy innovation was generated, designed, or evaluated inside or outside the unit which will implement it, there is an action which can be called adoption of the innovation. Adoption is the decision that decrees that an innovation will be implemented. In the case of a policy innovation, adoption is usually marked by issuing a policy statement (directive) which may take several forms: law, judicial decree, regulation, executive order, verbal order, or memorandum. The act of adoption is marked by issuance of the policy statement. The issuance of the policy statement is the observable indicator of adoption. We are interested here in situations where the person or unit making the adoption decision and the person or unit intended to implement the innovation are different. In the terminology developed in Chapter 1, the adoption decision is made by the decision maker, the implementer will carry it out. The focus of the policy implementation process is on actions and interactions of the change agent and the implementer. This is not to say that other actors and factors are not important, only that the change agent's and implementer's actions and interactions are of central interest. The implementation process begins with the received communication of an adopted policy by a change agent when the decision maker and change agent are separate units. If the decision maker and change agent roles coincide in the same unit the act of adoption itself marks the beginning of the implementation process.
2.2.1 Component Sub-processes of the Policy Implementation Process.

The policy implementation process consists of three component sub-processes: programming, implementer behavior, and incorporation/rejection/adaptation. These sub-processes will overlap temporally in many cases. It is not suggested that they are temporally discrete sub-stages of implementation.

Programming is the process of communication between the change agent and implementer. You recall that the role of change agent was defined as that of facilitating implementation of the policy innovation. The change agents task is to facilitate the implementer's efforts to perform the new behaviors required by the policy innovation. The programming process begins with the first action on the part of the change agent to facilitate implementation of the policy innovation. It ends with the cessation of activity by the change agent. When the change agent stops trying to produce the required behavior by the implementer the programming process is ended. The change agent may stop because of failure or success. What is noted is that the change agent has stopped trying to change behavior, not his or her success or failure. For example, in the case where the change agents are personnel temporarily assigned to provide technical assistance with the innovation, we would consider programming ended when these persons finish their task and go home.

Programming is one of the two types of implementation activity. (The other type is implementer behavior which will be discussed below.) Programming behavior (the term originated with March and Simon, 1958, p. 143) has been described in implementation studies by both CGB and
Beryl Radin. GCB suggest that an organizational innovation will be more successful if the manager (change agent): provides adequate feedback mechanisms, tries to overcome initial resistance to change, tries to clarify understanding of the innovation, establishes training programs, provides materials and other necessary resources, tries to make organizational arrangements compatible with the innovation, and provides rewards and punishments to motivate cooperation (GCB, 1971, pp. 202-203).

Beryl Radin identifies several strategies that were used by officials of HEW in implementing school desegregation policy between 1964-68:

Some of the officials had conscious and even articulated plans of action; these plans ranged from a voluntaristic approach (cajoling the school districts in one fashion or another to lure them to change) to an approach that approximated warfare (the feds battling against state and local education authorities). Still other officials—whether consciously or not—appeared to be using confusion as their strategy. In these cases, multiple approaches... were used to keep local and state officials off their guard... Yet other officials were using bluffing as their strategic approach... these officials tried to give the appearance of strength in Washington to provoke change in the school districts (Radin, 1977, p. 15).

In addition to these two sources the reader could consult the literature on planned organizational change for additional descriptions of and prescriptions for change agent behavior.

The second sub-process of the policy implementation process is implementer behavior. The behavior of the implementer is the second type of implementation activity. Implementer behavior includes all of the actions of the implementer as well as any interactions with the change agent or other actors in the implementation situation.
We mark the beginning of the implementer behavior sub-process by the first occasion that the implementer performs—or attempts to perform—a type of implementer behavior. Several types of implementer behavior will be identified in Chapter 7. Implementer behavior will usually not begin until after the change agent's first programming behavior. However, an implementer may well anticipate a directive to carry out a new policy and may begin any action in compliance or non-compliance in advance of formal notification.

I cannot make a general statement about the end markers of the implementer behavior sub-process at this point. The point at which this type of implementation activity ceases depends in part on the fate of the policy innovation. Implementer behavior may cease if the policy is rescinded. Cessation of implementer behavior may not even be a distinct event. The defining characteristic of implementer behavior is that it is an implementer's response to a directive to perform behaviors that are novel. If the implementer complies with the directive, then we could say that implementer's behavior ended either when he/she had learned the new behaviors or when the behaviors come to be perceived as routine. Behaviors performed in response to a directive which are perceived by an actor as routine are by definition not implementer behaviors.

To take another example, in the case where the implementer chooses not to comply with the directive, say, if the implementer decides to resign from the organization rather than carry out the policy. This implementer's behavior can be said to end with the submission of the resignation. The point I make is that it is not
a simple task to specify a general marker of the end of the implementer behavior sub-process.

The third sub-process, incorporation/rejection/adaptation focuses on the changes in the structural and functional properties of both the policy innovation and the collective unit (and individual members) which is putting the new policy in place. Whereas the other two sub-processes focused on action properties in an implementation situation this sub-process is a focus on the state properties of an implementation situation.

The actions of the change agent, implementer, decision maker, and change catalyst (see Chapter 1 for definitions) may bring about changes in the structural or functional properties of the policy innovation and/or the innovating unit. All, some, or none of the structural or functional properties of the policy innovation may be incorporated. As Berman and McLaughlin point out, it is unlikely that all of the characteristics of organizational innovations, including policy innovations, will be incorporated. All, some, or none of the structural or functional properties of the policy innovation may be rejected. Also, the mutual adaptation process that Berman and McLaughlin describe may occur with the result that some properties of the policy innovation and some properties of the innovating unit will be changed as a result of the implementation activity of the change

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2 See Ackoff and Emery (1972) for definitions of structural (p. 16) and functional (p. 22) properties. Structural and functional properties are types of state properties.
agent and implementer and the actions of decision-makers and change catalysts.

The incorporation/rejection/adaptation sub-process then, consists of incorporation or rejection of all, some, or none of the structural and functional properties, and adaptation of some structural or functional properties of the policy innovation and/or the innovating unit. The beginning and end markers of this sub-process are coterminous with those of the implementation process itself. You will recall that the beginning of the implementation process is marked with the receipt of a communication by the change agent that a new policy is to be implemented. The end marker of the implementation process is difficult to specify since there is not always a clear end point to the implementation stage. The end of the implementation stage may be marked by a decision to continue or to reject the policy innovation. This event has been suggested by Hage and Aiken and Berman and McLaughlin as a beginning marker of the stage following implementation and could therefore serve also as the end marker of the implementation stage. In cases where such decisions occur this would be a very distinct marker of the end of implementation. However, many policy innovations are implemented and then either fade away and are forgotten or are incorporated into the organization's routine without a clearcut decision point.

In cases where a continuation/rejection decision occurs we can employ it to mark the end of implementation. In other cases we may have to rely on less precise indicators. One potentially useful indicator of the end of the implementation process may be the
"implementer's perception of the routiness of the behaviors required to implement the innovation." We would expect that implementing behaviors would become more routine (be perceived as more routine) over time. We would not be able to use an absolute measure of routiness since some innovations may seem more routine to some implementers than to others. However, we can expect that perception of routiness will increase somewhat and finally reach a plateau. The attainment of the plateau would mark the end of the implementation process.

I have described the policy implementation process as a set of three sub-processes within a process. The policy implementation process itself is part of the political innovation process. We will move on to discuss another concept of importance to a theory of implementer behavior.

3. The Concept of Degree of Implementation.

We have defined, in the previous discussion, the concepts "implementation activity" and "implementation process." We need a concept that will refer to the outcomes of implementation activity and the implementation process. One such concept is "degree of implementation." You will recall that Gross, Giacquinta and Bernstein used this concept:

The degree to which, at a given point in time, the organizational behavior of members conforms to an organizational innovation. Put another way, degree of implementation refers to the extent to which organizational members have changed their behavior so that it is congruent with the behavior patterns required by the innovation (Gross, Giacquinta and Bernstein, 1971, p. 16).
To what unit of analysis does the property "degree of implementation" refer? It is not a property of the innovation nor of the behavior of organization members. "Degree of implementation" is a property of the relation between "organizational behavior of members" and "the behavior patterns required by the innovation." We described two types of relational properties in Chapter 2: comparative and interactional properties. Degree of implementation is a comparative property. The relata, the units being compared, in this case are the behaviors of implementers and the goals and means of a policy innovation as specified in a policy statement. The behaviors of implementers may be integral properties of individual implementers or, if we are dealing with a collective, (e.g. an organization or bureau) we may have an aggregate property of the collective, viz., the aggregate of implementer behaviors. The other unit being compared, the policy statement, can be considered an integral property of an organization or multiorganization.

Therefore, degree of implementation is a ratio variable. With "\( X \)" in the numerator, standing for implementer behaviors and "\( Y \)" in the denominator standing for the policy statement. In order to observe the relation "degree of implementation" we would see to what extent there is a correspondence between the properties of organizational behavior of members and the behavior patterns required by the innovation. High correspondence would indicate a high "degree of implementation" low correspondence would indicate a low "degree of implementation."
4. The Concept of Successful Implementation.

Several authors have defined a concept of "successful implementation" or its equivalent. They often refer to a high degree of implementation, wittingly or not. For example, Van Meter and Van Horn you recall have used the term "successful program performance:"

Our model and the research that flows from it are not designed to measure and explain the ultimate outcomes of governmental policy, but rather to measure and explain what we call program performance (i.e., the degree to which anticipated services are actually delivered). We recognize that some services could actually be delivered without having any substantial impact on the problem to which the policy is supposed to be related. A policy may be implemented effectively, but fail to have a substantial impact because it was ill-conceived - or because of other circumstances. Hence, successful program performance may be a necessary - but not sufficient - condition for the attainment of positive ultimate outcomes (Van Meter and Van Horn, 1975, p. 449).

Again, we have a relational property. The concept "successful program performance" refers to the relationship between anticipated services, perhaps the property of a plan, or regulation, or some other policy statement, and services actually delivered, perhaps the property of an organizational unit of analysis.

Also Williams discusses the concept of implementation success by discussing characteristics of a program with input/output system concepts.

The term input is employed in this paper to describe an element or characteristic of a program, or of a project, or of a treatment package(s) that comprise a project or program. Inputs may include both non-human elements (such as a new reading curriculum's text and test material and scheduling routine) and the human elements involved in their use (e.g., reading specialists and teacher's aides). The term output is used to describe organizational change deriving
from changes in inputs or other factors. Organizational change may be physical (for example, the rearranging of a classroom) or behavioral (less lecturing by the teacher). The term outcome describes change in the status and/or behavior of participants in a program or project. Outputs speak to the issue of whether or not an organization is doing things differently; outcomes have to do with whether the participants are better off.

Implementation has to do with inputs and outputs. Inputs are basically static; outputs are more dynamic. In trying to determine whether or not an innovation has been implemented successfully, it makes sense to have a checklist that asks whether the project has certain specified elements. However, a far more important task is to determine whether or not implementation has taken place by assessing the degree of correspondence between expected and actual outputs\(^3\) (Williams, 1975, p. 542).

This is again a discussion of a relational property. Successful implementation is a relationship between expected inputs and outputs and actual inputs and outputs; again, perhaps, the relationship between a policy statement as a unit of analysis and an organization as a unit of analysis. So, both of these authors present a concept of successful implementation as a notion of compliance or conformance of actual organizational, or individual, inputs or outputs (or behaviors) with intended or required inputs and outputs. Successful implementation is viewed, more or less, as implementation according to plan.

5. Disagreement About the Definition of "Successful Implementation."

There is some disagreement about what constitutes successful implementation. Contrary to the definitions of successful implementation of Williams and Van Meter and Van Horn is that of Rose. He

\(^3\)For William's reservations about this concept see Williams, 1975, p. 543.
defines successful implementation as the case where there is high correspondence between intended policy impacts and actual policy impacts:

Implementation does not guarantee a program's success; it is merely a precondition of success. In analytic terms, implementation is an intervening variable in the policy process, which starts with the statement of policy intentions or aspirations, moves through program choice to implementation and, finally, to an evaluation of the consequences of what has been done. Logically, the consequences of a program need bear no relation to the initial intentions of its sponsors, or to the expectations of those who chose to authorize it. . . . Logically, the implementation of a program can be classified as a success, if the consequences are positively evaluated; or a nullity, if implementation seems to have had no discernible consequences (1977, p. 66).

This is a contradiction of the viewpoint of the preceding authors who define successful implementation as a high degree of correspondence between intended inputs and outputs and actual inputs and outputs. Rose defines successful implementation as a high degree of correspondence between intended impacts and actual impacts. Rose retains a notion of implementation success as conformance or compliance but emphasizes conformance with intended impacts rather than conformance with intended outputs.

A more fundamental question about the meaning of the term successful implementation hinges on the fact that intended input, outputs, and impacts are usually not static during the implementation process. If intended inputs, outputs and impacts change during implementation, then what constitutes successful implementation must also change. This realization does not mean that we have to reject the concepts of "degree of implementation" or "successful
implementation" but that we must realize that the reference point for the concepts change during the implementation process.

Both Williams and Berman and McLaughlin understand the dynamic nature of these concepts:

In the ideal situation, those responsible for implementation would take the basic idea and modify it to meet special local conditions. There should be a reasonable resemblance to the basic idea, as measured by inputs and expected outputs, incorporating the best of the decision and the best of the local ideas (Williams, 1975, p. 543).

We define implementation as the change process that occurs when an innovative project impinges upon an organization. By so defining implementation, we shift the focus of research away from measuring compliance or the degree to which a project fulfills its stated "goals". Instead, we ask what changes actually occur as a result of introduction of a new project, how and why they occur, and how they affect the operation of the organization (Berman and McLaughlin, p. 13).

Berman and McLaughlin suggest that a definition of implementation which focuses on compliance makes assumptions about the implementation process in educational institutions which are unrealistic. Educational innovations, the strategies used to implement them, and even the goals of innovation are not static. They undergo changes as they are implemented, as does the organization which implements the innovation. A static compliance notion of implementation assumes that goals and/or plans do not change so drastically that comparison of intended impacts and outputs with actual impacts and outputs is meaningless. Berman and McLaughlin would say, I believe, that for educational innovations at least, that such a comparison would most often be meaningless.
Let me summarize. We find three views about evaluative uses of the term implementation. First is the view that successful implementation means that actual outputs correspond with intended outputs, a second view that successful implementation means that actual impacts correspond with intended impacts (or goals), and a third view that since intended inputs, outputs, and impacts change during implementation that the definition of successful implementation will change also. We have a view of successful implementation as goal conformance, another as output conformance and a third view of conformance as a dynamic concept.

If the question we are concerned with is "which is the true definition of successful implementation, if there is one?" we could easily settle it by choosing the definition that suited our purposes. But there are no real definitions only nominal ones. The important question is what leads authors to different definitions. What are they perceiving in the implementation situations they are familiar with that leads them to define implementation success differently?


There is an answer to the question in considering the concept of discretion. The differences among the authors on the definition of successful implementation will be seen to be a difference in their conceptions of how much discretion is granted and/or exercised in the implementation of policies and innovations.
6.1 Definition of Discretion.

Discretion has been defined by Mitnick as a relation between a principal and an agent (Mitnick, 1975, p. 19). According to this definition discretion is not a property of the agent but a property of the relation between a principal and agent. According to Mitnick:

Discretion exists if the agent A may choose to perform acts with the potential of affecting return to the principal B . . . (or alternatively). . . A relation of discretion exists if the agent A may choose to perform acts that are differentially preferred by the principal B (Mitnick, 1975, p. 19).

In our case a relationship of discretion may exist between the decision maker and/or change agent and the implementer. We could speak of "degree of discretion" existing between a decision-maker and/or change agent and an implementer. High to low degrees of discretion may exist.

We can differentiate the concept by referring to types of discretion based on whether discretion exists about the goal of implementation or the means of implementation. Means discretion exists to the extent that activities are not specified. Goal (or end) discretion exists to the extent that product or outcome are not specified (March and Simon, 1958, p. 147).

How does this help us explain the existence of different definitions of successful implementation? We will have to answer two other questions to get the answer. First, under what conditions will different degrees of discretion exist? Second, what is the relationship between degree of discretion and the definition of successful implementation that will be applied to implementer behavior?
6.2 A Typology of Discretionary Situations.

To answer these questions will require standing on the shoulders of James D. Thompson as many others have (Thompson and Tuden, 1959). I refer to his very useful and much used typology of decisions. Each of the four types of decisions Thompson specifies have corresponding amounts of different types of discretion. This would lead us to conclude that there are four types of "discretionary situations" (Thompson, 1967, p. 134).

Being faced with a discretionary situation means that one has to make a decision. Thompson and Tuden claim that decision issues have two basic dimensions (properties): certainty or uncertainty about cause and effect relationships and certainty or uncertainty of preferences regarding possible outcomes. As Thompson points out, it is possible to consider these properties as dichotomous variables or as having a greater range of values. Crossing the dichotomized properties in a matrix yields four types of discretionary situations.

The typology answers our first question: under what conditions will different degrees of discretion exist? Recalling that discretion is a relational property, a relation between properties of a decision maker and an implementer, note that the dimensions of the typology are properties of the decision maker (beliefs about cause/effect relations and specification of preferences regarding possible outcomes) and the type concepts in the cells are properties of the implementer (perceived degree of goal and means discretion). The implementer's perception is a perception of the degree of discretion, a perception of the discretionary relation between the decision maker and the implementer.
DECISION MAKERS' SPECIFICATION OF 
PREFERENCES REGARDING POSSIBLE OUTCOMES

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Figure 5.1 Types of Discretionary Situations.

*Cells refer to amount of discretion perceived by an actor; either change agent, decision-maker, or implemeneter. The typology assumes that effects of incentives/sanctions are controlled for, that is, we are deleting the impact of sanctions/incentives on perception. The reader should understand that the typology does not predict the exercise of discretion by a decision-maker or implementer but the implementer's perception of the amount of discretion granted or available to the actor in situations with differing amounts of certainty about preferred outcomes and cause/effect relations. In Simon's language we would be discussing the specificity of fact and value decision premises (Simon, 1945, 222-224).*
The typology generates four hypotheses:

H1: When a decision maker's specification of preferences regarding possible outcomes is high and beliefs about cause/effect relations are certain, the implementer will perceive low goal and low means discretion.

H2: When a decision maker's specification of preferences regarding possible outcomes is low and beliefs about cause/effect relations are certain, the implementer will perceive high goal discretion and low means discretion.

H3: When a decision maker's specification of preferences regarding possible outcomes is low and beliefs about cause/effect relations are uncertain, the implementer will perceive high goal and means discretion.

H4: When a decision maker's specification of preferences regarding possible outcomes is high and beliefs about cause/effect relations are uncertain, the implementer will perceive low goal discretion and high means discretion.

6.2.1 Discretionary Situations of the First Find

When decision makers specify the outcomes they desire and are certain about how to go about attaining those outcomes the implementer will perceive little goal or means discretion. Decision makers are likely to gauge the success of implementation efforts by attending to the extent to which actual inputs, outputs and impacts match those mandated in a policy statement. In situations where we know where we want to go and how to get there it is reasonable to assess our progress by comparing it with our plan. Conformity with planned impacts,
outputs, and inputs will be required.

In spite of our sparse knowledge about cause/effect relations in many policy areas, quite a few policies are implemented in this type of discretionary situation because a predominant goal in U.S. policy is that persons be treated equitably and with regard to due process. Gortner makes this point in a recent public administration text:

Public policy often not only describes the substance of what is to be done but also describes the process by which it is to be done. In a democratic state where the political system is founded on the philosophy of the inherent value of each individual, not only must public policy take into consideration what the final objective of any action is but also how that action will affect each citizen as the object is being attained (Gortner, 1977, p. 6).

The most far reaching prescription of process for federal administrative organizations is the Administrative Procedures Act, which in turn rests on the 5th and 14th amendments of the Constitution. Other examples that come to mind, such as the Miranda decision, blur the distinction between the goals of government policy and the process by which it is carried out. In some cases the goal of a government policy is that a certain procedure be followed. In the case of the Miranda decision certain procedures are specified to assure constitutional rights of individuals. If the procedures are carried out we would consider that the policy is implemented successfully, irrespective of whether the rights which the procedures are intended to protect are protected.

In the case of a policy like affirmative action, which has as its goal the active attempt to provide equal employment and promotion opportunity, it is the procedure which is important. Procedures are
specified because in this case there was certainty among the policymakers that these procedures would promote the goal; that is, were necessary, if not sufficient, to produce equal opportunity. Another example of where low discretion about means is granted are welfare programs. Guidelines for determining eligibility are quantitative and allow limited discretion.

To summarize, in this type of discretionary situation we are likely to find implementation success defined as high correspondence of actual with intended impacts, outputs, and inputs. In this discretionary situation there will be the least amount of change in the definition of successful implementation. We would also expect little variation in goals pursued and means employed among implementers.

6.2.2 Discretionary Situations of the Second Kind

In this situation the implementer perceives him/herself to have high goal discretion but low means discretion since the decision maker does not specify clear preferences about outcomes but does specify the means to be employed. This would be like giving someone a hammer and telling them that we are not very clear about what we want built but that we are sure we want it built with a hammer. A hypothetical example is the case of tuberculosis sanitariums around the country which lost their purpose for existence with the decreased incidence of tuberculosis. We can imagine the trustees of these hospitals giving a directive to an administrator to find a way to use the resources of the hospital. The administrator would perceive high discretion about the goal chosen but low discretion about the means.
There will be relatively few examples of this second type of discretionary situation. In those few cases, however, we would expect a potentially high amount of change in goals during implementation but a low amount of change in means. It would also be likely that several implementers would exhibit considerable variability in the goals pursued and less variability in means. The standard of successful implementation that would be applied would be a requirement that actual input's (means) match mandated inputs. Flexibility about evaluating outputs and impacts would be expected since policy goals may change during the implementation process.

6.2.3 Discretionary Situations of the Third Kind

The situation here is one where the decision maker does not specify clear preferences about outcomes and does not have certain beliefs about cause/effect relations. The result is that implementers perceive that they have high goal and high means discretion. Berman and McLaughlin claim that discretionary situations of type 3 do exist in educational policy innovation. Whether by the intention of federal education policy-makers, or in spite of their intentions, the implementers of federal educational program innovations at the local level do in fact have a high degree of goal discretion and means discretion. This results because of uncertainty regarding preferences about outcomes and uncertainty about cause/effect relations. In specific terms, there is uncertainty about the goals of educational innovations and uncertainty about how to produce desired effects in education. Not only is there much disagreement throughout the educational policy system (spanning federal, state and local education agencies) on what the goals
of educational policy ought to be, but, even if we did have agreement, we still lack the knowledge of cause/effect relations to realize the goals of that policy.

According to Berman and McLaughlin, then, in the study of implementation of educational innovations it makes little sense to ask whether goals and specified means were complied with and why they were or were not. Uncertainty about preferred goals and lack of a proven educational technology results in a high degree of discretion exercised about goals and means, whether discretion is granted or not. Therefore the goals of educational policy innovations and implementation strategies will undergo change during the implementation process. Their conclusion is that for educational innovations, it is meaningless to discuss success of implementation in terms of conformance to planned impacts, outputs, and inputs.

6.2.4 Discretionary Situations of the Fourth Kind

In this type of discretionary situation decision makers can clearly specify where they want to go but are not certain about how to get there. An implementer in this situation will perceive high means discretion but low goal discretion. In this situation we expect that decision makers will define successful implementation as conformity of actual impact with planned impact. It would not be reasonable to evaluate implementation success by assessing degree of correspondence of actual outputs and inputs to intended outputs and inputs if there is no "one best way" which is known to produce the outcome desired.

To require implementation according to a pre-conceived plan when there is uncertainty about the effectiveness of the plan is to
commit what Robert Anthony calls the "conformance fallacy". This is the fallacy of requiring conformance to plans, that is, allowing little means discretion, when certainty of cause/effect relations does not obtain. In his private sector idiom Anthony points out that middle management can often make better decisions about how to reach goals than top management:

Top management wants middle management to react to the events that actually occur, not to those that might have occurred had the real world been kind enough to conform to the planning assumptions. Therefore top management does not necessarily want operations to conform to plans (Anthony, 1965, p. 29).

Walter Williams (1975, p. 543) has made much the same point with reference to implementing federal social policy innovations and experiments.

What should the implemented activity be expected to look like in terms of the underlying decision? For a complex treatment package put in different local settings, decision-makers usually will not expect - or more importantly, not want - a precise reproduction of every detail of the package. The objective is performance, not conformance.

In implementation situations where this kind of discretionary relation is found we are likely to find variation among implementers in the means used to pursue the policy goal but relatively uniform pursuit of the policy goal as it was mandated. Likewise, the definition of successful implementation of policy goals will not vary greatly over the period of implementation, but the definition of successful implementation of means will vary over time as the means change.

To summarize we return to our original question: What is it that the different authors who discuss the concept of implementation success perceive about implementation situations that leads them to
define the concept differently? The answer, I have argued, is that they view implementation situations in which different degrees of discretion are granted and perceived by decision makers and implementers. At one extreme, in situations with low goal and means discretion, successful implementation will be defined as conformance with plan. On the other extreme, in situations with high goal and means discretion, the plan will change throughout the implementation process and along with it the definition of successful implementation.  

7. **Summary**

The best way to conclude this chapter is to review and consolidate the definitions produced. We began with a discussion of implementation as an action property and introduced the concept of "implementation activity" which can be defined as the intentional activity of change agents and implementers during the implementation process. The two types of implementation activity are the change agents' programming behavior and the implementer's behavior, and, of course, their interactions.

The next concept "implementation process" can be defined by either intension or extension. Intensionally, the implementation process is the sequence of actions of decision makers, change agents, implementers and change catalysts and concomitant changes in

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5 It would be interesting, and perhaps essential for progress of understanding about implementation to know what kinds of policies fall in each of the cells of the typology. Perhaps Berman and McLaughlin are correct in assuming that we do need more than one theory of implementation.
structural and functional properties of the policy innovation and the innovating unit during the period of implementation. The period of implementation begins with a communication received by the change agent that a new policy has been adopted. The end marker of implementation is either a continuation/rejection decision by a decision maker or, a less precise indicator, the point at which the implementer's (or a majority of a set of implementers) perception of the routineness of the behavior's required to implement the policy innovation reaches a plateau.

The extensive definition of the policy implementation process refers to the three component sub-processes of implementation: programming, implementer behavior and incorporation/rejection/adaptation. The first two subprocesses refer to the implementation activity of change agents and implementers and therefore focus on the action properties of the implementation process. Incorporation/rejection/adaptation, on the other hand, is a focus on the state properties (structural and functional) of the policy innovation and innovating unit over the period of implementation.

We also addressed the concept of "degree of implementation" and relied on GGB's definition: "the extent to which organizational members have changed their behavior so that it is congruent with the behavior required by the innovation" (GGB, 1971, p. 16). We then considered several definitions of the concept of "successful implementation." From this discussion arise three somewhat distinct concepts:

**Successful Implementation 1:** the estimate of decision makers of the degree of correspondence of actual program outputs and inputs with
intended program outputs and inputs.

Successful Implementation 2: the estimate of decision makers of the degree of correspondence of actual program outcomes (impacts or consequences) with intended program outcomes.

Successful Implementation 3: the case where the definition of successful implementation changes during the implementation process.

The different definitions of successful implementation are based on different perceptions of the degree of discretion existing in implementation situations. In the next chapter I define what I mean by the term "implementation situation."
CHAPTER 6. THE IMPLEMENTATION SITUATION

1. Introduction

This chapter is the midpoint of the essay. Up to this point review has been emphasized from this point the emphasis is on drawing together the raw material needed to build a theory of implementer behavior. In the first chapter we presented the basic concepts of the public policy innovation, the decision maker, change agent and implementer roles. Chapter 2 laid the foundation for the literature review in chapters 3 and 4. In chapter 5 we examined the concepts of implementation activity, implementation process, and the discretionary situation.

In this chapter the concept of an "implementation situation" is introduced. It is one of the organizing concepts used in the theory. Chapter 7 presents the "dependent variables" of the theory of implementer behavior in the form of a typology. In chapter 8 a model of implementer behavior is presented. Then in chapter 9 the substructure of theory is reviewed. Hence I discuss the unit term of the theory and its general form. The sub-theory of conforming behavior is presented in chapter 10. In chapter 11 the sub-theories of excessive, deficient, modification, ritual, delay, voice, bluffing and exit are produced. Finally, in chapter 12 the theory is evaluated and guidelines for tests are discussed.

2. The Concept of an Implementation Situation

This chapter introduces a concept which is central to the theory
of implementer behavior. It is important because it will help to define the domain of the study of implementation. It will help researchers who are working on the subject of implementation know that they are or are not talking about the same phenomena. I will attempt to specify a set of minimum conditions for identifying a phenomenon as an implementation situation. I argue that if a set of conditions are specified there can be agreement among researchers that a phenomenon constitutes an implementation situation.

My first objective in defining the concept is to provide a set of elements that can be used to determine when a particular theory of implementation can be applied. To that end I will specify six elements which, when specified, ought to enable researchers to reach agreement that they are observing the phenomenon we call implementation. I contend that each of these elements is necessary for agreement among a set of researchers that they are observing similar situations. Furthermore, this set of elements is sufficient for researchers to agree. That is, I believe they will not have to specify additional elements in order to reach an agreement to label some situation an implementation situation.

The second reason for developing the concept is to start work toward providing a classification of factors that influence the behavior of implementers of innovations. A typology of implementation situations would be a useful explanatory and prescriptive tool. I do not intend to produce a typology here. I limit my efforts to suggesting a set of elements of implementation situations on which a set of dimensions (properties) could be expanded to form a typology. The set of elements I present will be used at the end of this chapter to organize the concepts
and properties that I have culled from the literature reviewed in Chapters 3 and 4.

Before I explain the purposes (uses) of the concept in more detail I ought to define the term situation. Frederickson, et. al., define a situation as:

A set of circumstances that is likely to influence the behavior of at least some individuals, and that is likely to recur repeatedly in essentially the same form (Frederickson, et. al., 1972, p. 22).

They recommend this definition for psychological investigations. A situation is defined at a level of abstraction (sufficiently devoid of detail) that permits comparative study of "sets of circumstances."

The concept of an implementation situation is very similar to several other situational concepts (although they are not usually thought of as situational concepts) developed by social scientists. Katz and Kahn's (Katz and Kahn, 1966, p. 187) concept of a role episode, Fliegel and Kivlin's (Fliegel and Kivlin, 1966, p. 235) elements of the adoption process, and Rogers and Shoemaker's (Rogers and Shoemaker, 1971, pp. 18-38) elements of the innovation communication process contain roughly the same components as I include in an implementation situation.¹ The moti-

¹Nicholas Rescher has attempted an "exhaustive catalogue of the key generic elements of actions, so as to provide a classificatory matrix of rubrics under which the essential features of actions can be classed." (1966, p. 215) This effort corresponds with the effort of Lazarsfeld and Menzel, and later Barton, to provide such a classification for the properties (features) of individuals and collectives. (See chapter 2 for fuller discussion of the classes of properties of individuals and collectives.) Thus, for individual or collective units of analysis, or, for actions as units of analysis, there are schemes for classifying their properties. The concept of an implementation situation is a sub-type of classification system for action units of analysis which is designed to elicit specific properties relevant for questions about implementation.
vation of these researchers corresponds in part to my second reason for developing the concept of an implementation situation. They wish to organize the factors that influence the action or interaction of individuals into elements of a situation so as to be able to gather data and compare across situations. I believe that the concept has utility for the study of all four types of discretionary situations discussed previously. That is, I think that the elements listed here as the "parts" of an implementation situation would be useful for study of implementation success and for the study of the "mutation" of innovations and the implementing unit (Berman and McLaughlin, 1974, p. 10).

3. The Elements of an Implementation Situation

The six elements of a situation or case that must be specified in order that we may agree to call it an implementation situation are

1) a specifiable change agent, 2) a subject of the change agents efforts (implementer), 3) an innovation, 4) an attempt by the change agent to influence the subject to change behaviors or use new decision premises in accordance with the innovation, 2 5) a context and 6) a temporal concept.

Each of the two types of actors, the change-agents and the subjects of change, can be characterized by both state and action properties. One action property of the change agent, the influence attempt, is necessary for identifying a situation as an implementation situation and is therefore listed separately.

The concept as it is presented here and as it is used in the theory applies to the process of implementation and not the whole inno-

2I wish to thank Barry Mirnick for suggesting inclusion of this element.
vation process. As the reader will see when the temporal concept is discussed, the implementation situation refers to the period of time after an innovation has been adopted. The concept of an implementation situation may be useful beyond the discussion of the implementation of policy innovations, however, I refer here only to policy implementation situations.

3.1 The Change Agent

The first property that must be ascertained is that there is a change agent operating in the situation. The term change agent usually refers to a professional, other than the manager of the unit which is changing, who is trying to influence the adoption or implementation of an innovation. Here I use the term more broadly, to include anyone, including a manager, who is engaged in trying to influence others to change their behavior so that it conforms to an adopted policy innovation. The person may be either a professional change agent, a manager, or someone with a less clearly specified role who is promoting behavior change.

Change agents can be either individuals or collectives. Types of collectives include groups, organization sub-units, or organizations. All that is necessary to satisfy this condition for labelling a situation an implementation situation is that there be at least one individual or collective that identifies itself, or is identified by others in the situation, as one who is trying to influence others to cooperate with implementation. If there is no identifiable change agent, then the situation ought not be called an implementation situation. Action and state properties of the change agent that influence the behavior of the
implementer can be identified and classified under this element of the situation. An exception is made for the influence attempt which, although an action property of the change agent, is treated separately because of its significance.

3.2 The Intended Implementer

The second element that must be present in order for a situation to be labelled an implementation situation is an intended implementer (hereafter, referred to as the implementer). There must be a subject of the change agent's influence attempts. The implementer is expected to perform the actions necessary for carrying out the innovation (including the making of decisions employing the decision premises established by the new policy.)

The implementer is the focus of the actions of the change agent. The change agent is attempting to change the behavior of the implementer. In order for a situation to be identified as an implementation situation, there must be an identifiable implementer. The implementing unit may be a private individual or organization as well as a public organization and its members. Including non-governmental organizations among the set of implementers is important because the boundary between government organizations and non-government organizations is unclear, especially in an era of expanding government contracting with private organizations. To the extent that non-governmental organizations are the instruments of public policy they are included in the set of implementers.

Under the "implementer" element of the implementation situation we can array the state and action properties of implementers. Perhaps, the action properties of greatest interest will be the implementing and
non-implementing behaviors of implementers. These behaviors of implementers will be the "dependent variables" in the theory that follows. I present a typology of these behaviors in Chapter 7.

3.3 The Policy Innovation

The third necessary property of an implementation situation is the existence of a policy innovation which the change agent is promoting. Policy innovations are new ideas which require change in an implementer's behavior. The action of the change agent must be such that he/she is trying to induce the implementer to engage in behaviors which the implementer perceives to be new. It is necessary to specify that the innovation be related to the behavior of the implementer in order that we be able to distinguish implementation situations from interpersonal interactions where only beliefs, attitudes, motives, etc., are the focus of the interaction. The agent must try to influence the behavior of the implementer in order that the situation be termed an implementation situation. The behaviors or interest will include decision-making. The change-agent may be attempting to instill new decision premises in an implementer, so that the implementer's future decision behaviors will conform to the new policy. Again, evidence that the change agent attempts to influence decision-making behavior is prerequisite to labelling a situation an implementation situation.

Under this element of the implementation situation will be arrayed the properties of the innovation that influence its implementa-

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3 See Chapter 1 for an earlier discussion of this concept.

tion success and the behavior of implementers. Properties of policies of innovations have been largely ignored in the policy implementation literature. Although some of the students of implementation of innovations in organizations have listed properties of innovations (e.g., Zaltman, Duncan and Holbek) they have not included these properties in explicit theoretical statements about implementation.

3.4 The Change Agent's Influence Attempt

The next essential property of an implementation situation is the change agent's influence attempt (programming behavior). This is an action property of the change agent. I have discussed the initiation stage of the policy implementation process. I noted that there was overlap between the initiation and implementation stages. It is the programming behavior of the change agent that we refer to as the overlap. The term programming fortunately invites connotations with two areas of research: decision-making and budgeting. In decision-making theory, March and Simon introduced the concept of programming to refer to the degree to which the individual activities of organization members are specified. They refer to an activity called "program elaboration" which precedes carrying out the new activity (March and Simon, 1958, pp. 186-187). My use of the term is related. I am referring to the behaviors of the change agent that specify implementer activities and facilitate those activities as programming behaviors. The connotation of the term programming in the budgeting literature is also complementary. Programming is the . . . determination of the manpower, material, and facilities necessary for accomplishing a program (Novick, 1968). Gross, GIacquinata, and Bernstein are the only authors reviewed that
cope with this element of the implementation situation. Their list of activities of managers in implementation situations reflects both the budgeting and decision making meanings of the term programming. To refresh your memory the list includes: manager provision of feedback mechanisms, efforts to overcome initial resistance to change, efforts to clarify member understanding of innovation, efforts to establish training programs, efforts to provide material and other resources, efforts to rewards and punishments to motivate cooperation, and efforts to make organizational arrangements compatible with the innovation. Note that some authors have confused properties of programming behavior with the properties of the innovation itself (e.g. ZDH). It is important to avoid this error so that, when asking questions about implementation success, we may be able to separate implementer rejection or acceptance of the innovation from implementer rejection or acceptance of the process by which the innovation was implementer.

3.5 The Context

The fifth essential element of an implementation situation that must be specified by a researcher is the context of the change agent's and implementer's interaction. This element is specified by determining the affiliation of each actor with a group, and/or an organization subunit, and/or an organization, and/or a multiorganization. This list implies that we are limiting the term implementation situation to natural settings. In other words, although we may use laboratory experiments to study implementation, we would not label the situation which occurs in the laboratory an implementation situation. This element will be the label under which we gather all the contextual factors that influence
implementation. (It is interesting to note that the context of the change agent and implementer's interaction is a situation itself. Therefore typologies of group, organization sub-unit, organization and multi-organization situations would be useful for ordering the factors influencing implementation listed under this element.)

The sixth and last necessary condition for defining a situation as an implementation situation is a temporal concept. I have specified in Chapter 5 the beginning and end points of the implementation process. Those indicators will satisfactorily specify the points in time during which implementation is said to occur. If a researcher identified implementation as beginning with the first behavioral response of the implementer to a directive to implement a policy innovation and ending with either a policy maker's continuation/rejection decision or a plateau of perceived routineness of implementation activity, or devises another set of indicators to mark the beginning and end of implementation this criteria will be satisfied.

I have presented a concept which I have called an implementation situation. One reason for constructing such a concept is to help define what it is that students of implementation are studying. My answer is, that they are all studying aspects of implementation situations. No matter whether they study the complex process of implementing a program in the federal system of government or the change of a procedure in an industrial work group, the elements of an implementation situation can be discerned. I hope that the concept helps to both integrate studies

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5See Yin, 1977, Chapter 1 on the importance of specifying the temporal parameters of implementation.
of implementation of various types and differentiate implementation studies from other research areas.

The other purpose the concept serves is as a set of elements the properties of which influence implementation processes whether they be individual implementer cooperating or non-cooperating behavior, implementation success 1, implementation success 2, or the mutation of both the innovation and the implementing unit during implementation. The elements of the implementation situation will be used not to organize the concepts culled from the implementation literature reviewed in Chapters 3 and 4. The elements will also serve as an organizing or ordering device to facilitate presentation of the theory of implementer behavior in a later chapter.

4. The Harvest

Before I proceed with presenting a theory of implementer behavior I need to garner all the relevant concepts from the literature I have reviewed. Before I can assess the relevance of individual concepts I need to put them in a common framework. As I suggested, the way that I will do this is by assigning the concepts of the various authors to categories formed by the elements of an implementation situation. For example, all of Hage and Aikea's "independent variables", i.e., those that predict initiation and implementation, when viewed form the perspective of contribution to a theory of implementer behavior, can be classified as a list of properties of the context of the implementation situation. The reader should realize that even though I am going to use this framework and its contents to build a particular theory of implementer behavior, this listing of concepts from the authors I reviewed
should be usable for building other types theories about implementation, especially other theories of implementer behavior. One warning is necessary. Since I had to interpret authors meanings in building the individual lists of concepts the possibility of misinterpretation may continue as the concepts are entered in the implementation situation framework.

4.1 Hage and Aiken

Hage and Aiken's theory, you will recall, consisted of statements linking properties of organizations to organizational initiation and implementation of innovations. I assume that these properties, complexity, centralization, formalization, etc. may be considered as part of the context of an implementation situation. They may influence implementer's behavior, which is the behavior that the theory I am proposing is supposed to explain. However, I will leave the assessment of which, if any, of the organizational properties Hage and Aiken identify are useful for my theory until later. Here my objective is to gather and sort the concepts presented. As I mentioned, all of Hage and Aiken's concepts appear to be properties of the organizational context of an implementer's behavior.

4.2 Wilson

If I judged Wilson's work from the three explicit hypotheses alone, I would have difficulty seeing his work's relevance for my undertaking. But, by referring to his implicit statements and concepts which are diagrammed and listed in figure 3.3 the reader can see that Wilson's work may suggest influences on implementer behavior. If my reading of
Wilson is correct, several properties of individual implementers of innovations, change agents (managers) and context (setting) are mentioned.

4.3 Gross, Giaquinta and Bernstein

As with Wilson's theory, the work of these three researchers yields a set of concepts that are very compatible with the elements of an implementation situation. They have specified properties of the implementer, change agent's (manager's) programming activity and of the context. They do not include properties of the innovation. Rather, we get a "reflection" of the properties of the innovation in the intended user's perceptions of it. For example, their property "clarity of understanding" may reflect the innovation's complexity, and their "original resistance," the innovation's degree of radicalness. This is an interesting way to approach the problem of including properties of innovations in a theory, because it gets around the problem of proposing objective measures of the properties of innovations. For theories that do not treat the causes of change in the innovation itself or the consequences of changes in innovation properties for implementation this is sufficient. Theories that do include changes in properties of innovations will need objective measures of innovation properties.

4.4 Berman and McLaughlin

These authors provide us with properties of individual implementers, context, the innovation, and change agents. As we know, their contribution is the suggestion that we gauge innovation and organization properties at several points during the implementation process. For example, they include the following innovation concepts: initial project
characteristics and implemented project characteristics. However, their
treatment of innovation properties might be enhanced by attention to
some innovation properties identified by students of innovation adoption
by individuals and organizations (See Rogers and Shoemaker, 1971, and
Zaltman, Duncan, and Holbek, 1973). They may have ignored these properti-
ties because they have been associated with adoption studies which have
a focus similar to the compliance focus which Berman and McLaughlin re-
ject.

Berman and McLaughlin do include properties of change agents in
their model. In fact, their model allows for an extension of the original
concept of an implementation situation because of the interorganizational
perspective which they introduce. There are, at least, two levels of
change agents operating in this model of the education policy system.
Actors in federal and state education agencies, as well as within the
local education agency, may take the role of change agents. This sit-
uation is more accurate descriptively for many implementation situations
in public organizations where actors from more inclusive government
agencies influence other actors in their jurisdictions. On the other
hand, inclusion of change agents from other governmental units will make
any theory of implementation more complex and therefore difficult to
construct.

4.5 Zaltman, Duncan, and Holbek

ZDH discuss properties which could be classified under the inno-
vation, context, and implemener categories. Only the latter two are
integrated in their theory. Since they merely discuss innovation pro-
perties and do not include them in their theory, I do not classify their
theory as one which comprehends this element. ZDH also discuss the role of the manager, apparently, in order to make prescriptive statements, but again, these properties are not part of the explicitly stated theory.

4.6 Van Meter and Van Horn

Van Meter and Van Horn include in their conceptual framework concepts that I would classify as properties of the implementer, the context, and the change agent's programming behavior. They discuss two properties of innovations but do not integrate these in their conceptual framework.  

4.7 Baum

Finally, Baum's analytical model includes properties of the change agent's programming behavior and implementer elements of the implementation situation.

In the table below I array all of the properties identified by the authors reviewed according to the elements of the implementation situation. The only element not relevant for this task is that of the point or period in time at which implementation occurs.

Table 6.1 Properties of Elements of Implementation Situations

A. Properties of the Change Agent

Zaltman, Duncan, and Holbek:
1. felt mistrust of subordinates by superiors

Smith and Bunker offer no concepts that I could relate to the elements of an implementation situation.
Berman and McLaughlin:
2. innovativeness propensity

3. Properties of the Implementer

Wilson:
1. availability of extraorganizational incentives to members
2. value of extraorganizational incentives to members
3. clarity of behavior required of members of extraorganizational sources of incentives
4. perception of organizational crisis
5. perceived differential effect of the innovation on members

Gross, Giacquinta, and Bernstein:
6. degree of implementation
7. members' original resistance to innovation
8. members' clarity of understanding of innovation
9. members' possession of knowledge and skill to perform required behaviors
10. members' willingness to expend time and effort to implement the innovation

Berman and McLaughlin:
11. personal backing of individuals for innovative project
12. teacher's perception of autonomy or activity control

Zaltman, Duncan, and Holbek:
13. need for stability
14. local pride
15. felt need
16. feigned acceptance and utilization
17. passivity
18. perceived manipulation
19. disillusionment because of false expectations
20. selective processes
21. primacy
22. habit
23. illusion of impotence
24. dependence
25. self-distrust
26. insecurity
27. regression
28. anxiety
29. homeostasis

Van Meter and Van Horn:
30. willingness to carry out policy
31. comprehension of policy
32. direction and intensity of response toward policy

Baum:
33. faithfulness of subordinate's implementation of decision
34. subordinate's motivation to implement decisions faithfully
35. extent subordinate's interests favored by faithfully implementation
36. consistency between an appellate decision and subordinate's policy preferences
37. authority subordinate attaches to decision

C. Properties of Change Agent's Programming Behavior

Wilson:
1. need to redistribute incentives to resolve conflict
2. difficulty in using incentives to resolve conflicts about implementation
3. amount of detailed control over member behavior
4. ability to make distribution of rewards dependent on changed behavior

Gross, Giaquinta, and Bernstein:
5. extent of manager provision of adequate feedback mechanisms
6. extent of manager efforts to overcome initial member resistance to change
7. extent of manager efforts to clarify members' understanding of the innovation
8. extent of manager efforts to provide materials and other necessary resources
9. extent of manager efforts to make organizational arrangements compatible with the innovation
10. extent of manager efforts to provide rewards and punishments to motivate cooperation

Berman and McLaughlin:
11. incentives offered
12. levels of funding
13. guidelines or restrictions
14. resource commitment to project
15. degree of principal and/or superintendent involvement, support, and accessibility
16. staff development

Van Meter and Van Horn:
17. adequacy of interorganizational communication activities
18. type of interorganizational enforcement activities

Baum:
19. accuracy of decision communication
20. power of influence mechanism

D. Properties of the Innovation Being Implemented

Berman and McLaughlin:
1. educational objectives of innovation
2. personal consequences of innovation implementation
3. change that increases the level of resource use only
4. change that affects the resource mix
5. change that affects instructional process without deterring resource level or mix
6. change that affects administrative management without significant alteration of the organizational power structure
7. change that affects either the organizational structure of the school or the school's relation to external authority
8. prior planning and testing of innovation
9. specificity of goals and means
10. flexibility
11. complexity

Zaltman, Duncan, and Holbek:
12. financial cost
13. social cost
14. returns to investment
15. efficiency
16. risk and uncertainty
17. communicability
18. clarity of results
19. compatibility
20. pervasiveness
21. complexity
22. scientific status
23. perceived relative advantage
24. visibility of relative advantage
25. amenability to demonstration
26. structural radicalness
27. performance radicalness
28. point of origin
29. terminality
30. reversibility
31. divisibility
32. commitment required
33. publicness vs. privateness
34. impact on interpersonal relationships
35. number of gatekeepers
36. susceptibility to successive modification
37. gateway capacity

Van Meter and Van Horn:
38. amount of change involved to implement policy
39. degree of goal consensus about policy

Baum:
40. clarity of appellate decision

E. Properties of the context:

Hage and Aiken:
1. complexity
2. centralization
3. formalization
4. stratification
5. production emphasis
6. efficiency emphasis
7. aggregate job satisfaction

Wilson:
8. scarcity of incentive supply
9. rate of member proposal of innovations
10. amount of disagreement among members about the merits of the innovation.
11. complexity of the organization's task structure
12. aggregate perception of organizational crisis

Gross, Giacquinta, and Bernstein:
13. availability of required materials and other resources necessary for implementation
14. compatibility of organizational arrangements prior to introduction of innovation

Berman and McLaughlin:
15. aggregate staff mobility patterns
16. staff age patterns
17. racial and socio-economic status composition
18. pupil-per-teacher ratio
19. number of graduates entering college
20. dropout rate
21. leadership style
22. locus of decision-making
23. research and development capacity
24. wealth
25. level of pupil expenditure
26. amount of budgetary slack
27. pattern of resource use
28. size
29. age and condition of facilities
30. degree of reciprocity within schools
31. degrees of staff participation in decision-making
32. change in routinized procedures
33. change in loci of decision-making

(The following are properties of the organizational environment noted by Berman and McLaughlin.)

34. Urban - rural composition
35. ethnic and racial composition
36. community size
37. median age of residents
38. tax base
39. level of unrest
40. level of community involvement in school affairs
41. type of school board
42. family influence
43. peer group influence
44. community influence

Zaltman, Duncan and Holbeck:
45. complexity
46. formalization
47. centralization
48. capability for effective interpersonal relations
49. capability for dealing with conflict
50. coding scheme barrier
51. division of labor
52. hierarchical and status differences
53. physical separation of relevant parties
54. forces altering the innovation
55. conflict
56. continued conflict
57. occurrence of unintended dysfunctional efforts

Van Meter and Van Horn:
58. competence
59. size
60. degree of hierarchical control
61. political resources
62. vitality
63. openness of communications
64. linkages with policy-making or policy-enforcing body
65. political, economic, and social conditions

The list contains approximately 170 variables that authors have suggested are related to the implementation process or its outcomes either directly or indirectly. There is some duplication but not much. I might be criticized for not providing definitions, however, the authors I have reviewed have rarely provided definitions. When one of the above concepts is used in the theory to be constructed it will be defined. I might be criticized for merely listing the variables and not reporting the relations of the variables to each other. But, when the authors I have reviewed made their statements about relationships among variables explicit, I recorded those in Chapters Three and Four.

My purpose in listing these terms is to arrange the concepts according to the implementation situation scheme. Comparison of these
lists with the lists of terms in Chapters 3 and 4 will show that the scheme comprehends all of the concepts. I accept only partial blame for any misinterpretation of any undefined concepts but will accept full blame for mis-interpreting/misclassifying any concepts which authors defined explicitly.

The reader should understand that the classification was done on the basis of the implementer being an individual in an organization. Therefore, the categories reflect this. If an organization were treated as the implementer then we would expect the implementer, change agent programming behavior, and context categories to have contents different than those I have compiled.

How will this list be used in constructing the theory of implementer behavior? The list will serve as a source of concepts to be integrated into the theory. Not all of the concepts can be or should be worked into the theory. Four criteria will be used to choose which concepts should be used. First, those concepts which have explicit definitions will be preferred. This criterion will eliminate a great number of the concepts. Second, those concepts which have been utilized in statements which have been tested and supported will be preferred. That is, where empirical evidence exists it will be relied on in constructing the theory. Third, those concepts which are compatible with the attitude-behavior concepts that I employ as the core of my theory of implementer behavior will be preferred. Fourth, those concepts which seem to fit because arguments in the literature are convincing (where empirical tests are lacking) or seem right by intuition will be preferred. It is not embarrassing to me to admit the use of intuition as a criterion; it is the test of the theory that tells.
5. **Summary**

In this chapter I have introduced the concept of an implementation situation. This concept will be used as the "unit term" for the theory of implementer behavior. That is, the concept of an implementation situation will help define what the theory is intended to do and what type of situation it applies to. I then used the elements of an implementation situation to categorize the properties that I culled from the literature reviewed in Chapters 3 and 4. In Chapter 7 I will address the problem of specifying the dependent variables of a theory of implementer behavior.
CHAPTER 7. A TYPOLOGY OF IMPLEMENTER BEHAVIORS

1. Introduction

The last major problem to be considered before presenting the theory of implementer behavior is the question of the specific properties of the object unit of analysis that the theory of implementer behavior will attempt to predict. What kinds of behaviors might implementers engage in when they are directed to implement a policy innovation in different implementation situations? What behaviors will the theory predict will occur? This is the question to be answered in this chapter. The answer takes the form of a classification of implementer behaviors. The implementer is the object unit of analysis. The behaviors of implementers are properties of the implementer element of the implementation situation concept.¹

2. The Typology²

A typology is a multidimensional classification. Classification is the ordering of concepts into groups (or sets) on the basis

¹Note that Janice Beyer and John M. Stevens (1976) advance a typology of implementer behaviors but apply it to the aggregate behavior of individuals in organizations. Also, Beryl Radin (1977, p. 16) has identified several types of behaviors of change agents in her study of H.E.W.'s implementation of school desegregation policy.

²I thank Robert Backoff and Barry Mitnick for the help they gave me in revising this typology.
of their relationships, that is, of their associations by contiguity, similarity, or both (Bailey, 1973, p. 19). The typology I construct has six dimensions. The behaviors of implementers can be grouped together on the basis of their similarity to one another with reference to those six dimensions.

The dimensions of the typology consist of attributes (properties) of an implementer's behavior which can be observed by a researcher either directly by on-site investigation or indirectly through the self-reports of implementers or reports of other actors involved in a policy's implementation. These properties of the implementer behaviors define the behaviors. They describe the behaviors of the implementer. Before presenting the dimensions I will briefly discuss several criteria outlined by Mitnick (1977, p. 4-5) which are useful for guiding the development of and evaluating typologies.

2.1 Criteria for Evaluating Typologies

A typology should evidence parsimony, inclusiveness, systematicity, exclusiveness, theoretical utility, and naturalness.

A. Parsimony: The number of dimensions upon which classes are constructed should be kept as small as practicable.

B. Inclusiveness: The typology should exhaust the set of relevant phenomena. Each phenomenon should be capable of being assigned to the typology.

C. Systematicity: "The typology should be systematically constructed, so that categories are located in a systematic way on all classifying dimensions" (Mitnick, 1977, p. 4-5).
D. Exclusiveness: It should be possible to make unambiguous assignment of a phenomenon to a single cell of the typology. There should be no doubt about the cell to which a particular phenomenon is to be assigned.

E. Theoretical Utility: "The dimensions that generate the typology should be chosen to have particular utility in theory construction and be key or important ones in the explanation and prediction provided by any theory. Given the need to empirically test any future theory, the dimensions should be empirical variables and/or relatively easily operationalized" (Mitnick, 1977, p. 5, see also Blalock, 1969, pp. 30-35).

F. Naturalness: "The classificatory dimensions or variables should be chosen to be basically descriptive of the phenomena, i.e., relate to ready, clear, and "natural" aspects of the empirical phenomena" (Mitnick, 1977, p. 5).

The degree to which the typology of implemen ter behavior meets these criteria will be discussed after the typology is presented.

2.2 The General Typology

The first dimension (property of the implementer's behavior) is the implementer's behavioral intention to perform implementing behaviors. A behavioral intention is defined simply as a person's degree of intention to perform a behavior (Fishbein and Ajzen, 1975, pp. 372-381). Common sense tells us that a person's intention to do something might be related to their actually doing it, and in fact, research supports
this. So, on the first dimension we are arraying behaviors on the basis of the degree to which the implementer intends to carry the policy into effect at the point in time that he or she performs the behavior. If we dichotomize the property we may group behaviors as either being intended to carry out the policy or as not intended to carry out the policy.

<table>
<thead>
<tr>
<th>Implementer's Behavioral Intention</th>
<th>Compliance</th>
<th>Non-Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to Conform</td>
<td>Intentional Compliance</td>
<td>Unintentional Non-Compliance</td>
</tr>
<tr>
<td>Intent not to Conform</td>
<td>Unintentional Compliance</td>
<td>Intentional Non-Compliance</td>
</tr>
</tbody>
</table>

Figure 7.1 A General Typology of Implementer Behaviors

The second dimension on which we array the behaviors of implementers is the degree to which the behaviors conform with the goals and/or procedures expressed in the policy statement in question. An evaluator (the decision maker, change agent, or researcher) would judge

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3For studies supporting the hypothesis that behavioral intention is positively related to behavior see inter alia: Ajzen, 1971; Ajzen and Fishbein, 1970; Fishbein and Coombs, 1974; and Holman, 1956.

4An implementer could comply with the goals of a policy but not its procedures, and vice versa. It would complicate the typology greatly to treat goal and procedure compliance separately. However, the question should be pursued in later research.
the behavior as either conforming with the policy statement or not conforming with the policy statement. Conforming (or correct) behaviors are implementer behaviors which the evaluator thinks conform to the goals and/or procedures expressed in a policy statement. Non-conforming (or wrong) actions are implementer behaviors which the evaluator decides are failures to conform to the goals and/or procedures expressed in a policy statement.

The intersection of these two dimensions produces a four cell typology. This gives us four general types of implementer behavior. The type of behavior in cell "a" is intentional compliance. The implementer intends to comply and the evaluator judges that he or she successfully complies with the policy statement's goals and procedures. The type in cell "b" is unintentional non-compliance, or error, the implementer intends to comply but fails to do so. In cell "c" is intentional non-compliance. The implementer intends not to implement the policy and the evaluator judges that he or she in fact does not. Finally, cell "d" contains the type of behavior in which the implementer intends not to implement the policy but the evaluator judges that the policy has been implemented.

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5 It is possible to measure these properties on an ordinal scale. We may have degrees of intention to implement and degrees of intention not to implement and, certainly, degrees of conformity and non-conformity. However, it seems reasonable to begin investigating these behaviors by using the simpler nominal scale. The typology is easier to understand with a nominal scale. If it becomes clear that the goals of explanation, prediction and prescription can be better served with a more complex typology or, if assigning empirically observed behaviors to this typology is too crude with nominal scales the typology should be adapted.
It is hypothesized that behaviors could be identified that would meet the characteristics of cells "a", "b" and "c", but that cell "d" would have no behaviors assigned to it. It is assumed that it would be unlikely that an individual would intend not to implement a policy and at the same time be performing behaviors that implement the policy. It is assumed that accidentally implementing a policy that one doesn't intend to implement would be a rare enough occurrence to label the cell "empty." If examples could be found they would be entertaining no doubt.

2.3 A More Specific Version

The typology can be made more specific with regard to the non-compliant behaviors by introducing four additional properties of implementer behaviors and by further elaborating the second dimension, the evaluator's judgement about implementer compliance or non-compliance. In the elaborated version of the typology the second dimension takes on an additional value. An evaluator may 1) observe that an implementer complies with the goals and/or procedures of the policy statement (observes compliance), 2) observe that the implementer continues to perform according to an old standard operating procedure (SOP), 3) observe that the implementer's action is neither merely old SOP nor merely compliance with the policy (other non-compliance). For an example of the last case, the implementer may be observed to bargain with the decision maker or change agent about the policy. This

6The evaluator could only observe this value of the property if the new policy were replacing an old one that was in place.
behavior would be identified as neither merely complying with the policy nor performance of an old SOP. The second dimension now has three values instead of the two discussed previously. The first dimension, implementer's behavioral intention to conform or not is unchanged. The third dimension of the implementer's behavior is the coveryness or overtneiness of the implementer's behavior. If the implementer attempts to hide his/her true behavior from the change agent or decision maker the behavior is labelled covert. If no attempt to deceive these actors is made the behavior is labelled overt.

The fourth dimension of the implementer's behavior is the direct target of the behavior (as opposed to indirect target). The direct target of the implementer's behavior may be 1) the policy itself, 2) other actors in the implementation situation, or 3) neither the policy nor other implementation situation actors. The implementer's behavior may be described as actual manipulation of the policy, for example, alteration of the goal of a policy; may involve interaction with the change agent, for example, to protest an aspect of a policy; or may involve action targeted directly toward neither the policy nor an actor, for example, simple interaction with respect to the policy.

The fifth dimension of implementer behavior is the direction of deviation of the behavior with respect to the policy. A behavior may 1) exceed the goals and/or procedures mandated in a policy statement, 2) fall short of the goals and/or procedures of the policy, or 3) not deviate in either direction. For examples, an implementer's behavior may be described as serving a larger target population than intended, or serving too few, or serving the population intended.
In addition, some behaviors which are directly targeted at the actors in an implementation situation may not exceed or fall short of policy goals or procedures. For example, when an implementer argues against a policy the act of arguing cannot be considered a deviation from the policy.

The final dimension (property) of implementer behavior is the presence or absence of the implementer in the implementation situation. The property refers to whether the implementer stays in or leaves the implementation situation. When these dimensions intersect we get a complex typology with many cells. However, many of the cells in the typology contain either 1) uninteresting behaviors, or 2) behaviors that are unlikely to occur frequently. A search of the literature on implementation, and discussions with colleagues and practitioners led to identification of nine behaviors that can be classified in this typology of implementer behaviors: conforming, excessive, deficient, modification, ritualism, delay, voice, bluffing, and exit. These behaviors will be defined below.

The nine behaviors can be related to the general typology presented in Table 7.1. Table 7.2 shows the relationship between the general types of behavior (intentional compliance, unintentional non-compliance, intentional non-compliance, and unintentional compliance) and the nine further specified behaviors. Appendix A contains the figures which portray the expanded, six-dimensional typology of implementer behaviors. Note that voice appears in two places in the table. This is a flaw in the typology; it's types are not mutually exclusive. More on this later.
Table 7.1  Nine Types of Implementer Behaviors

<table>
<thead>
<tr>
<th>Intentional Compliance</th>
<th>Unintentional Non-Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conforming Voice</td>
<td>Excessive Deficient</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unintentional Compliance</th>
<th>Intentional Non-Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modification</td>
<td></td>
</tr>
<tr>
<td>Ritualism</td>
<td></td>
</tr>
<tr>
<td>Delay</td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td></td>
</tr>
<tr>
<td>Bluffing</td>
<td></td>
</tr>
<tr>
<td>Exit</td>
<td></td>
</tr>
</tbody>
</table>

2.3.1 Intentional Compliance

The first implementer behavior of interest is conforming behavior that occurs intentionally. These behaviors are judged as carrying out the policy; the evaluator concludes that the goals and procedures of the policy statement are correctly translated into behaviors by the implementer. With respect to the other dimensions of the typology conforming behavior can be described as overt, targeted directly at the policy, as having zero deviation in direction from the policy statement, and as requiring the implementer's presence in the implementation situation. 7

2.3.2 Unintentional Non-Compliance

An implementer can intend to conform to a policy but fail to. There are two types of error possible. One may err by exceeding

---

7Voice will be discussed in the section on intentionally non-compliant behavior.
<table>
<thead>
<tr>
<th>Behavioral Intention</th>
<th>Evaluator's Observation</th>
<th>Covert/Overt</th>
<th>Direct Target of Behavior</th>
<th>Direction of Deviation from Policy Statement</th>
<th>Implementer's Presence or Absence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conforming</td>
<td>To Conform</td>
<td>Compliance</td>
<td>Overt</td>
<td>Policy</td>
<td>None</td>
</tr>
<tr>
<td>2. Excessive</td>
<td>To Conform</td>
<td>Neither mere Compliance nor old SOP</td>
<td>Overt</td>
<td>Policy</td>
<td>Exceeds</td>
</tr>
<tr>
<td>3. Deficient</td>
<td>To Conform</td>
<td>Neither mere Compliance nor old SOP</td>
<td>Overt</td>
<td>Policy</td>
<td>Falls Short</td>
</tr>
<tr>
<td>4. Modification</td>
<td>Not to Conform</td>
<td>Neither mere Compliance nor old SOP</td>
<td>Covert or Overt</td>
<td>Policy</td>
<td>Falls Short, or Exceeds</td>
</tr>
<tr>
<td>5. Ritualism</td>
<td>Not to Conform</td>
<td>Old SOP</td>
<td>Overt</td>
<td>Neither Policy nor Actors</td>
<td>Falls Short</td>
</tr>
<tr>
<td>6. Delay</td>
<td>Not to Conform</td>
<td>Old SOP or neither mere Compliance nor old SOP</td>
<td>Overt</td>
<td>Neither Policy nor Actors</td>
<td>Falls Short</td>
</tr>
<tr>
<td>7. Voice</td>
<td>To Conform or not to Conform</td>
<td>Neither mere Compliance nor old SOP</td>
<td>Overt</td>
<td>Actors</td>
<td>None</td>
</tr>
<tr>
<td>8. Bluffing</td>
<td>Not to Conform</td>
<td>Old SOP or neither mere Compliance nor old SOP</td>
<td>Covert</td>
<td>Actors</td>
<td>None</td>
</tr>
<tr>
<td>9. Exit</td>
<td>Not to Conform</td>
<td>Neither mere Compliance nor old SOP</td>
<td>Overt</td>
<td>Neither Policy nor Actors</td>
<td>Falls Short</td>
</tr>
</tbody>
</table>
or by falling short of the goals or procedures of a policy. The first type of error is labelled excessive behavior, the second type deficient behavior. Both of these behaviors occur in spite of an intention to conform with the policy. The evaluator does not observe conformity nor does he or she observe behavior according to an old SOP, but some other non-complying behavior. The behavior is overt, the direct target of the implementer's behavior is the policy, and the behavior requires the implementer's presence in the implementation situation. Of course, on the dimension "direction of deviation from the policy statement" excessive behaviors exceed the policy and deficient behaviors fall short of it.

These sub-types of error are the result of the intervention of some factor between intention to implement and the successful translation of that intention into behavior. Two factors may intervene directly; the individual's ability and understanding. (Other factors in a policy implementation situation may influence ability and understanding and hence indirectly influence the implementer's behavior. These factors will be discussed later.) The implementer may either not understand the policy and/or, the behaviors required to implement it and/or, may lack the ability to perform the reacquired behavior. Understanding refers to intellectual content and is distinguishable from ability which is the capacity to apply intellectual content to concrete situations. Someone may be able to recite the steps of a procedure, but not able to perform them.
2.3.3 Intentional Non-Compliance

Modification refers to behaviors which are alterations of the goal and/or procedures prescribed in a policy statement. Either the goal or procedure or both may be modified. Modification is distinguished from error (unintentional non-compliance) because it is an intentional deviation from the goals and/or procedures of a policy statement. Modification is distinguishable from the other five intentionally non-compliant behaviors because it has a characteristic none of the other behaviors possess; namely, it is a behavior that implements a variation of the new policy whereas the other intentionally non-compliant behaviors are not attempts to implement any version of the policy. Modifying behaviors may be either overt or covert, they are directly targeted at the policy (but may be indirectly targeted at other actors in the implementation situation, and modification requires the implementer's presence in the implementation situation. The direction of deviation from the policy may be either positive or negative. The implementer may modify the policy in varying degrees (Berman and McLaughlin, 1974, p. 10). The category of modification includes outright disobedience.

Ritualistic behavior refers to behaviors which are performed according to an old standard operating procedure rather than according to the prescriptions of the new policy statement. Ritualistic behavior is distinguishable from bluffing (defined below) in that although an implementer who is bluffing may behave according to an old standard operating procedure, an effort is made to give the appearance of implementing the new policy. Whereas, an implementer who is engaging
in ritualistic behavior does not do it covertly. Behavior according to an old standard operating procedure is easily distinguished from modification, since modification consists of varying from the new policy statement, whereas ritualism consists of maintaining old behaviors rather than adding new ones. This, however, requires that an old SOP exists. Ritualism will only occur when the policy innovation being implemented replaces an existing policy. If the new policy is not a replacement, then there will be no SOP to fall back on. As a glance at Table 7.2 will show this behavior is described by: a behavioral intention not to conform, an evaluator's observance of behavior according to an old SOP, by overtness, neither the policy nor actors being the direct target of behavior, either falling short or exceeding the policy statement's goals and/or procedures, and the implementer's presence in the implementation situation.  

Delay may refer to an action that either merely postpones carrying out the policy (because the implementer either: does not understand the policy, lacks the resources to implement it, or lacks the necessary cooperation of others) or to an action that is used as a tactic to influence actors in the implementation situation. In either case delay has the following descriptive characteristics: it is performed with a behavioral intention not to conform, the evaluator may

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8 The reader should understand that the term "ritualistic behavior" is used in a restricted way here. The term has a connotation in anthropological and sociological studies which should not be imported here. However, the term was suggested by Merton's (1968) use of it in his typology of individual adaptation.
observe either an old SOP or behaviors which are neither mere compliance nor the old SOP, it is overt (if it were covert it would be subsumed under bluffing), it falls short of the goals and or procedures of the policy, and it requires the implementers presence in the implementation situation. In the case of delay as mere postponement we would label delay as directed toward neither the policy nor actors; in the case of delay as a tactic we would describe delay as being targeted at the other actors in the implementation situation or of neither policy nor actors.

Voice is a set of behaviors which are intended to change a policy or the way in which it is being implemented. The term is suggested by Hirschman who defines voice as:

> Any attempt at all to change, rather than to escape from an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to change public opinion (1970, p. 30).

Pressman and Wildavsky have discussed bargaining behavior in their case study of implementation. Bargaining is a type of voice. If an individual refuses to change his/her behavior in the manner specified, or goes on strike the behaviors are labelled voice. Voice may indicate either an intention to subvert implementation or, the individual may believe that a change in a policy or its manner of implementation would be beneficial to the organization or its clients.

This type of behavior is distinguishable from ritualistic behavior in that ritualistic behaviors are not performed with the objective of changing the policy or the way it is being implemented,
whereas the behaviors labelled voice do have this characteristic. Voice is distinguishable from exit (defined below) in that exit is an attempt to avoid performing implementing behaviors by leaving the situation, whereas voice is an attempt to confront decision-makers and seek change.

Note that voice could be performed with either a behavioral intention to conform or to not conform with the policy. There are two types of voice therefore. An implementer may attempt to get the policy changed while conforming with the policy or while not carrying the policy out. The evaluator will observe two behaviors, then, when voice is observed; the voice behavior itself and, either conforming behavior or, one of these intentionally non-compliant behaviors: modification, ritualism, delay, or bluffing. Exit itself will not be observed, but the threat of exit may occur, threat of exit is a form of voice. It differs from exit in that exit is actually leaving the implementation situation whereas threat of exit requires presence to deliver the threat. To touch on the dimensions of implementer behaviors not yet mentioned for voice behavior, note that voice may be described as: overt, directly targeted at actors, and involves, of itself, no deviation from the policy statement.

Bluffing is the label given to all behaviors that are attempts to give an appearance of performing conforming behaviors while actually not carrying out the policy. ZDG refer to this behavior as "feigned utilization and acceptance" (1973, p. 90). Bluffing is a covert behavior. An evaluator may 1) observe the implementer performing according to an old SOP or performing some other non-conforming behavior while sending a signal to the decision maker or change agent that he
or she is complying with the policy or 2) observe the implementer complying with the policy only when under surveillance while expressing an intention not to comply when the surveillance is withdrawn. In terms of the dimensions of implementer behavior bluffing is described by: an intention not to conform with the policy, the evaluator's observation of either old SOP or behaviors which are neither mere compliance nor an old SOP, covertness direct targeting of the behavior at actors in the implementation situation, and, the implementer's presence in the implementation situation. Note that bluffing itself involves no deviation from the policy statement, although the non-compliant behaviors which accompany it may.

Exit, borrowing another term from Hirschman, is the last type of intentionally non-compliant behavior. It includes resigning from the organization, requesting a transfer, or attempting to get the responsibility for implementing the policy shifted to someone else; all of these behaviors indicating a desire to avoid implementing a policy. Exit is described as having the following attributes, an intention not to conform, evaluator observance of non-compliance, overtress, targeting of the behavior neither at the policy nor other actors in the situation (the threat of exit but not exit itself may be targeted toward these actors), deviating in a negative direction from the policy, and the implementer's absence from the implementation situation.

These nine behaviors are distinguishable from one another. However, anyone observing an implementation situation over a period of time will probably see more than one type of implementer behavior.
For any given interval of time an implementer is likely to observe a complex set of behaviors occurring in sequence. Several behaviors will usually be observed because policies are not seldom composed of a single goal and a single procedure but rather packages of goals and procedures. An implementer may be observed to comply with one aspect of a policy package, bluffing about a second, and delaying the implementation of a third aspect. Behaviors will also occur in sequences. For example, an implementer may be delaying implementation of a policy until he or she learns more about it, upon learning about the policy the implementer may voice his/her objections, and then finally settle down to complying with the policy. A typology of likely clusters or sequences of behaviors would be useful, but that is not the purpose of the typology I constructed. If investigators are likely to observe clusters and sequences of implementer behaviors this raises a problem for tests of a theory designed to predict the occurrence of discrete behaviors. First, the researcher testing a theory of implementer behavior will have to specify carefully what is meant by conformity and non-conformity with the policy. Does the researcher intend to test compliance with the policy as a whole or with an aspect(s) of it?

The theory I have constructed allows the researcher a choice of level of specificity. The researcher must make certain that implementer's behavioral intention and the evaluator's judgement about compliance or non-compliance are made at the same level of specificity. If the implementer is being asked about his/her behavioral intention to implement the whole policy in all its parts, then the evaluator
must measure his/her observation with respect to the whole policy and not merely parts of it. Care should be taken that the referent behavior for the implementer's intention is of the same degree of behavioral specificity as that of the evaluator's referent (Fishbein and Ajzen, 1975, pp. 292-298). If the measure of behavioral intention is on a general level (e.g., intention to comply with the policy/intention not to comply) then the evaluator's judgement should be on the same level of generality (e.g., conformed with policy statement/did not conform with policy statement). If one measure is specific, then the other should be as specific (e.g., intention to file the report on the due date, and successfully filed report on the due date). If this precaution is not taken, observed implementer behaviors may be assigned to the wrong cells.

3. Evaluation of the Typology

Does the typology meet the criteria discussed above?

A. Parsimony: The typology employs six dimensions which leads to a fairly complex typology (see Appendix A). It does not appear that too many dimensions were employed rather as indicated by problems with the criterion of exclusiveness the typology may contain too few dimensions.

B. Inclusiveness: Whether or not the typology exhausts the relevant set of implementer behaviors will be determined empirically.

C. Systematicity: The typology is systematic, each behavior can be located on each dimension. However, and this comment refers to the criterion of naturalness, some of the behaviors do not seem to be described naturally by these dimensions. For example, the dimension
"direction of deviation from the policy statement" does not apply
naturally to behaviors "voice" and "bluffing". Voice and bluffing
themselves do not deviate from a policy statement but the behaviors
that accompany them may.

D. Exclusiveness: A problem with the typology is that two
behaviors occupy the same cell. Both one type of delay and one type
of ritualistic behavior are apparently described by the same values of
the properties of implementer behaviors. On the face of it both
behaviors seem to be discrete, the problem with the typology is that
the dimension which distinguishes them has not been identified. This
is an area for further work.

Furthermore, the two types of delay discussed earlier are not
behaviors distinct from other types. Delay, voice, and modification
are not mutually exclusive categories. Delay which is merely post-
pomement of carrying out the policy is a sub-type of modification. The
implementer is modifying the time-table of policy implementation. The
second type of delay, delay used as a tactic to influence other actors
in the implementation situations is a sub-type of voice - a nonverbal
influence attempt.

Thus, the sub-type of delay is not distinct and a revision of
the typology would require subsuming delay under the behavioral types
of voice and modification. However, for the theory of implementer
behavior which follows in Chapters 10 and 11 it may still be useful to
predict delay as a discrete behavior because of its significance to the
phenomena of implementation (see Pressman and Wildavsky, 1973,
pp. 113-124).
E. Theoretical Utility: That typology does have theoretical utility will become clear in later chapters. The operational definitions for the behaviors are found in Appendix B.

F. Naturalness: Discussed above.

4. Utility of the Classification

What value does this classification have? Why not describe behavior by implementers simply as actions which implement policies and those that don't? Why make finer distinctions? The fact that we can make fine distinctions among types of implementing and non-implementing behaviors does not mean that it is useful to do so. The reply to these questions and arguments is that this classification (or a better one) will improve our descriptions, prescriptions, and explanations and predictions about implementation.

So far, case studies describing implementation have only examined several types of the set of possible behaviors that individuals might perform in implementation situations. For example, Pressman and Wildavsky only analyze bargaining behavior and ritualistic (traditional) behavior. It would be interesting to know if other behaviors were 1) observed but considered insignificant, 2) were not noticed for lack of inclusion in a priori conceptual framework, or, were actually not performed by implementers in these cases. I suggest that the richness and comprehensiveness of case studies of implementation would be enhanced by including analysis of more types of behaviors.

Aside from use for description, there may be practical advantages, for implementation planners and analysts, of having a set of terms to classify the behaviors individuals may engage in when they
are directed to implement a policy. Once we have names for behaviors, we notice and anticipate them more easily. Awareness of potential behaviors is a prerequisite for taking action to produce or avert them. Contingency plans could be made for the most likely non-implementing behaviors. More specific plans can be formulated if we can expect specific behaviors than would be the case if we were only prepared for non-implementing behaviors of an unknown type.

Finally, specifying types of implementing and non-implementing behaviors will prove useful in theory construction for three reasons. First, indicating specific types of implementing and non-implementing behaviors will reduce the intensional vagueness of these terms. In other words, with the specific types we will know better what it means to say that an individual did or did not carry out a policy. Second, a theory that attempted to explain or predict the occurrence of implementing/non-implementing behaviors in general would be less falsifiable than a theory that purported to explain or predict specific types of implementing and non-implementing behaviors. This is the case because a theory that makes specific predictions or explanations is likely to be easier to falsify than a theory that makes general predictions and explanations. The production of falsifiable theories is important for progress in science.

Third, it is likely that a classification of implementing and non-implementing behaviors will be useful in constructing "independent" as well as "dependent" variables in theories of implementation. For example, if one's research questions are, "Why wasn't the policy implemented as planned?", or, "To what extent did an individual's
failure to cooperate with implementation lead to a program's failure to have intended consequences?", then individual implementing and non-implementing behaviors could be used as "independent" variables. On the other hand, if one's research question is, "What contributes to an individual's engaging in implementing or non-implementing behaviors?", then the behaviors would be "dependent" variables.

5. **Summary**

In this chapter I have presented a typology of implementer behavior. These behaviors are the properties of the implementer which are to be predicted by the theory of implementer behavior. In the next chapter I will present a model of the general determinants of these implementer behaviors.
CHAPTER 8. AN ATTITUDE - BEHAVIOR MODEL OF IMPLEMENTER BEHAVIOR.

1. Introduction.

In the last chapter I introduced a typology of implementer behaviors. In this chapter I present a general model that can be used to describe how those behaviors are produced. The main purpose for presenting the model is to introduce the theory of implementer behavior which follows in Chapters 10 and 11. The model has no explanatory or predictive utility. The model is not interpreted in terms of empirical referents as the theory is. It merely represents the theory, and, hopefully, the determinants of implementer behavior.

I begin by discussing the concepts that are at the core of the model and theory, then, I present the model itself. Finally, I use the model as a vehicle for discussing the simplifying assumptions that I have made in constructing the theory.

2. The Bases of the Model.

The model that I construct has four major organizing ideas as bases. The first is an attitude - behavior theory devised by Martin Fishbein, the second is a set of systems concepts, the third is an observation on implementation made by Herbert Kaufman, and the fourth is the concept of an implementation situation and its elements. Since I have devoted a whole chapter to the last concept I will not review it again here. I will proceed directly to the other three bases.
2.1 The Attitude - Behavior Basis of the Model.

My goal for a theory of implementer behavior is to predict which of the several implementer behaviors will occur in an implementation situation. The general theory which I employ to make those predictions is Fishbein's attitude - behavior theory. Fishbein's approach is different from the traditional approach to predicting behavior with attitudinal measures. Let me begin to demonstrate the contrast between the two approaches by defining "attitude."

Attitude can be defined as a learned predisposition to respond to an object in a consistently favorable or unfavorable manner (Fishbein and Ajzen, 1975, p. 336). The traditional approach to predicting behavior with measures of attitudes can be characterized (in an oversimplified way) with reference to two assumptions. First, behavior is highly related to a person's attitude toward an object. That is, if a person feels favorably disposed to a person, an institution, a racial group etc., the person will act in a favorable way toward that person, institution or racial group. In the case at hand, applying this assumption would lead us to make statements about the relationship between a person's attitude toward elements of the implementation situation (or relations between elements) and their behavior. For example, we might assume that if a person favored a policy innovation (attitude toward object), that they would then cooperate with its implementation. This assumption is being questioned

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1Most attitude researchers would accept this definition. However, Fishbein and Ajzen warn that it is important to specify further the meaning of the definition (1975, pp. 5-13).
since it has been very difficult to find a consistent relationship between attitude toward an object and behavior toward that object (Wicker, 1971; Fishbein and Ajzen, 1975).

Ajzen and Fishbein (1977) have suggested that the low correlations found between attitudinal and behavioral measures are attributable to inconsistency between the measures. In a review of 109 empirical studies of the attitude-behavior relationship they found strong correlations between attitude and behavior components when the attitude and behavior measures have as referents the same target and the same action. (Ajzen & Fishbein, 1977) This suggests that attitude toward a behavior would be a more effective predictor of behavior than would attitude toward an object. Fishbein has proposed a theory based on the attitude-toward-behavior concept that has been more effective in predicting behavior than attempts to predict behavior with the attitude-toward-object concept. We will discuss Fishbein's theory more fully in the next few pages.

The second assumption made in the traditional approach is that the concept of attitude has three components: an affective component, comprised of the person's feelings about the object; a cognitive component, the person's beliefs about the object; and a conative component, the person's action tendencies toward the object. We have defined attitude as a learned predisposition to respond. According to this view a person can respond cognitively, can form beliefs about something; can respond affectively, have feelings about something; or can respond conatively, can take action toward something. This assumption is also being questioned since a study by Ostrom (1969)
has failed to show discriminant validity among the three components, but did show high convergent validity. We can infer from this finding that the concept of attitude, rather than being composed of three distinct components, is actually a single concept that can be measured by assessing a person's beliefs, feelings or actions toward an object or behavior.

With two of the fundamental assumptions of the traditional attitude - behavior approach in question it seems reasonable to consider alternatives. Fishbein has advanced an alternative which I have adopted as a basis for the theory of implementer behavior. Fishbein's view is that behavior can best be predicted by attention to a person's intention to perform that behavior.\(^2\) Behavioral Intention (BI), in turn is determined by two factors: an attitudinal factor and a normative one. BI is a function of a person's attitude toward performing a behavior, not attitude toward an object, and the person's subjective norm about performing the behavior symbolically:

\[
\text{BI} = (A_B)_{w1} + (SN)_{w2}
\]

where BI is the behavioral intention to perform a behavior; \(A_B\) is the attitude toward performing the behavior and \(SN\) is the person's subjective norm about performing the behavior; \(w_1\) and \(w_2\) are the weights associated with each factor.

Attitude toward a behavior is a function of a person's beliefs about the consequences of performing the behavior and the person's evaluation of those consequences. Presented as an equation:

\(^2\)The following is drawn from Fishbein and Ajzen, 1975, pp. 301ff.
\[ A_B = \sum_{i=1}^{n} b_i e_i \]

where \( A_B \) is the person's attitude toward performing a behavior; \( b_i \) is the belief that performing the behavior leads to consequence or outcome \( i \); \( e \) is the person's evaluation of outcome \( i \); and \( n \) is the number of beliefs the person holds about performing the behavior. This is an expectancy-value approach to the definition of attitude. In this view, the valence (evaluation) of an outcome and the likelihood of the outcome's occurrence following a behavior co-determine the value of the attitude. It is assumed that attitude is determined by the sum of the products of all beliefs about the consequences of performing a behavior and the person's evaluation of those consequences.

The person's subjective norm (SN) is the belief that persons important to him/her think he/she should or should not perform the behavior. The subjective norm is a function of a person's beliefs about the expectations of specific referent individuals or reference groups and the person's motivation to comply with the expectations of those referents. Symbolically:

\[ SN = \sum_{i=1}^{n} b_i m_i \]

where \( b_i \) is the normative belief (i.e., the person's belief that reference group or individual \( i \) thinks he should or should not perform behavior \( B \); \( m_i \) is the motivation to comply with referent \( i \); and \( n \) is the number of referents. We measure the normative belief and motivation to comply for each referent, multiply them, and sum the products. This produces a general subjective norm for the particular behavior.
The weights \((w_1, w_2)\) in the formula for behavioral intention determine whether attitude toward the behavior or subjective norm are more important influences on behavioral intention. In some situations, for some behaviors, the perceived expectations of others and the motivation to comply with them will be more influential than the person's attitude toward the behavior.

Fishbein's theory has been effective in predicting the behavioral intention to perform behaviors. Table 8.1 indicates the results of studies predicting behavioral intention with the attitudinal \((A_B)\) and normative components \((SN)\) of the theory.

Table 8.2 indicates several studies that have obtained high correlations between the subject's behavioral intention to perform a behavior and his/her actual behaviors. These correlations and multiple correlations indicate the level of predictive accuracy that might be expected ideally for the theory of implementer behavior to be presented here. Further discussion of expected predictive accuracy will be delayed until Chapter 12.

2.2 The Systems Concepts.

The attitude - behavior theory is supplemented by several systems concepts.\(^3\) The purpose for introducing these concepts is to allow us to discuss the relationship between the implementer and his/her environment in an easily - communicated way. Therefore, in the model the implementer is viewed as a system with three subsystems. The

\[\text{The source of these systems concepts is Alfred Kuhn's, The Logic of Social Systems.}\]

\(^3\)
Table 8.1 Multiple Correlation Coefficients for the Prediction of Intentions to Perform Various Behaviors.\(^4\)

<table>
<thead>
<tr>
<th>Study</th>
<th>Intention</th>
<th>Multiple correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishbein (1966)</td>
<td>Engage in premarital sexual intercourse</td>
<td>.849</td>
</tr>
<tr>
<td>Carlson (1968)</td>
<td>Perform 30 behaviors toward an African Negro</td>
<td>.839*</td>
</tr>
<tr>
<td>Ajzen and Fishbein (1969)</td>
<td>Perform 8 leisure-time activities</td>
<td>.766*</td>
</tr>
<tr>
<td>Fishbein et al. (1970)</td>
<td>Send communications to coworkers.</td>
<td>.704</td>
</tr>
<tr>
<td></td>
<td>Follow the instructions of coworkers.</td>
<td>.608</td>
</tr>
<tr>
<td>Hornik (1970)</td>
<td>Maintain missiles in an experimental game</td>
<td>.806</td>
</tr>
<tr>
<td>Ajzen and Fishbein (1970)</td>
<td>Choose alternative X or Y in 2 PD games</td>
<td>.714</td>
</tr>
<tr>
<td>Ajzen (1971b)</td>
<td>Choose alternative X or Y in PD game</td>
<td>.716*</td>
</tr>
<tr>
<td>DeVries and Ajzen (1971)</td>
<td>Cheat in college. Copy from other student's test papers. Allow other students to copy from one's own test paper.</td>
<td>.869* .818 .566</td>
</tr>
<tr>
<td>Darroch (1971)</td>
<td>Sign 2 interracial photographic releases</td>
<td>.647</td>
</tr>
<tr>
<td>Ajzen and Fishbein (1972)</td>
<td>Perform 4 behaviors involving risk.</td>
<td>.793*</td>
</tr>
<tr>
<td>Jaccard and Davidson (1972)</td>
<td>Use birth control pills.</td>
<td>.836</td>
</tr>
<tr>
<td>McArdle (1972)</td>
<td>Sign up for alcoholic treatment unit.</td>
<td>.740</td>
</tr>
<tr>
<td>Glassman (1971)</td>
<td>Buy 8 products.</td>
<td>.665*</td>
</tr>
</tbody>
</table>

* Average multiple correlation coefficients.

\(^4\) Taken from Table 7.4, Fishbein and Ajzen, 1975, p. 310.
Table 8.2 Correlation Coefficients for the Relation Between Behavioral Intention and Behavior.5

<table>
<thead>
<tr>
<th>Study</th>
<th>Intention</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajzen and Fishbein, 1970; Ajzen, 1971</td>
<td>Choose alternate X or Y in 3 Prisoner's Dilemma games</td>
<td>.853*</td>
</tr>
<tr>
<td>Fishbein and Coombs, 1974</td>
<td>Vote for Goldwater</td>
<td>.888</td>
</tr>
<tr>
<td>Fishbein and Coombs, 1974</td>
<td>Vote for Johnson</td>
<td>.785</td>
</tr>
<tr>
<td>Holman, 1956</td>
<td>Attend football games</td>
<td>.80</td>
</tr>
<tr>
<td>Hornik, 1970</td>
<td>Maintain missiles in an experimental game</td>
<td>.806</td>
</tr>
<tr>
<td>Mc Ardle, 1972</td>
<td>Sign up for alcoholic treatment unit</td>
<td>.76</td>
</tr>
</tbody>
</table>

* Average correlation coefficients.

The detector subsystem is the perceptual or cognitive aspect of the person. It receives and processes information about the environment of the person and about the functioning and status of the person. The selector subsystem is the valuing or disvaluing aspect of the person. We will be concerned with how behavior in implementation situations is selected by this aspect of the person. The effector subsystem is the doing aspect of the person, the performance of behaviors chosen by the selector (Kuhn, 1974, pp. 60-79).

In terms of the concept of an implementation situation, the implementer is composed of the three subsystems. The other elements of the implementation situation: the change agent, the change agent's

5 Taken from text Fishbein and Ajzen, 1975, pp. 372-374.
programming behaviors, the policy innovation and the context are in the environment of the implementer. Note that the environment of the implementer is defined by the elements of the implementation situation. This is our first simplifying assumption. It is assumed that whatever is relevant for predicting implementer behavior can be attributed to one of the elements of the implementation situation.

The environment is assumed to impinge on the implementer at two points. One, via the detector, the perceptual process, the implementer gathers information about the elements of the implementation situation and the implementer's relationship with the elements of the situation. And the second point; the implementation situation elements impinge directly on the implementer's behavior, that is, various properties of elements act as constraints. These environmental influences will be discussed in more detail shortly.

2.3 Kaufman's Observation.

In a little book called Administrative Feedback Herbert Kaufman sums up the reasons why implementers do or don't comply with a directive. They may or may not know what to do, be able to do it, or want to do it. These ideas are simple, but fundamental.\(^6\) If a theory of implementer behavior glossed over one of these factors because it was obvious, the theory would have little utility. So, I have included, in both the model and the theory, concepts that refer to the implementer's knowledge, ability, and desire to carry out a policy innovation.

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\(^6\) Van Meter and Van Horn rested their framework on Kaufman's three factors.
3. **The Model**

With this introduction to the three basic ideas which underly the model and theory of implementer behavior we can turn to examining the model itself. Note that not all of the concepts that are included in the theory are portrayed in the model. One of my purposes for presenting the model is to give a simplified introduction to the theory. Included in the model are all of the properties of the implementer but only a general discussion of the elements of the implementation situation. I think that this will be a sufficient demonstration.

3.1 The Detector Contents.

The contents of the detector of the implementer are the implementer's perceptions. In figure 8.1 you will notice that the implementer is portrayed as having three categories of perceptions. We have already discussed the implementer's beliefs about the consequences of performing various behaviors, and the implementer's evaluations of those consequences. The third category of perceptions are the implementer's beliefs about his or her capability to implement the policy innovation. This category contains the implementer's beliefs about 1) his/her understanding of the policy innovation, 2) his/her understanding of the behaviors required to implement the policy innovation, 3) his/her possession of the resources needed to perform the required implementing behaviors, and 4) the implementer's belief about the extent to which his/her implementing behavior is dependent on the cooperation of others. These beliefs have various effects on other components of the model which I'll discuss as we come upon them.
Figure 8.1  A Model of Implementer Behavior

Key:

--- general relationship
----- less general relationships
3.2 The Selector Contents.

The selector is the valuing or disvaluing aspect of the implementer. This component selects the behavior which will be performed by the effector. Five components make up the selector contents. First, the selector contains the implementer's evaluation of the consequences of performing implementing and non-implementing behaviors. This selector component combines with a detector component, implementer's beliefs about the consequences of behavior, to form the implementer's attitude toward the implementing or non-implementing behaviors. In other words, an implementer's attitude toward performing an implementing or non-implementing behavior is a function of the implementer's beliefs about the consequences of that action and his or her evaluation of those consequences. This accounts for two of the selector components.

The third component is the implementer's subjective norm about performing implementing or non-implementing behaviors. This component refers to the implementer's perception that the change agent, his or her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers familiar with the implementation situation think he or she should perform a particular behavior. The subjective norm is determined by the implementer's normative beliefs, a detector component, and the implementer's motivation to comply with the expectations of referents. In other words, an implementer's subjective norm about performing an implementing or non-implementing behavior is a function of the implementer's beliefs
about the norms extant in the situation and the implementer's intention to comply with those norms.

The fifth component of the implementer's selector is his or her behavioral intention. This component refers to the implementer's degree of certainty that he or she will perform a particular implementing or non-implementing behavior. The principal determinants of behavioral intention are the implementer's attitude toward performing a behavior and his or her subjective norm about performing that behavior.

3.3 The Effector Contents.

The content of the implementer's effector is what the theory of implementer behavior is intended to predict. The effector contents are the set of nine behaviors that an implementer may perform in an implementation situation: conforming, excessive, deficient, modification, ritualistic, delay, voice, bluffing, or exit. The most immediate determinant of the implementer's behavior, according to Fishbein's attitude - behavior theory, is behavioral intention.

3.4 The Implementer's Environment.

The environment of the implementer is defined as all of the properties of the elements of an implementation situation that are not part of the implementer's detector, selector, or effector. The elements of the implementation situation are the change agent, the change agent's programming behavior, the implementer, the policy innovation, and the context. We have defined these in an earlier chapter. Note that the characteristics of the implementer fall in
both the environment and in the detector, selector, effector contents. The environment impinges on several subsystem components. First, the implementer's beliefs about the consequences of implementing and non-implementing behaviors are informed by the elements of the implementation situation. For example, if the change agent acts to enforce sanctions against non-compliance, the implementer may perceive that incurring sanction is a consequence of non-implementing behavior. Second, the implementer's normative beliefs are informed by two elements of the environment, the change agent's programming behavior and the context. For example, the implementer may form a belief that his or her peers think that the best behavior in the situation is to delay carrying out the innovation. Third, properties of the elements of the implementation situation may inform the implementer's beliefs about his or her capability to implement the innovation. For example, if the change agent does not provide the resources needed by the implementer, the implementer may well form the belief that he or she lacks the resources to implement the new policy. Thus, the environment of the implementer's detector, selector, and effector subsystems influence the components of the detector.

3.5 Variations In Relationships Among the Components.

To this point I have been describing relationships among components that hold across all nine sub-theories of implementer behavior. But the model contains several relationships that are found in several but not all of the nine sub-theories. These relationships are indicated by dotted lines in Figure 8.1. There are three. First,
beliefs about capability to implement are sometimes related to the implementer's beliefs about the consequences of behavior. This relationship is found in the modification, voice, and delay sub-theories. As an example consider the delay sub-theory. In this case it is plausible that the implementer may believe that a consequence of delaying performance of implementing behaviors would be that there would be more time to learn what behaviors are required to implement the new policy. "If I put off implementing the new policy, I'll have more time to learn what it requires that I do." In this kind of situation there is an interrelation between beliefs about consequences of behavior and beliefs about capability to implement. In other cases, this relationship is implausible. For example, it is unlikely that an implementer would hold a belief that a consequence of exit would be an allowance of time to learn what behaviors are required to implement the new policy. Continuing to perform old SOP's is not conducive to learning new procedures. The point is that the relation between beliefs about consequences and beliefs about capability are found in only three of the sub-theories.

The second relation that is not found in all nine sub-theories is that between beliefs about capability to implement and behavioral intention. This is found only in the conforming, excessive, deficient, ritualistic, bluffing, and exit sub-theories. For example it is plausible that a shortage of resources may influence an implementer to intend to bluff, (BI) that is, to give the appearance of carrying out the policy while actually not doing so. However it is not plausible that a lack of resources is related to an implementer's
beliefs about the consequences of bluffing \( b \) of \( \mathbb{E} b_{i} \). What consequence related to resources is an implementer likely to relate to his or her bluffing? But, beliefs about capability to perform implementing behaviors clearly may influence behavioral intention to perform in a traditional way, to bluff, conform, or exit. Therefore, the relationship is found in the sub-theories that predict those behavioral intentions.

The third relation that is found in only several of the theories is that which relates properties of the environment directly to the implementer's behavior. This relationship is found in the sub-theories of conforming, excessive, and deficient behavior. Certain of the properties of the environment influence the implementer's ability to transform a behavioral intention to perform conforming behaviors into actual conforming behavior. Characteristics of the implementer, change agent's programming behavior, and the policy innovation influence the ability of the implementer to conform. However, these factors influence the implementer's non-compliant behaviors through the detector and selector components, hence the fact that the direct relation between environmental properties and behavior is found in only three of the sub-theories. As an example of this relationship consider that the extent to which a change agent provides the resources needed to implement the new policy may influence an implementer's ability to translate an intention to conform into conforming behavior. If the change agent provides insufficient resources the implementer may not be able to perform the required behaviors and an evaluator may label his or her behavior deficient. Because of
possibilities like this one, three sub-theories contain statements about relations between properties of the environment and the implementer's behavior. This concludes our discussion of the model of implementer behavior.

4. Simplifying Assumptions.

Now that we have the model I can use it to describe the simplifications of reality that I have assumed in constructing a theory of implementer behavior. All model building and theory building requires simplification of reality. I have tried to be aware of the simplifying assumptions I have made because some of them may affect the predictive accuracy of the theory. Later versions of the theory might alter or reject some of the simplifying assumptions in attempts to improve predictive accuracy.

The first and most obvious simplification is that I have chosen a narrow focus for the theory. The theory is intended to predict only implementer behavior, not the behavior of organizations and multi-organizations as they implement new policies, not even the behavior of sub-units of organization. One can conceive of such theories, and even of multi-unit theories; theories which predict or explain the behavior of individuals and organizations or of organizations and multiorganizations. Theories of individual and organizational implement-
implementation success of type 1 or type 2 could prove as difficult as the problem of determining organizational effectiveness has been.

Second, the fact that the theory is intended to predict the behavior of implementers in general whether they be heads of bureaus or lower participants allows simplification. Special characteristics of the implementer's role and of the context can be ignored at this level of generality, perhaps, though, at the expense of predictive accuracy. The simplifying assumption is that implementer behavior and the determinants included in the theory are the same whatever the role or rank of the implementer.

Third, again because of the intended range of the theory, a simplifying assumption is made that there is no significant difference in the determinants of implementer behavior if the implementer and change agent are in different organizations. Understand, that I am not saying that I am assuming that the differences in the situations would not significantly affect the theory's predictive accuracy.

Fourth, the assumption is made that implementer behavior and the determinants included in the theory are the same whatever the authority relations between the change agent and the implementer. This assumption is likely to lead to low predictive accuracy.

Fifth, the assumption is made that attitude toward the behavior and subjective norm have equal weight in determining behavioral intention. Recall the equation

$$B\text{I} = (A_B)^{\omega_1} + (\text{SN})^{\omega_2}$$

where BI is the behavioral intention to perform a behavior; $A_B$ is the
individual's attitude toward performing the behavior; SN is the general subjective norm about performing the behavior; and \( w_1 \) and \( w_2 \) are the weights assigned to \( A_p \) and SN in predicting BI. In some situations it is understandable that a person would weigh the expectations of others more heavily than his/her own attitude in deciding to perform a behavior. The simplifying assumption made in this version of the theory is that the weights are equal. That is, no allowance is made for differential weighting of the two components. This version of the theory does not even contain \( w_1 \) and \( w_2 \) as concepts.

5. The Relation of the Model to the Theory.

With the preliminary sketch of the model of implementer behavior we can turn to the question of how the model is related to the theory, and how the model and theory are assumed to be related to the actual phenomenon of the implementer acting in an implementation situation. Rather than wade through a discussion of how models are used in social science I will simply make clear how I have used the model of implementer behavior. The model has had two uses. First, it has served as a guide in the application of Fishbein's general attitude - behavior theory to the more specific case of predicting behavior in implementation situations. The theory of implementer behavior presented in the next chapter was sketched out using versions of the model presented here. As you will find, each sub-theory employs the same basic concepts and relationships that have been presented in the discussion of the model.

The second use to which the model is put is descriptive (Hawes, p. 142). The model is not isomorphic with the theory but is
a simplification of it. It is my hope that a reader will understand the theory more easily having understood the simpler model of it. The model is related to the theory in that the model is a simplification of the theory.

6. The Relation of the Model to the Phenomenon.

How is the model related to the implementer acting in an implementation situation? It is a representation of that part of reality in symbolic form (Hawes, p. 137). The model represents symbolically the flow of information and the interaction of properties of elements of the implementation situation. The model is not an explanation, nor a prediction, but merely an analogy.

The theory is an analogy also, but an analogy with a form that hopefully allows prediction of implementer behavior. The standard distinction between theory and model is the one I made above, a model merely represents, whereas a theory explains. It seems that this distinction is made all too glibly; it seems easy to know what a representation is but there seems to be no agreement about what is meant by scientific explanation (Gibbs, 1972, pp. 58-71). However others may want to distinguish between theories and models, the distinction I make here is that the theory I have constructed is intended to predict implementer behavior. It is a tool that can be used in that way. Whereas the model I have constructed cannot be used for prediction but for merely describing the theory and determinants of implementer behavior.

This concludes the discussion of the model of implementer behavior which is based on the systems concepts of the detector,
selector and effector, the concept of an implementation situation and its elements, Fishbein's attitude—behavior theory, and Kaufman's ideas about compliance. In this chapter I have discussed how each of these concepts are integrated in a model of implementer behavior. I have discussed simplifying assumptions that have been made in the process of theory construction. The chapter that follows contains a description of some of the components of the theory of implementer behavior.
CHAPTER 9. THE ORGANIZING STRUCTURE OF THE THEORY

1. Introduction

This chapter discusses the organizing structure of the theory. We will deal with the way the theory is held together prior to presenting the actual concepts and statements of the theory in Chapters 9 and 10. I will discuss the units of analysis of the theory, the theme which underlies it, the form of the theory and its "unit term." Then I will discuss several technical points: what a concept is, what referential formulas are, temporal quantifiers, relational terms, and the form they take in the theory of implementer behavior. Finally I discuss types of theoretical statements. All this is necessary for a full understanding of the theory which follows.

2. Units of Analysis in the Theory

The units of analysis that are employed in the theory are elements of an implementation situation, which concept was introduced in Chapter 5. However, not all of the elements are used in the theory as units of analysis. Properties of the change agent, which you recall are distinguished from change agent programming behaviors, have not been included in the propositions of the theory. Nor have properties of the context. The reason is that the literature reviewed in Chapters 3 and 4, which was my principal source of concepts, included no properties that seemed related (intuitively) to the other concepts in the theory.
One other element of an implementation situation, the temporal markers that delimit the implementation stage, is not a course of concepts but does figure in the theory. I will discuss how it "figures in" later in this chapter.

The subject unit of the theory of implementer behavior is the implementer. The properties of that subject unit which the theory purports to predict are the nine implementer behaviors presented in the last chapter: bluffing, and exit. The object units of analysis included: the implementer, the change agent's influence attempt (programming behaviors), and the policy innovation. Properties of these units are employed to predict the occurrence of implementer behavior.

3. The Thema Underlying the Theory

Because no rigorous definitions of individual themata, nor any rigorous method of identifying them, has been constructed any discussion of themata is highly speculative. Recognizing that, I believe that it is important for me to reveal the thema that I have been aware of while constructing the theory for two reasons. First, the use of a thema is an assumption that a particular image is fruitful for exploring or explaining a phenomenon. Such assumptions ought to be explicitly stated so that their worth can be examined and argued. Second, knowing the thema that guided me may make the theory I have constructed more intelligible. The rationale underlying choice of concepts and propositions may be clarified by referring to the image that was part of the mental context in which they were chosen.

The thema employed was that of individual choice. I have viewed
the implementer as essentially the master of his/her own behavior. I have not constructed a theory that assumes that the implementer's behavior is controlled by the other elements of the implementation situation. On the other hand, I have not ignored their influence. Perhaps the best way to describe this assumption is to make the distinction between cognitive and acognitive models of behavior. 1

Cognitive theories view behavior as the result of a conscious choice based on stimuli from the environment. Thought processes mediate between the stimuli and the behavior. Acognitive theories on the other hand, do not see thought processes as mediating between stimuli and behavior. No conscious choice occurs. Acognitive theories, of which B.F. Skinner is the most famous proponent, see behaviors as responses learned from past interactions with environmental stimuli. The process of learning behavioral responses is called operant conditioning.

There is a middle ground, which Behling, Schreisheim, and Tolliver refer to as "Cognitive - Acognitive Combination Models." This category combines elements of both views, as the reader expects. It seems that attitude - behavior theories in general and the theory of implementer behavior presented here best fit in this category. Although, since they do refer to behavior being determined in part by attitude and since the concept of attitude is "described as a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein and Ajzen, 1975, p. 15), it seems

appropriate therefore to say that attitude - behavior theories do see behavior as partially determined by past experience. In addition, attitude - behavior theory views attitudes as formed from conscious beliefs and evaluations. This theory, therefore, has an aspect of the cognitive view. The conclusion is that attitude - behavior theory in general, and the theory of implemener behavior specifically, are examples of the cognitive - acognitive combination model.

4. The Unit Term of the Theory

The theory of implemener behavior is constructed according to the method of formal theory construction devised by Gibbs. Gibbs presents a general method of theory construction, not all of which is applied in the theory I have constructed. I will describe those elements of the method that I have used. According to this method the theory has two parts: an intrinsic part and an extrinsic part. The intrinsic part of the theory is composed of empirical assertions and the extrinsic part defines the terms employed in the intrinsic statements. The extrinsic part of the theory of implemener behavior contains a unit term, concepts, referential formulas, temporal quantifiers and relational terms.

The unit term designates a class of events, things, acts or conditions which is the focus of the theory (Gibbs, 1972, pp. 113-122). The unit term of the theory of implemener behavior is the concept of the implementation situation. If the theory of implemener behavior is to be testable it is important that the unit term be identifiable by

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2The reader should be aware that I am not employing the whole of Gibb's method in constructing this theory. Gibbs discusses several "versions" of theory - theories of degrees of complexity. The interested reader should read Gibbs directly for further information.
researchers who would test the theory. Let me review the concept of an implementation situation with attention to its empirical applicability. I will describe a way of identifying a situation as an implementation situation. This method should be used by investigators to form a universe and sample of implementation situations for tests of the theory.\(^3\)

The first element that must be identified is a policy innovation. The investigator will identify as a policy innovation any policy which is perceived as new by the political or public administrative organization which adopts and/or implements the policy. A public policy is defined as an intended or actual strategic course of action by a legal governmental unit.\(^4\) The investigator should employ the following guidelines in choosing a public policy innovation.

1. The policy should be clearly the policy of a legal governmental unit.

2. The policy should be perceived as a major decision by high ranking decision-makers of the organization.

3. The policy should be perceived as new by high-ranking decision-makers of the organization.

Because of the lack of an operational definition for the concept "public policy" in the literature of political science and public administration, the position adopted here is that public policy is what high-ranking decision makers of public organizations say it is. The conditions mentioned above are the operational definition of the concept of a public policy innovation. The specific procedure for using the guidelines is left to

\(^3\)See Chapter 12 for specific discussion of creation of a universe of implementation situations.

\(^4\)This definition was influenced by Backoff's definition of public policy (Backoff, 1974, p. 179).
the discretion of the investigator. In some cases reports in the media and other public statements by decision-makers will suffice, in other cases interviews may be necessary. The stipulation as to procedure is that it (the procedure for identifying the policy innovation) be reported explicitly by the investigator along with evidence that the guidelines have been followed.

The second element that must be located is the implementer. The investigator may choose any set of participants of legal government units who are being introduced to a policy innovation which will require action (including decision-making) on their part.

The third element of the implementation situation is the change agent. The change agent is the implementer's immediate supervisor in the matter of implementing the policy innovation. The investigator must first make certain that there is a change agent operating in the situation. If the implementer does not recognize the presence of someone who is trying to influence his/her implementation of the new policy then there is no implementation situation. In addition, the investigator will need the identity of the change agent since the change agent is used as a subject unit of analysis. The investigator can use the item below to ascertain the existence and identity of the change agent.\(^5\) The item

\(^5\)It is possible that the implementer may recognize more than one person who is attempting to influence the carrying out of the policy. It is assumed that the implementer can choose the person whose role is most significant. It is recognized that the existence of more than one change agent may influence implementer behavior in that confusion may arise as to which change agent has authority. However, the present version of the theory does not deal with this complication.
Can you identify a person to whom you are responsible - to whom you report - about the implementation of the new policy (if necessary the researcher should describe the policy)? Please name that person and indicate his or her position.

The fourth element of an implementation situation is the change agent's programming behavior, or stated more generally, the influence attempt by the change agent. An implementation situation does not consist of cases where persons take initiative in carrying out a new policy without stimulus from a higher authority. Such cases are defined as adoption of policy innovations. Implementation of a policy innovation follows the adoption of a new policy. The definition of an implementation situation requires the communication of a directive to the implementer in some manner. This element of the implementation situation will be considered to be specified if the other elements are specifiable. It is assumed that if a policy innovation and an implementer is specified, and the implementer can identify a change agent then, the implementer has been made aware that he/she is required to perform behaviors that carry out the policy innovation.

The fifth element of the implementation situation, the context of the change agent and implementer's interaction, is specified by the investigator's designation of the organizational and sub-unit affiliation of both the change agent and the implementer.

The final element of the implementation situation is the temporal dimension of implementation. This must be specified to assure that we are dealing with the implementation stage and not another stage of the policy innovation process. Recall that there are two alternatives for
marking the end of the implementation stage and one to mark its beginning. It will be sufficient for the investigator to designate which of the following markers are employed.

Beginning Marker:

1. The first occasion that the implementer makes a behavioral response to a directive to carry out a new policy.

End Markers:

1. A formal decision by policy makers to continue to reject the policy innovation.

2. Implementer perceives the implementing behaviors as routine.

If the investigator attends to these six guidelines in choosing implementation situations then it should be possible to gain agreement about the phenomena to which the theory of implementer behavior applies.

5. **Technical Definitions**

Gibbs' method of theory construction employs several technical terms which I will define. First, Gibbs uses the term "concept" in a specific way. "Concepts" are, according to his method of theory construction, definitions of terms which the theorist regards as complete but not eminipically applicable (Gibbs, 1972, pp. 127-128). "Referential formulas" are the formulas by which concepts are made eminipically applicable (Gibbs, 1972, pp. 129-156). Referential formulas are represented by capitalized acronyms. For example, RICB stands for the "referential formula for the implementer's conforming behavior."

In Gibbs' method of theory construction concepts and referential formulas used in the theory are linked to a particular point in time. In this theory of implementer behavior concepts are related to temporal points with regard to the implementation stage of the policy process.
In the present version of the theory all of the concepts and referential formulas refer to points during the implementation stage. Subscripts are used to denote these points.

\[ t_1 = \text{the beginning of the implementation process} \]
\[ \quad \text{(see the beginning marker discussed earlier).} \]

\[ t_2 = \text{a point after the beginning of the implementation stage but before the behavior of the implementer, which is being observed in tests of the theory, occurs.} \]

\[ t_3 = \text{the point at which the implementer performs the behavior(s) which is being observed in tests of the theory.} \]

\[ t_4 = \text{the end of the implementation stage (one of the two end markers discussed earlier).} \]

More temporal quantifiers could be added for versions of the theory which might examine sequences of implementer behaviors or the feedback of behavior to beliefs, attitudes, etc.

The last component of the extrinsic part of the theory is the set of "relational terms" employed in the intrinsic statements of the theory. The relational terms denote the association between concepts and referential formulas employed in the intrinsic statements. The relational terms employed are "the greater ______, the greater ______" and "the greater ______, the lesser." The use of these terms suggest that the coefficient of correlation, rank order coefficient of correlation, product-moment correlation, and chi-square would probably be appropriate statistical tests for the theory (Gibbs, 1972, p. 160-161).

6. **Types of Statements in the Intrinsic Part of a Theory**

We have completed the review of the components of the extrinsic part of the theory and now turn to the heart of the theory, or, the
intrinsic part. This part of the theory contains the statements that link the concepts and referential formulas that have been presented. There are three types of statements employed in this theory. (See Figure 9.1).

Propositions state relationships between concepts (Gibbs, 1972, pp. 178-180). They are not testable since they contain only concepts. Transformational statements are composed of a concept and a referential formula. Transformational statements are necessary to render a theory testable. Through transformational statements nonquantifiable concepts are linked to quantifiable referential formulas (Gibbs, 1972, p. 180). Gibbs points out that the construction of transformational statements is not a purely logical step . . . it is always an empirical assertion. The theorist thinks of the property designated by a concept as distinct from the values computed by application of a referential formula. To be sure he presumes that the values "reflect" the property, but uncertainty about the relation is inevitable. Even if the theorist could be certain that the referential formula has been applied correctly to absolutely reliable and comparable data, he would still have doubts about the transformational relation, for he can never be sure that another formula would not more accurately reflect the property identified by the concept (Gibbs, 1972, p. 188).

The third type of statement employed is the theorem. Theorems are formally derived statements composed of referential formulas. The rule employed to derive theorems is the sign rule (Gibbs, 1972, p. 190). Since it will be easier to understand the application of the sign rule

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6Gibbs' method includes more types of statements but I present only those types which I use: propositions, transformational statements, and theorems.
Figure 9.1 Example of types of terms and statements employed in the theory
if an example is given, I will postpone a demonstration until the propositions and transformational statements of the theory have been presented. The sign rule is discussed in Appendix C.

7. Conclusion

In this chapter we have reviewed several technical definitions, types of theoretical statements, and the units of analysis, theme and unit term of the theory of implementer behavior. Breathe a sigh of relief. The long preamble to the theory is finished. The theory of implementer behavior is presented in the next chapter.
CHAPTER 10. A THEORY OF IMPLEMENTER BEHAVIOR:

THE SUB-THEORY OF CONFORMING BEHAVIOR

1. Introduction

In this chapter and the next I present a theory of implementer behavior. The theory has been built with concepts found in the literature of organizational innovation and policy implementation, which I reviewed in Chapters 3 and 4, around a core of concepts drawn from Fishbein's attitude-behavior theory. The theory is a limited synthesis of the policy implementation and organizational innovation literature as it pertains to the behavior of individuals in innovation processes. I am aware that there is a considerable amount of research in several disciplines that I have ignored in constructing this theory. I also know that I have not exhausted the literature that I did review.

The theory is presented as nine sub-theories of implementer behavior; one sub-theory for each of the nine implementer behaviors identified in the typology construction exercise of Chapter 7. Each sub-theory is presented as a set of concepts and propositions which relate the concepts. A path-diagram accompanies each sub-theory.

In this chapter I present the sub-theory of conforming behavior, in Chapter 11, the eight sub-theories of nonconforming behaviors. At the end of this chapter I briefly describe the differences between the conforming sub-theory and the nonconforming sub-theories.
These chapters contain only the concepts and propositions of the theory. The referential formulas, transformational statements and theorems are not included here. Since they would clutter the discussion of the theory I relegate them to Appendices B and C.

2. **Sub-theory of Conforming Behavior.**

2.1 Extrinsic Part of the Sub-theory of Conforming Behavior.

The first sub-theory is intended to predict implementer conforming behavior. The goal of the theory is to identify a set of factors which will be highly correlated with conforming behavior by the implementer. The research question is: "Under what circumstances will an implementer perform the behaviors required to carry out a policy innovation?" The theory is intended to specify those factors. I will present the concepts of the theory using the general model of implementer behavior as a guide. That is, I will discuss the effector concept (conforming behavior), then the selector components, then detector, and finally those elements of the implementer's environment which are related to the detector, selector and effector components.

The variable to be predicted in this sub-theory is the implementer's conforming behavior which is defined as:

C.1. **Implementer's conforming behavior:** Behaviors which an evaluator judges are actions which carry out the goals and/or means of the policy innovation as expressed in a policy statement.

Several points in this definition need clarification: a) what is a policy innovation? b) what are the goals and/or means of a policy innovation? c) what is a policy statement? d) who is an evaluator?
a) A policy innovation has been defined in Chapter 1 as a public policy which is perceived as new by the political or public administrative organization which adopts and/or implements the policy (see Chapter 9 for further discussion).

b) The "goals" of a policy innovation are the intended impacts of the new policy. The "means" of a policy innovation are the plans for attaining the goals of the policy. Goals and means are discussed with variable degrees of specificity in policy statements.

c) A policy statement is a written or verbal communication of the goals and/or means of a policy. A policy statement may take the form of a law, regulation, judicial decree, memorandum, executive order, description of procedural guidelines, or a verbal command. A written policy statement may be amended verbally, or vice versa.

d) The evaluator, for purposes of tests of this theory may be either the change agent or the researcher. The advantages of choice of one evaluator over another are discussed in Appendix B.¹

2.1.0 Properties of the Implementer Which Influence Conforming Behavior.

The component of the selector most directly related to conforming behavior is "behavioral intention to conform." I have explained the general concept of behavioral intention and its relations to behavior so I will not say more than that behavioral intention is a state property of an implementer.

¹For further clarification of this concept the reader may turn to the discussion of this type of behavior in Chapter 7 or may turn ahead to Appendix B where a referential formula for conforming behavior is proposed.
C.10. **Implementer's behavioral intention to perform conforming behaviors:** An implementer's expression of his/her degree of certainty that he/she will perform conforming behaviors.

According to Fishbein's attitude - behavior theory, as you recall, behavioral intention is predicted by the sum of "attitude toward performing the behavior" and "subjective norm about performing the behavior." The formula read:

\[ AB + SN = BI \]

Therefore, the next two components of the selector are the implementer's attitude and subjective norm about performing conforming behavior.

C.17. **Implementer's attitude toward conforming behavior:**

An implementer's attitude about performing conforming behavior. The person's attitude toward performing conforming behavior is a function of the perceived consequences of performing conforming behaviors and of the person's evaluation of these consequences. Thus

\[ A_B = \sum_{i=1}^{n} b_i e_i \]

where \( b \) is the belief that conforming behavior, \( B \); leads to consequence or outcome \( i \); \( e \) is the person's evaluation of outcome \( i \); and \( n \) is the number of beliefs the person holds about performing conforming behavior, \( B \) (Fishbein and Ajzen, 1975, p. 301).

C.24. **Implementer's subjective norm about performing conforming behavior:** The person's perception that the change agent, his/her immediate supervisor (assuming that the
Immediate supervisor and change agent are not the same person, and peers familiar with the implementation situation think he/she should or should not perform conforming behaviors.

The subjective norm is determined by the perceived expectations of the referent individuals and/or groups just mentioned and by the person's motivation to comply with those expectations. Thus

$$SN = \sum_{i=1}^{n} b_i m_i$$

where $b$ is the normative belief, that is, the implementer's belief that reference group or individual $i$ thinks that he/she should or should not perform conforming behavior; $m_i$ is the motivation to comply with referent $i$'s expectations; and $n$ is the number of relevant referents (Fishbein and Ajzen, 1975, p. 302).

In the conforming behavior sub-theory the concepts $AB$ and $SN$ are combined in another concept, viz.:

C.45. Sum of the implementer’s attitude toward performing conforming behavior and the implementer’s subjective norm about performing conforming behavior: The name of the concept is its definition. Stated symbolically the concept is:

$$A_B + SN$$

where $A_B$ is the attitude toward performing conforming behavior; and $SN$ is the subjective norm about performing conforming behavior.

The reason for including such a concept will become clear when the propositions of the sub-theory are discussed.
As you have just seen, AG "conforming behavior" is determined by the sum of the products of "beliefs about the consequences of performing conforming behaviors" (a detector component) and "evaluation of the consequences of performing conforming behaviors" (a selector component). The theory does not contain these concepts individually but does contain the sum of their products.

C.31. Sum of the products of the implementer's beliefs about the consequences of performing conforming behaviors and the evaluation of those consequences. The name of this concept is the concept's definition. Presented symbolically the concept is:

\[ \sum_{i=1}^{n} b_i e_i \]

where \( b \) is the belief that performing conforming behavior leads to consequence or outcome \( i \); \( e \) is the person's evaluation of outcome \( i \); and \( n \) is the number of beliefs the person holds about performing conforming behavior (Fishbein and Ajzen, 1975, p. 301). A person's beliefs about the consequences or outcomes of performing a behavior are the person's assessments of the likelihood (probability) that certain consequences or outcomes are linked with their performing the behavior. "The terms 'consequences' and 'outcomes' ... are generic terms referring to any belief about the behavior, including its perceived consequences, effort to perform the behavior, cost, and other attributes" (Fishbein and Ajzen, 1975, p. 301). A person's evaluation of the consequences or outcomes of performing the behavior consists of the person's valuing or disvaluing of an outcome or consequence.
I have explained how this concept is a determinant of a person's attitude toward performing a behavior, but allow me to repeat. A person will feel good or bad about doing something depending on 1) what he or she believes will be the result of that behavior, and, 2) depending on whether that result is valued or disvalued. Thus when an implementer forms an attitude toward performing the behaviors required to implement a new policy he or she will be aware of the probability that the result of conforming or not conforming will be either positive or negative. Several concepts discussed by the authors I reviewed can be related to "beliefs about consequences" and "evaluation of consequences." Note that I say the concepts discussed can be related. What I mean is that we must make a distinction between the beliefs and evaluations of the implementer (which are not discussed by the reviewed authors) and factors which influence beliefs and evaluations (which have been discussed). The manner in which I handle these concepts in the theory is complicated, so I will proceed at a slow pace. First, I will discuss factors that potentially influence beliefs and evaluations. Second, I will discuss the beliefs and evaluations. Third, I will discuss how these factors and the beliefs and evaluations are related in the theory.

My search of the literature reviewed turned up the potential influences on the "beliefs of the implementer about the consequences of performing conforming behavior" listed in Table 10.1. All of the factors are properties of the change agent's programming behavior which leads me to the tentative conclusion that it is what the change agent does which most influences what the implementer thinks will
Table 10.1 Potential Influences on the Implementer’s Beliefs about
the Consequences of Performing Conforming Behaviors.

<table>
<thead>
<tr>
<th>Situation Element</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Agent</td>
<td>None</td>
</tr>
<tr>
<td>Implementer</td>
<td>None</td>
</tr>
<tr>
<td>Change Agent’s</td>
<td></td>
</tr>
<tr>
<td>Programming Behavior</td>
<td>&quot;ability to make distribution of changed behavior&quot; (Wilson)</td>
</tr>
<tr>
<td></td>
<td>&quot;extent of manager efforts to provide rewards and punishments to motivate cooperation&quot; (GGB)</td>
</tr>
<tr>
<td></td>
<td>&quot;incentives offered&quot; (Bermand and McLaughlin)</td>
</tr>
<tr>
<td></td>
<td>&quot;power of influence mechanisms&quot; (Baum)</td>
</tr>
<tr>
<td>Innovation</td>
<td>None</td>
</tr>
<tr>
<td>Context</td>
<td>None</td>
</tr>
</tbody>
</table>
happen as a result of his/her conforming or not conforming. Of course, the policy statement could itself specify rewards and sanctions, however, we will assume that the change agent will be perceived by the implementer as determining whether the rewards or sanctions will be applied to the implementer's behavior.

The next question to address is which factors influence the "implementer's evaluations of the consequences of performing or not performing behaviors." That is, what properties of the implementation situation will influence how much the implementer values or disvalues the consequences he or she believes will result from performing or not performing conforming behaviors. I realize that two of the factors listed in Table 9.1 are stated vaguely enough to be potential influences on either beliefs or evaluations, viz., "incentives offered" and "power of influence mechanisms." Therefore they are listed as potential influences in both cases. As you look at Table 10.2 you notice that "properties of innovations" are the largest group of potential influences on the "implementer's evaluation of the consequences of performing conforming behaviors." It is likely that there is a relationship between a property of an innovation like "impact on interpersonal relationships" and an implementer's evaluation of the consequence of performing conforming behaviors. Specifically, the implementer may believe that if he or she cooperates with the implementation of that policy innovation the consequence will be a negative impact on interpersonal relationships. The implementer may value or disvalue this consequence of his or her behavior. Many properties of
### Table 10.2 Potential Influences on the Implementer's Evaluation of the Consequences of Performing Conforming Behaviors.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation Element</td>
<td>None</td>
</tr>
<tr>
<td>Change Agent</td>
<td>&quot;value of extra organizational incentives available to members,&quot; &quot;perceived differential effect of innovation on members&quot; (Wilson)</td>
</tr>
<tr>
<td>Implementer</td>
<td>&quot;felt need&quot; (ZDH)</td>
</tr>
<tr>
<td></td>
<td>&quot;extent subordinate's interests favored by faithful implementation&quot; &quot;consistency between policy and subordinate's policy preferences&quot; (Baum)</td>
</tr>
<tr>
<td>Change Agent's Programming Behavior</td>
<td>&quot;power of influence mechanisms&quot; (Baum)</td>
</tr>
<tr>
<td>Innovation</td>
<td>&quot;financial cost&quot; &quot;social cost&quot; &quot;returns to investment&quot; &quot;efficiency&quot; &quot;risk and uncertainty&quot; &quot;compatibility&quot; &quot;pervasiveness&quot; &quot;complexity&quot; &quot;relative advantage&quot; &quot;structural radicalness&quot; &quot;terminality&quot; &quot;reversibility&quot; &quot;impact on interpersonal relationships&quot; (ZDH)</td>
</tr>
<tr>
<td>Context</td>
<td>None</td>
</tr>
</tbody>
</table>
an innovation would influence an implementer's evaluation of the consequences of conforming behavior since the implementer may see his conforming behavior as contributing to implementing an innovation with those properties. I have used my judgement in selecting properties to list in Table 10.2 We need to formulate hypotheses about the relationship of innovation properties and the "implementer's evaluation of the consequences of performing conforming behavior" so that we can base judgements on these relationships on data.

Now that I have listed some of the properties of the implementation situation elements that may influence implementer's beliefs about consequences, I turn to the beliefs and evaluations themselves. The beliefs and evaluations do not appear separately as concepts in the theory but the concept "sum of the products of the implementer's beliefs about the consequences of performing conforming behaviors and the evaluations of those consequences" ("E be") does appear. The beliefs and evaluations themselves are the components of the referential formula for "E be."

Particular beliefs may include: belief that conforming behavior leads to a reward, belief that conforming behavior contributes to implementation of an innovation that will have a negative impact on interpersonal relations, belief that conforming behavior contributes to implementation of an innovation that is contrary to the implementer's policy preferences, etc. Accordingly, the implementer's evaluations of these consequences may include: high-low evaluation of reward offered

2See Downs and Mehr (1976) on the question of primary and secondary properties of innovations.
for conforming, high-low evaluation of interpersonal relations affected by policy innovation, high-low evaluation of policy innovation vis-a-vis implementer's own policy preferences, etc. These beliefs and evaluations would be incorporated in the referential formula for the concept $\Sigma$ be. The formula itself is discussed in Appendix B. I have discussed the beliefs and evaluations and properties of implementation situations which potentially influence those beliefs and evaluations, let me now say how these variables are related in the theory.

As I have said, beliefs and evaluations do not appear as concepts in the theory, rather they are employed as part of the referential formula for the concept $\Sigma$ be. The properties of implementation situations which potentially influence those beliefs and evaluations (listed in Tables 10.1 and 10.2) have not been included in the theory, but should be included in expanded versions. (They have not been included in this version because they would complicate the exposition of the theory greatly, that is, many more concepts and statements would have to be added to an already complex theory.) The question of the relationship between the properties of the implementation situation elements and the $\Sigma$ be is a difficult one. The relationship between an implementation situation property like "ability to make distribution of rewards dependent on changed behavior," which is believed to influence beliefs about consequences of conforming, and "$\Sigma$ be" is not necessarily linear since the value of $e$ as well as $b$ determine "$\Sigma$ be." Since, the theory in its present version includes only linear relations between concepts I have decided to lay this problem aside for later consideration.
So ends a long digression on the determinants of the concept "*be.*" Since the reader is now inured to digressions on such concepts I turn to a discussion of a similar concept.

C.38. **Sum of the products of the implementer's normative beliefs about conforming behavior and the motivation to comply with the expectations of referents:** The name of the concept is the concept's definition. Presented symbolically the concept is:

\[ \sum_{i=1}^{n} b_i m_i \]

where \( b_i \) is the normative belief about conforming behavior (that is, the implementer's belief that reference group or individual \( i \) thinks he/she should or should not perform conforming behavior); \( m_i \) is the motivation to comply with referent \( i \); and \( n \) is the number of relevant referents (Fishbein and Ajzen, 1975, p. 302). A person's normative belief about a behavior is a belief that a particular person or reference group thinks that the person ought to or ought not perform the behavior in question. A person's motivation to comply with a referent's expectation is the person's intention to comply with a referent whom the person believes holds a certain belief (Fishbein and Ajzen, 1975, p. 306).

In the definition of C.24 "implementer's subjective norm about performing conforming behavior" \( i \) described how "SN" is related to "\( \sum b m \)." In plain language, an implementer will feel that he or she should or should not perform conforming behaviors depending 1) on whether
the implementer believes that his or her referent(s) thinks he or she ought to conform and, 2) on whether the implementer is motivated to comply with what a particular referent(s) thinks he or she ought to do.

As with the case of the concept "E be," "E bm" is determined by properties of elements of the implementation situation. Again, the relationship between a given property and "E bm" is not necessarily linear. Again, "normative beliefs" and "motivations to comply" are not included as concepts in the theory but are used as components of the referential formula for "E bm." Tables 10.3 and 10.4 contain lists of properties of elements of implementation situations which potentially influence 'implementer's normative beliefs" and "motivation's to comply with a referent's expectations." Again, these lists reflect my judgements. In later versions of the theory perhaps these "judgements" can be converted to propositions.

I have discussed most of the selector and detector concepts in the conforming behavior sub-theory. Two detector concepts remain: "implementer's understanding of the policy innovation" and the "implementer's understanding of the behaviors required of him/her to implement the policy innovation." These are rather obvious determinants of conforming behavior. Generally speaking, someone must understand what is being implemented and what his or her role in implementation is in order to perform the required behaviors (Kaufman, 1973, p. 2). The concepts are defined as follows:

C.52. Implementer's understanding of the policy innovation:
The implementer's comprehension of the goals of the policy, the means which the policy specifies to attain
Table 10.3 Potential Influences on the Implementer's Normative Beliefs about Performing Conforming Behavior.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation Element</td>
<td></td>
</tr>
<tr>
<td>Change Agent</td>
<td>None</td>
</tr>
<tr>
<td>Implementer</td>
<td>None</td>
</tr>
</tbody>
</table>
| Change Agent's Programming Behavior | "extent of manager provision of adequate feedback mechanisms"  
"extent of manager efforts to overcome initial member resistance to change"  
"extent of manager efforts to clarify member's understanding of the innovation."  
"extent of manager efforts to provide materials and other necessary resources."  
"extent of manager efforts to make organizational arrangements compatible with the innovation."  
"extent of manager efforts to provide rewards and punishments to motivate cooperation." (GGR)  
"provision of guidelines and restrictions"  
"degree of (change agent) involvement, support and accessibility" (Breman and McLoughlin) |
| Innovation | None |
| Context | "amount of disagreement among members about the merits of the innovation" (Wilson) |
Table 10.4 Potential influences on the implementer's motivation to comply with his or her referent's expectations.

<table>
<thead>
<tr>
<th>Implementation Element</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Agent</td>
<td>&quot;felt mistrust of subordinates (implementers) by superiors (change agents)&quot; (ZDH)</td>
</tr>
<tr>
<td></td>
<td>&quot;innovativeness propensity&quot; (Berman and McLaughlin)</td>
</tr>
<tr>
<td></td>
<td>&quot;perceived manipulation&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;disillusionment because of false expectations&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;illusion of impotence&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;dependence&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;self-distrust&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;insecurity&quot; (ZDH)</td>
</tr>
<tr>
<td></td>
<td>&quot;authority subordinate attaches to decision&quot; (Bauer)</td>
</tr>
<tr>
<td>Implementer</td>
<td>&quot;degree of (change agent) involvement, support, and accessibility&quot; (Berman and McLaughlin)</td>
</tr>
<tr>
<td>Change Agent's</td>
<td>None</td>
</tr>
<tr>
<td>Programming Behavior</td>
<td>&quot;amount of disagreement among members about the merits of the innovation&quot;</td>
</tr>
<tr>
<td>Innovation</td>
<td>&quot;aggregate perception of organizational crisis&quot; (Wilson)</td>
</tr>
<tr>
<td>Context</td>
<td>&quot;amount of staff participation in decision making&quot; (Berman and McLaughlin)</td>
</tr>
</tbody>
</table>
these goals, and the strategy by which the policy will
be implemented (Van Meter and Van Horn, 1975, p. 472;

C.53. **Implementer's understanding of the behaviors required**
of him/her to implement the policy innovation: The
name of the concept is its definition.

A distinction is made between understanding the goals, means,
and implementation strategy of a policy innovation and the intended
implementer's understanding of what behavior is required by him/her at
a point in time to make implementation go forward. Someone can under-
stand a policy in general and yet be unaware of specific implementing
behaviors which they are expected to perform.

The last two properties of the implementer which influence
conforming behavior are the "implementer's possession of the resources
needed to perform the required implementing behaviors" and the "extent
to which the implementer's conforming behavior is dependent on the
cooperation of others." Both of these properties can be classified
as aspects of the implementer's effector subsystem. They are proper-
ties which directly influence the ability to perform implementing
behaviors.

C.54. **Implementer's possession of the resources needed to**
perform the required implementing behaviors: This
concept refers to the extent to which the implementer
has the materials, funds, personnel, equipment, and/or
space needed to perform the required implementing
behavior.
Note that this concept does not refer to the extent to which a policy innovation is adequately supported with resources (a property of the policy innovation), nor to the general availability of resources in an organization (a property of the context), but to the implementer's access to the specific resources needed for his or her performance of conforming behaviors (Gross, Giaquinta and Bernstein, 1971, p. 211).

C.55. Extent to which the implementer's conforming behavior is dependent on the cooperation of others: The concept refers to the degree to which the implementer's conforming behavior can be blocked or hindered if another implementer, change agent, or policy maker fails to cooperate.

Pressman and Wildavsky refer to an example of this concept in their study of the implementation of an EDA program in Oakland, California. Implementation of the program was delayed because action depended on getting clearance from many participants. The concept defined above refers to the implementer's dependence on any type of cooperation before he/she may perform implementing behaviors.

2.1.1 Properties of the Implementer's Environment which Influence Conforming Behavior.

We have examined all of the properties of the implementer which the theory relates to conforming behavior. I will not discuss the properties of the implementer's environment which influence conforming behavior. You will recall that the implementer's environment is composed of the remaining elements of the implementation situation: the change agent, the change agent's programming behaviors, the policy
innovation, and the context. Let's examine each.

2.1.2 Properties of the Change Agent

Recall that these are state properties of the change agent. My literature review turned up few properties of the change agent. The properties discovered are judged not to be related to conforming behavior.

2.1.3 Change Agent's Programming Behavior's

The following properties of this element are related to conforming behavior: change agent's provision of adequate feedback mechanisms, change agent's efforts to clarify the implementer's understanding of the policy innovation, change agent's efforts to clarify the implementer's understanding of the behavior required to implement the policy innovation, and change agent's provision of resources to aid implementation by the implementer. Gross, Giacquinta, and Bernstein you recall, laid heavy emphasis on the role of the manager (read change agent) in facilitating implementation. All of the properties mentioned above are derived from their conclusions (1971, pp. 212-216). However, Baum, Van Meter and Van Horn, and Berman and McLaughlin mentioned one or several of these properties in their studies. I will define each concept.

C.56. **Change Agent's provision of adequate feedback mechanism:**

This concept refers to actions of change agents which establish channels through which implementer's can:

1) get information about the policy innovation, the behaviors required to implement the policy, and the
implementation strategy; 2) refer to the change agent any problems encountered in implementing the policy; 3) refer to the change agent requests for resources and training; 4) refer complains and suggestions about implementing the policy (CCB, 1971, p. 213).

This concept refers to actions by the change agent which establish (predominately): 1) bi-directional exchange of information, 2) informal channels of communication, 3) which are established in response to implementer demands.

This concept is to be distinguished from the concepts "change agent efforts to clarify understanding of the policy innovation" and "change agent's efforts to clarify the implementer's understanding of the behavior required to implement the policy innovation." These latter concepts, as you will see in the definitions which follow, refer to actions of the change agent which are 1) unidirectional dispensations of information, 2) through formal or semi-formal channels of communication, and 3) which are initiated by the change agent.

C.57. **Change agent's efforts to clarify the implementer's understanding of the policy innovation:** This concept refers to actions of change agents which are formal or semi-formal efforts to disseminate information about the policy innovation's goals, procedures, and the implementation strategy. It differs from the concept 'change agent's provision of adequate feedback mechanisms' in that the actions are predominately 1) originated
by the change agent 2) consist of the change agent disseminating information, i.e., information flow is mostly unidirectional, and 3) the method is formal or semi-formal (GGB, 1971, p. 202; VM&VH, 1975, pp. 465-466; Baum, 1976, pp. 91-96).

C.58. Change Agent's efforts to clarify the implementer's understanding of the behavior required to implement the policy innovation: This concept refers to efforts of the change agent which are intended to improve the implementer's understanding of what he/she must do to carry out the policy. The concept refers to actions which predominantly 1) originate with the change agent, 2) are unidirectional dissemination of information from the change agent to the implementer, and 3) are formal or semi-formal (GGB, 1971, p. 202).

The latter two concepts (C.57, C.58) refer to actions of the change agent which are intended to assure that the implementer knows how to implement the policy innovation (Kaufman, 1973, p. 2). The "Change agent's efforts to provide feedback mechanisms" have this purpose also, but, in addition, provide opportunities for the implementer to inform the change agent of obstacles to implementation that are being encountered and occasions for the expression of complaints and suggestions about the way in which the policy is being implemented.

A fourth aspect of the change agent's programming behavior is the
C.59. Change agent's provision of resources to aid implementation by the implementer: This concept refers to the actual provision of resources by the change agent, not merely to the commitment of resources. Resources are defined broadly to refer to any materials, funds, personnel, equipment or space required to perform implementing behavior (Gross, Giacquinta and Bernstein, 1971, p. 202).

The concept refers to resources provided by a change agent and not to resources authorized by a policy statement. Of course, authorized resources may not be provided and in cases where the policy statement authorizes no resources alternate sources may be found.

These are the five properties of the change agent's programming behavior which influence the implementer's conforming behavior. Next, we discuss the properties of the policy innovation which influence the implementer's conforming behavior.

2.1.4 Properties of the Policy Innovation.

As we have seen the theories and models of organizational innovation and policy implementation often discuss the relevance of characteristics of the innovation or policy for understanding implementation but generally fail to integrate properties of the innovation into theoretical statements. Until this is done systematic information on the impact of various types of policies or innovations on the probability of implementation will not be available. This theory includes the following properties of policy innovations: "policy innovations specificity of goals and means," "complexity of the
policy innovation," "divisibility of the policy innovation," "amount of change that has occurred in the policy innovation," and the "performance radicalness of the policy innovation."

It should be understood that in this theory the properties of a policy innovation are not observed on the innovation itself, but are attributed to the innovation by the implementer. The rational is that it is the implementer's perception of the innovation which will most directly influence the implementer's behavior (Rogers and Shoemaker, 1971, p. 138). The "objectively" determined properties of the innovation may not be the same as the perceived properties of the innovation since factors other than the objective properties of the innovation may condition the implementer's perception. For example, cost of an innovation, might be assessed not only with reference to the price tag on the innovation but also with reference to the wealth of the implementing organization. The result would be that an implementer in a wealthy organization would perceive the innovation as inexpensive and implementer in a poorer organization would view the innovation as expensive. Use of the implementer's perception permit recognition that the influence of innovation properties on the implementer's behavior are sometimes moderated by other elements of the implementation situation. I will define each property.

3Downs and Mohr refer to two types of properties of innovations: primary and secondary. Primary properties are intrinsic characteristics of innovations; secondary properties may be perceived differently by different "percipients" (Downs and Mohr, 1976, p. 762). Primary properties I refer to as objective properties.
C.60. Policy innovation's specificity of goals and means:
The concept refers to the degree to which the goals (intent) of a policy innovation and the procedures and guidelines for attaining those goals are "spelled-out" in a policy statement (Berman and McLaughlin, p. 9).

C.61. Complexity of the policy innovation: Complexity refers, in this context, to how complicated the goals and procedures (means) of the policy innovation are. Complexity might be broken down into sub-properties, for example number of goals, procedures, interdependence of goals, and interdependence of procedures. Therefore, the number of goals perceived in a policy statement, the number of procedures perceived in a policy statement, the perceived degree of interdependence of goals and interdependence of procedures define the degree of complexity of the policy innovation.  

C.62. Divisibility of the policy innovation: This refers to the extent to which the policy innovation can be broken up into steps or smaller components and implemented gradually as opposed to implementing the policy all at once. Divisibility of a policy innovation has two sub-properties. First, divisibility can refer to the extent to which a policy with multiple goals (or

---

4 ZDH use the term "complexity of innovation" to refer to a different concept. See ZDH, 1973, pp. 39-39.
sub-goals) and multiple procedures can be applied sequentially (for example, goal 1 and procedure 1 are introduced, then goal 2 and procedure 2, etc.) rather than in parallel (all, or most, goals and procedures introduced at once). Second, a policy innovation can be divisible in that it can be applied to its objects sequentially, rather than in parallel. For example, a new accounting system might have to be introduced in all departments at once, rather than in a department at a time.  

5 C.63. Amount of change that has occurred in the policy innovation: This refers to changes in the goals and procedures of the policy by the policy maker since the adoption of the policy.

C.64. Performance radicalness of the policy innovation: This refers to the magnitude of change (Backoff, 1974, p. 61) in the functioning or performance of tasks that results from the introduction of the policy innovation. The reader should realize that this term has a different

5 The concept of 'divisibility of a policy innovation' should not be confused with the implementation strategy of 'partialization' which is a property of the change agent's programming behavior. "Partialization", which depends on the divisibility of the innovation, refers to the strategy of gradual, incremental implementation of an innovation. A later version of the theory should include this concept. ZDH use the term divisibility in a different way than I do, see ZDH, 1973, p. 43. Rothman (p. 440-441) proposes partialization as an "action guideline" to enhance adoption of innovation. Backoff's concept of domain (1974, p. 62) is related to the second sub-property of divisibility.
definition here than it had with Knight (1967, p. 482) who first used the term. A policy innovation may radically alter the tasks of the implementer or have a mild impact.

These are the properties of the policy innovation which are included in the sub-theory of implementer conforming behavior. The last element of the implementation situation to be considered is the context. There are no properties of this element included in the sub-theory of conforming behavior. It should not be assumed that contextual properties are unimportant for this sub-theory. They are not included since none of the properties identified by the author's reviewed in Chapters 3 and 4 seem readily linked to this version of the sub-theory.

2.2 intrinsic Part of the Sub-theory of Conforming Behavior.

You will recall that the intrinsic part of a theory contains the statements of the theory. Here I will discuss the propositions of the sub-theory of conforming behavior. The transformational statements and theorems are reported later. I will state each proposition and explain it. The propositions are portrayed in figure10.1. The number of each proposition is indicated in the figure.

2.2.0 A Principal Determinant of Conforming Behavior

Pr.1. Among Implementation Situations (AIS), the greater the implementer's behavioral intention to perform conforming behaviors' at t_2, the greater the 'implementer's conforming behavior' at t_3.
Figure 10.1 Path Diagram of Conforming Behavior Sub-theory.
This is the key proposition in the sub-theory. It links the "implementer's behavioral intention to conform" (C.10.) to the "implementer's conformity behavior" (C.1.). You will recall that this relationship is derived from Fishbein's attitude-behavior theory. If this link in the theory is weak, then the several concepts related to behavioral intention are worthless.

The reader should note that the proposition begins with a reference to the unit term of the theory, viz., the implementation situation. Also note the temporal markers. Behavioral intention is measured prior to the measurement of conforming behavior. We would expect that the relationship between the variables would weaken as the duration of the interval \((t_2, t_3)\) lengthened (Fishbein & Ajzen, 1975, p. 375-376). This expectation is not expressed as a formal statement of the theory, but could be added in later versions.

2.2.1 Determinant’s of the Behavioral Intention to Conform.

Behavioral intention, as we have seen, is predicted by the attitude toward a behavior and the subjective norm about performing the behavior. Specifically,

\[ BI = A_B + SN. \]

Thus,

Pr. 8. A1S, the greater the 'sum of the implementer's attitude toward performing conforming behavior and the implementer's subjective norm about performing conforming behavior' at \(t_2\), the greater the 'implementer's behavioral intention to perform conforming behavior' at \(t_3\).
In turn, the "implementer's attitude toward conforming behavior" and the implementer's subjective norm" are determined in the following ways. You recall that, according to Fishbein,

\[ A_B = \sum_{i=1}^{n} b_i e_i \]

which, when applied to this sub-theory, takes this form:

Pr. 22. AiS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing conforming behaviors and the evaluation of those consequences' \((i \cdot b_i \cdot e_i)\) at \(t_2\), the greater the 'attitude toward performing conforming behaviors' at \(t_2\).

This means that an implementer's attitude about performing conforming behaviors can be predicted by multiplying each of the implementer's beliefs about a consequence of conforming by his/her evaluation of the consequence and summing them. Say, the implementer believes at a 75% probability level that if he performs the required behavior that he will have to resign his job because the policy conflicts with his values. And, that the implementer disvalues this consequence rather mildly, say at \(-1\) on a scale from \(-7\) to \(+7\). These scores would be multiplied and summed with other products of beliefs and evaluations to attain a score. Pr. 8. predicts that such scores would be positively correlated with scores of implementers' attitudes toward performing conforming behaviors.

Turning to the determinant of "subjective norm about performing conforming behavior," remember that, in general,

\[ SN = \sum_{i=1}^{n} b_i m_i \]
which, when applied specifically to the conforming behavior sub-theory, takes the following form:

Pr.15. AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing conforming behavior and the motivation to comply with the reference groups ($\sum b_i m_i$) at $t_2$, the greater the 'subjective norm about performing conforming behavior' at $t_2$.

This means that an implementer's subjective norm about performing conforming behaviors can be predicted by multiplying each of the implementer's normative beliefs by his(her) motivation to comply with the norms of the referent person or group and summing them. Say the implementer believes at a 60% probability level that his peers think that he ought to perform the required behaviors and that he intends to comply with the norm established by his peers at a +2 level. These scores would be multiplied and summed with other scores of normative beliefs and motivations to comply to attain a score for $\sum b_i m_i$. Pr. 15 predicts that the score for $\sum b_i m_i$ will be positively correlated with the score for the implementer's general subjective norm about performing conforming behavior.

We have now discussed the determinants of the "implementer's attitude toward performing conforming behavior" and the "implementer's subjective norm about performing conforming behavior," as determinant of the "implementer's behavioral intention." All of the propositions that we have discussed (Pr's.1, 8, 15 and 22) relate concepts of the attitude-behavior "core" of the theory. All of the propositions report
how the general concepts and relationships of Fishbein's attitude-behavior theory map onto the sub-theory of implemen ter conforming behavior.

There are four other concepts which influence the implemen ter's behavioral intention to conform. These are factors which influence the implemen ter's ability to perform conforming behaviors: the "implemen ter's understanding of the behaviors required to implement the policy innovation," the "implemen ter's possession of the required resources," and the "extent to which the implemen ter's conforming behavior is dependent on the cooperation of others." We assume that the implemen ter forms beliefs about each of these factors and that as a general rule more understanding, more resources, and less dependence on cooperation would contribute to a more certain intention to perform implementing behaviors than would less understanding, less resources, and more dependence on cooperation. Therefore, the following propositions enter the sub-theory.

Pr.67. AIS, the greater the 'implemen ter's understanding of the policy innovation' at t<sub>2</sub>, the greater the 'implemen ter's behavioral intention to perform conforming behaviors' at t<sub>2</sub>.

Pr.68. AIS, the greater the 'implemen ter's understanding of the behavior required of him/her to implement the policy innovation' at t<sub>2</sub>, the greater the 'implemen ter's behavioral intention to perform conforming behaviors' at t<sub>2</sub>.

Pr.69. AIS, the greater the 'implemen ter's possession of the resources needed to perform the required behaviors' at t<sub>2</sub>, the greater the 'implemen ter's behavioral intention to perform conforming
behaviors' at \( t_2 \).

Pr.39. AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at \( t_2 \), the lesser the 'implementer's behavioral intention to perform conforming behaviors' at \( t_2 \).

We have now discussed all of the determinants of the implementer's behavioral intention.

2.2.2 Other Determinants of Conforming Behavior: The Implementer's Understanding.

We have just seen that factors which influence the implementer's capability to implement can influence the implementer's intent to implement. If a person knows he can't perform, he may not intend to try. However, we must take into consideration the possibility that an implementer's beliefs about his/her own ability to implement are contrary to fact. In other words an implementer may believe he or she is capable and therefore intend to conform, but fail because he or she actually lacks capability. In this section of our discussion we consider the impact of the implementer's understanding of the policy innovation and his or her understanding of behaviors required to implement the policy on conforming behavior. Kaufman (1973, p. 2), Gross, Glacquinta and Bernstein (1971, p. 202), and Van Meter and Van Horn (1979, p. 472) all recognize the importance of this factor for explaining or predicting implementer behavior. Two propositions relate the implementer's understanding to conforming behavior.

Pr.29. AIS, the greater the 'implementer's understanding of the policy innovation' at \( t_2 \), the greater the 'implementer's conforming
behavior' at \( t_3 \).

Pr. 32. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \), the greater the 'implementer's conforming behavior' at \( t_3 \).

These propositions should be important predictors of conforming behavior. Several factors determine the degree of implementer's understanding. I will discuss 4 concepts that contribute to implementer understanding and 3 factors that detract from implementer understanding.

2.2.3 Contributors to Implementer Understanding.

The four factors which contribute to implementer understanding are: "change agent's provision of adequate feedback mechanisms," "change agent's efforts to clarify the implementer's understanding of the policy innovation," "change agent's efforts to clarify the implementer's understanding of the behaviors required of the implementer," and the "policy innovation's specificity of goals and means."

We have three properties of the change agent and one property of the policy innovation related to two aspects of the implementer's understanding in the following propositions.

Pr. 40. AIS, the greater the 'change agent's provision of adequate feedback mechanisms' at \( t_2 \), the greater the 'implementer's understanding of the policy innovation' at \( t_2 \) (Gross, Giacquinta, and Bernstein, 1971, p. 213).

Pr. 42. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the policy innovation' at \( t_2 \), the greater the 'implementer's understanding of the policy
innovation' at \( t_2 \) (Gross, Giacquinta, and Bernstein, 1971, p. 202).

Pr.45. AIS, the greater the 'policy innovation's specificity of goals and means' at \( t_2 \), the greater the 'implementer's understanding of the policy innovation' at \( t_2 \) (Berman and McLaughlin, p. 9).

The next three propositions relate change agent's behaviors and a property of the policy innovation to the implementer's understanding of the behaviors required to implement the new policy.

Pr.41. AIS, the greater the 'change agent's provision of adequate feedback mechanisms' at \( t_2 \), the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \).

Pr.43. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the behaviors required of the implementer to implement the policy innovation' at \( t_2 \), the greater the implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \).

Pr.46. AIS, the greater the policy innovation's specificity of goals and means' at \( t_2 \), the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \).

The last proposition asserts that specifically stated goals and means make it easier for the implementer to understand what behaviors he or she are required to perform. Now we will discuss the three factors that exert a negative influence on the implementer's understanding of the policy innovation and understanding of required
behaviors. The three factors are all properties of the policy innovation: the "policy innovation's complexity," the "amount of change in the policy innovation," and the "performance radicalness of the policy innovation."

The complexity of a policy innovation, I suggest will have a negative influence on both understanding of the policy innovation and understanding of required behaviors.

Pr. 47. AIS, the greater the 'complexity of the policy innovation' at \( t_2 \), the lesser the 'implementer's understanding of the policy innovation' at \( t_2 \).

Pr. 48. AIS, the greater the 'complexity of the policy innovation' at \( t_2 \), the lesser the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \).

Recall that complexity refers to the number of goals and procedures a policy has and the degree of interdependence of goals and interdependence of procedures. Not only will many goals and procedures and high interdependence of each make the policy itself difficult to understand, it will also make it difficult for the implementer to learn the required behaviors.

The impact of complexity on the implementer's understanding of the required behaviors may be moderated by at least two factors: the divisibility of the policy innovation, that is, the extent to which goals and procedures can be implemented sequentially, and the degree of division of labor. Both of these factors would make it easier for the implementer to understand required behaviors. These factors might
be entered in a later version of the theory.

Theories of innovation rarely consider that innovations vary in the degree to which they remain stable during the innovation process. As Berman and McLaughlin (p. 16) point out, some types of innovations are likely to change during implementation more than others. No doubt policy innovations of various kinds will vary in the amount of change that they will undergo during implementation. At this point in our understanding of policy implementation we can do no more than record the amount and type of change and try to relate it to implementer behavior. The following propositions assert that the change in the policy innovation influences implementer behavior by affecting the implementer's understanding of the policy innovation and of the required behaviors.

Pr. 50. AIS, the greater the 'amount of change that has occurred in the policy innovation' at $t_2$, the lesser the implementer's understanding of the policy innovation' at $t_2$.

Pr. 51. AIS, the greater the 'amount of change that has occurred in the policy innovation' at $t_2$, the lesser the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$.

Changes in a policy innovation tax the implementer's ability to perform conforming behaviors because of uncertainty about how the components of the policy have changed.

The last factor which would have a negative influence on the implementer's understanding is the degree of performance radicalness of the policy innovation.
Pr. 52. AIs, the greater the 'performance radicalness of the policy innovation' at \( t_2 \), the lesser the 'implementer's understanding of the policy innovation' at \( t_2 \).

Pr. 53. AIs, the greater the 'performance radicalness of the policy innovation' at \( t_2 \), the lesser the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \).

Performance radicalness refers to how radically the tasks of the implementer are altered by the policy innovation. The above propositions assert that performance radicalness would be yet another factor that the implementer would have to overcome to implement some types of policy innovations.

This concludes our review of factors which contribute to or detract from the implementer's understanding. So far we have discussed two principal determinants of conforming behavior (see diagram), behavioral intention to conform and understanding. You'll recall that Kaufman (1973, p. 2) has said that a person may not perform as directed as a result of three factors: they may not want to, they may not know how to perform, or they may lack the ability to perform. We have considered desire to perform (behavioral intention), and knowledge (understanding of the policy innovation and of required behaviors). We have yet to consider factors that influence ability to perform.

2.2.4 Factor's Influencing Ability to Perform Conforming Behaviors.

The sub-theory of conforming behavior contains two concepts which are related to the implementer's ability to perform conforming
behaviors: the "implementer's possession of the required resources" and the "extent to which the implementer's conforming behavior is dependent on the cooperation of others."

Pr.35. AIS, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$, the greater the 'implementer's conforming behavior' at $t_3$.

The relationship is straightforward. Availability of resources facilitates compliance. This sub-theory relates one property of the policy innovation and one property of the change agent's programming behavior to the possession of adequate resources.

Pr.49. AIS, the greater the 'divisibility of the policy innovation' at $t_2$, the greater the implementer's possession of the resources required to implement the policy innovation' at $t_2$.

The "divisibility of the policy innovation" will influence possession of required resources. A policy which has multiple goals and multiple procedures will require fewer resources at each point in time if the goals and procedures can be implemented sequentially than would be needed to implement the goals and procedures in parallel.

Also, if the policy can be applied to its objects (clients, regulated persons or organizations, etc.) sequentially rather than simultaneously the required resources will be less at each point in time. In both cases resource demands (demands for personnel, materials, funds, equipment and space) will be "smoothed" out over the period of implementation; "peaking" of resource needs will be avoided. Therefore, the implementer is more likely to have the resources needed to conform when the policy is divisible than when it is not.
The second property of the policy innovation which influences the "implementer's possession of the required resources" is noted in the following proposition:

Pr.44. AIS, the greater the 'change agent's provision of resources to aid implementation by the implementer' at \( t_2 \), the greater the 'implementer's possession of the resources required to implement the policy innovation' at \( t_2 \).

This proposition is an assertion that the change agent plays a role in assuring that the implementer has the resources necessary for performing the required behaviors (Gross, Giacquinta, and Bernstein, 1971, p. 202).

We have discussed one influence on the implementer's ability, viz., possession of required resources, the other influence on ability is the "extent to which the implementer's conforming behavior is dependent on the cooperation of others." Note that the concept does not refer to whether cooperation is forthcoming or not, only to whether cooperation is essential. It is asserted that the existence of a need for cooperation itself will have a negative influence on the performance of conforming behaviors because, in general, it is more difficult to coordinate the behaviors of several persons with ones own, than it is to act alone.

Pr.55. AIS, the greater the 'extent to which implementer's conforming behavior is dependent on the cooperation of others' at \( t_2 \), the lesser the 'implementer's conforming behavior' at \( t_3 \).
2.3 Comments on the Conforming Behavior Sub-theory.

In the conforming behavior sub-theory the reader will see the general pattern of the eight sub-theories which follow. The attitude-behavior concepts make up the core of each sub-theory, behavioral intention being directly related to the resultant behavior. Other properties of the implementation situation elements condition the translation of the behavioral intention to behavior.

Note that the change agent’s behavior plays a key role in facilitating the implementer’s understanding and ability to implement the policy innovation. The change agent helps the implementer to cope with the properties of the policy innovation which constrain the implementer. This aspect of the sub-theory may be contrasted with the approach of Hage and Aiken and to some extent of Van Meter and Van Horn and Baum. Their approaches do not recognize the role of a facilitator who moderates the impact of the policy innovation on the implementer and facilitates a conforming behavioral response.

One shortcoming of the present version of the sub-theory is that the influence of the change agent’s programming behavior on the implementer’s attitude toward performing conforming behaviors is not related in propositional form. This problem will have to be addressed later.

3. The Theory Taken as a Whole

Now that the reader has been exposed to one sub-theory of the theory of implementer behavior it will be helpful to consider the theory as a whole. We will do this by examining clusters of concepts and propositions used in the theory and the variations and similarities
among the sub-theories. First, note in Table 10.5 that there are clusters of concepts that are found in the theory. For example, note that concepts 24 through 30 are all properties of the implementer, viz., the "implementer's subjective norm about performing a particular behavior." This general concept appears in all of the sub-theories, and there are seven distinct subjective norms found in the theory as a whole. To take another example, note that concepts 60 through 64 refer to properties of the policy innovation. These policy innovation properties are found in several of the sub-theories.

Second, in Table 10.6 are listed the clusters of propositions that are used in the theory. Clusters of propositions relate sets of like concepts to one another. For example, in each sub-theory a behavioral intention is linked to a behavior by a proposition. The propositions that state these relationships are Pr.1-Pr.7, Pr.57, and Pr.58. To take another case, Pr.45-Pr.53 all relate characteristics of the policy innovation to implementer characteristics.

If the reader would look ahead at the sub-theories not yet discussed, he or she would notice that no concepts beyond those introduced in the conforming sub-theory are presented. Each sub-theory which follows is a variation of the conforming sub-theory. In some cases the relationships between concepts are reversed, in other cases they are the same, in other cases there is assumed to be no relation between the concepts (or a weak one) and concepts are deleted.

What stays the same? First, the determinants of the "implementers understanding of the policy innovation" (C.52) and the "implementer's understanding of the behaviors required to implement
Table 10.5 Concept Clusters in the Theory of Implementer Behavior.

<table>
<thead>
<tr>
<th>Concept Numbers</th>
<th>Name of Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.1 - C.9</td>
<td>Implementer Behaviors</td>
</tr>
<tr>
<td>C.10 - C.16</td>
<td>Implementer Behavioral Intentions</td>
</tr>
<tr>
<td>C.17 - C.23</td>
<td>Implementer Attitudes toward Behaviors (A_B)</td>
</tr>
<tr>
<td>C.24 - C.30</td>
<td>Implementer Subjective norms (SN)</td>
</tr>
<tr>
<td>C.31 - C.37</td>
<td>Implementer Sums of the product of beliefs about consequences of behaviors and evaluations of those consequences (Y_be)</td>
</tr>
<tr>
<td>C.38 - C.44</td>
<td>Implementer Sums of the products of the implementer’s normative beliefs about a behavior and the motivation to comply with the referents with those expectations (Y_bm)</td>
</tr>
<tr>
<td>C.45 - C.51</td>
<td>Sums of the implementer’s attitude toward behavior and the implementer’s subjective norm (A_B + SN)</td>
</tr>
<tr>
<td>C.52 - C.55</td>
<td>Properties of the implementer other than attitude-behavior core concepts</td>
</tr>
<tr>
<td>C.56 - C.59</td>
<td>Properties of the Change Agent’s Influence Attempt</td>
</tr>
<tr>
<td>C.60 - C.64</td>
<td>Properties of the Policy Innovation</td>
</tr>
</tbody>
</table>
Table 10.6 Clusters of Propositions in the Theory of Implementer Behavior.

<table>
<thead>
<tr>
<th>Proposition Numbers</th>
<th>Relationships</th>
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</thead>
<tbody>
<tr>
<td>Pr.1-Pr.7, Pr.57-Pr.38</td>
<td>Relate Implementer Behavioral Intentions to Implementer Behaviors</td>
</tr>
<tr>
<td>Pr.8-Pr.14</td>
<td>Relate the Sums of the Products of Implementer's attitude toward Behaviors and Implementer's Subjective norms to Implementer Behavioral Intention</td>
</tr>
<tr>
<td>Pr.15-Pr.21</td>
<td>Relate the Sums of the Products of the Implementer's Normative Beliefs about a Behavior and the motivation to Comply with the Referents with those expectations to the Implementer's Subjective Norm</td>
</tr>
<tr>
<td>Pr.22-Pr.28</td>
<td>Relate the Sums of the Products of the Implementer's Beliefs about the Consequences of Performing a Behavior and the Evaluation of those Consequences to the Implementer Attitudes Toward Behavior</td>
</tr>
<tr>
<td>Pr.29-Pr.39</td>
<td>Relate the Characteristics of the Implementer (other than the Concepts of the Attitude-Behavior Core) to the Implementer's Behavior</td>
</tr>
<tr>
<td>Pr.40-Pr.44</td>
<td>Relate the Characteristics of the Change Agent's Influence Attempt to the Implementer's Understanding of the Policy Innovation and understanding of Required Behaviors</td>
</tr>
<tr>
<td>Pr.45-Pr.53</td>
<td>Relate Policy Innovation Characteristics to Implementer Characteristics</td>
</tr>
<tr>
<td>Pr.55-Pr.56</td>
<td>Relate Implementer Characteristics (other than the Concepts of the Attitude-Behavior to core) to Implementer Behaviors</td>
</tr>
<tr>
<td>Pr.59-Pr.69</td>
<td>Relate Implementer Characteristics (both Attitude-Behavior Core and others) to Implementer Behavioral Intentions</td>
</tr>
</tbody>
</table>
the policy innovation" (C.53) do not change from sub-theory to sub-theory. Also remaining unchanged across all sub-theories are the determinants of the "implementer's possession of the resources required to implement the policy innovation" (C.54).

What changes are found among sub-theories? First, although at a general level the attitude-behavior core concepts remain unchanged, they do vary among sub-theories. For example, the general concepts of "behavioral intention" and "behavior" are found across all the sub-theories but there are variations within those clusters of concepts. For example, within the cluster of behavior concepts are "conforming behavior," "modification," and "exit."

The second kind of variation found among the sub-theories is in the relations between the "behavioral intention" and "behavior" concept clusters and the following properties of the implementer: "implementer's understanding of the behaviors required to implement the policy innovation" (C.53), "implementer's understanding of the policy innovation" (C.52), "implementer's possession of the resources required to implement the policy innovation" (C.54), and the "extent to which the implementer's conforming behavior is dependent on the cooperation of others" (C.55). In Table 10.7 the variations in the relationships between the concepts across the sub-theories are listed. By reviewing this table the reader can see how the sub-theories predicting the non-conforming behaviors differ from the sub-theory of conforming behavior.

Two points should be made about these variations. First, concerning the symbol "0" as it is used in Table 10.7. "0" indicates
Table 10.7 Variations in the Relationships between Concepts Across the Nine Sub-theories.

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<tr>
<th></th>
<th>Conforming</th>
<th>Excessive</th>
<th>Deficient</th>
<th>Modification</th>
<th>Ritualism</th>
<th>Delay</th>
<th>Voice</th>
<th>Bluffing</th>
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<td>Implementer's</td>
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Key: + indicates a direct relationship  
- indicates an inverse relationship  
0 indicates no proposition in theory
that there is no proposition in the theory relating the concepts. For example, no proposition relates the "implementer's possession of the resources required to implement the policy innovation" to the "implementer's behavioral intention to modify the policy innovation" although, intuitively, it seems likely that an implementer faced with a lack of resources might implement an altered form of a mandated policy. The symbol "O" does not necessarily indicate no relation between the concepts, merely the absence of a proposition. In the case of the relation of implementer's resources and the implementer's behavioral intention one would expect a correlation. But one would expect a stronger relation between implementer's possession of resources and the determinants of the implementer's attitude toward modification behavior than between implementer resources and behavioral intention (Fishbein and Ajzen, 1975, p. 307).

The second point I raise with the help of Table 10.7 is that the table only reflects part of the variation among the sub-theories. If one compares, for example, the entries in the table for the ritualism, bluffing and exit sub-theories they are the same. The same values hold between the implementer characteristics in the rows and the behavioral intentions and behaviors across all three sub-theories. Although these sub-theories are similar in this respect, there is variation across them with respect to the determinants of the implementer's attitude toward performing the behaviors. Specifically, the implementer's beliefs about the consequences of performing the various behaviors ("b" in the formula $\sum b_i e_i$) vary across the sub-theories. The reader can assure him/herself of this by turning ahead to these
sub-theories. With those comments in mind we can begin to review the non-conforming behavior sub-theories in the next chapter.
CHAPTER 11: A THEORY OF IMPLEMENTER BEHAVIOR:

THE NON-CONFORMING SUB-THEORIES

1. Introduction

In this chapter the non-conforming sub-theories are presented. Eight in all; the first two discussed are excessive and deficient behavior, the two types of unintentional non-conforming behaviors. Then the six types of intentionally non-conforming behaviors are treated in six sub-theories.

2. Sub-theory of Excessive Behavior

2.1 Extrinsic Part of the Sub-Theory of Excessive Behavior

Review of the sub-theory of excessive behavior (and in fact of all of the remaining sub-theories) will be less laborious since there is some overlap of concepts and statements between the sub-theories. The sub-theory of excessive behavior purports to predict the occurrence of behaviors which unintentionally go beyond the behaviors required by a policy statement. For example, a policy may be applied to all clients when the policy statement applies only to a subset. The formal definition of the concept is:

C.2 Implementer’s excessive behavior: Behaviors which an evaluator judges are actions which unintentionally exceed the goals or procedures and guidelines of the policy innovation as expressed in a policy statement.
In the discussion of the conforming-behavior sub-theory I discussed the basic elements of this definition; the meaning of policy innovation, goals, means (procedures and guidelines), policy statement, and evaluator. I will not repeat them here. It is important that the reader note that this concept refers only to unintentional excessive behavior. You will recall that intentional excessive behaviors are classified as modification. Unintentional excessive behavior is one type of implementer error, the other, which is the subject of the next sub-theory, is unintentional deficient behavior.

The research question which led to the formulation of this sub-theory was: "Under what circumstances will an implementer perform unintentional excessive behaviors?" I will present propositions that express the argument that an implementer will unintentionally exceed the goals and procedures and guidelines of a policy innovation when he or she has a behavioral intention to perform conforming behaviors, but does not understand the policy innovation or the behaviors required to implement the policy innovation.

The concept "implementer's excessive behavior" is the only new concept to appear in this sub-theory. I will review briefly the concepts which are employed to predict excessive behavior. First, the concepts of the attitude-behavior core are present: "behavioral intention to perform conforming behaviors" (C.10), "attitude toward performing conforming behaviors" (C.17), "subjective norm about performing conforming behaviors" (C.24), "sum of the implementer's attitude toward performing conforming behavior and the implementer's subjective norm about performing conforming behaviors" (C.45), "sum of the products of the implementer's beliefs
about the consequences of performing conforming behaviors" (C.31), and
"sum of the products of the implementer's normative beliefs about con-
forming behavior and the motivation to comply with the expectations of
referents" (C.38). These retain the same definitions.

We can predict unintentional excessive behavior with the concept
of behavioral intention to conform because we assume that unintentional
excessive behaviors are the result of factors which frustrate the inten-
tion to perform conforming behaviors. The factors which interfere are
the implementer's lack of understanding of the policy innovation and of
the behaviors required to implement the innovation. Therefore, the sub-
theory contains the following concepts: "implementer's understanding of
the policy innovation" (C.52), and the "implementer's understanding of
the behaviors required to implement the policy innovation" (C.52). It
also contains all of the concepts that are related to these two aspects
of the implementer's understanding - all of which have been defined
previously: "change agent's provision of adequate feedback mechanisms"
(C.56), "change agent's efforts to clarify understanding of the policy
innovation." (C.57), "change agent's efforts to clarify understanding of
the behavior's required to implement the policy innovation" (C.58),
"policy innovation's specificity of goals and means" (C.60), "policy
innovation's complexity" (C.61), "amount of change in the policy innova-
tion" (C.63), and "policy innovation's performance radicalness" (C.64).

These are the concepts which are included in this sub-theory.
Other concepts could be related to the implementer's performing unin-
tentional excessive behaviors, however, there is the principle of parsi-
mony to consider. I believe that the concepts that the theory includes
will accurately predict (produce high correlations) this behavior. I will describe the propositions of this sub-theory in the following section.

2.2 Intrinsic Part of the Sub-Theory of Excessive Behavior

The excessive behavior sub-theory contains only three new propositions. I will report those propositions and refer the reader to the path diagram of this sub-theory (figure 11.1) for an indication of all of the propositions included which were reported in the discussion of the determinants of conforming behavior.

The first new proposition is:

Pr. 57 AIS, the greater the 'implementer's behavioral intention to perform conforming behaviors' at t₂, the greater the 'implementer's excessive behavior' at t₃.

This is a formal way of saying that implementer's sometimes err by exceeding goals or procedures and guidelines when they actually intended to do the right thing. The next two propositions assert that the reason that they weren't able to do as they intended is because they didn't understand what they were supposed to do.

Pr. 30 AIS, the greater the 'implementer's understanding of the behaviors required to implement the policy innovation' at t₂, the lesser the 'implementer's excessive behavior' at t₃.

Pr. 33 AIS, the greater the 'implementer's understanding of the behaviors required to implement the policy innovation' at t₂, the lesser the 'implementer's excessive behavior' at t₃.

According to these propositions, if the implementer understands the new policy and understands how he or she is to behave with respect
\[
\sum b_{iej} \quad \text{C.31}
\]
\[
\quad + \quad \text{Pr.22}
\]

- Attitude Toward Conforming Behavior \quad \text{C.17}
- plus
- Subjective Norm About Conforming Behavior \quad \text{C.24}
+ \quad \text{Pr.15}

\[
\sum b_{imej} \quad \text{C.30}
\]

**Figure II.1 Path Diagram of the Excessive Behavior Sub-theory.**
to it, the implementer will not have difficulty in performing conforming behaviors. As we have seen in the discussion of conforming behavior, characteristics of the policy innovation may make it difficult for the implementer to understand. However, implementer understanding may be facilitated by the change agent.

2.3 Summary of the Sub-Theory of Excessive Behavior

This sub-theory predicts when the implementer will engage in unintentional excessive behaviors. The implementer will unintentionally exceed the goals or procedures and guidelines when the properties of the implementation situation elements take the value indicated below: (I repeat that these values are reported on a nominal scale only for convenience; the referential formulas of theory assume at least an ordinal level of measurement.\(^1\))

1. When behavioral intention to conform is positive.
2. When attitude toward conforming behavior is positive.
3. When the subjective norm about performing conforming behavior is positive.
4. When the implementer's understanding of the policy innovation and of the required behaviors is negative because the policy innovation is complex, and/or requires radical change in the implementer's behavior, and/or has low specificity of goals and/or means, and/or has undergone change; and when the change agent has not compensated for those characteristics of the policy innovation by providing feedback mechanisms.

\(^1\)Not all of the concepts are listed. My objective here is to give a summary notion of when this behavior will occur. The propositions contain the complete statement.
or by initiating efforts to clarify the implementer's understanding.²

We have concluded our discussion of the sub-theory by answering the research question that stimulated its development: "Under what circumstances will an implementer perform unintentional excessive behaviors?" We turn to the next sub-theory.

3. **Sub-theory of Deficient Behavior**

3.1 **Extrinsic Part of the Sub-Theory**

In this sub-theory we want to predict behaviors which unintentionally fall short of the goals and/or procedures and guidelines of a policy innovation: "When will an intended implementer fall short of goals and/or fall short of implementing the correct procedure in spite of an intention to implement the policy?" The sub-theory is an attempt to predict "deficient behavior" which is defined as:

C.2 **Implementer's Deficient Behavior**: Behaviors which an evaluator judges are actions which unintentionally fall short of the goals and/or procedures of the policy innovation as expressed in a policy statement.

This behavior is to be distinguished from intentionally falling

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²The reader should not be misled by the last statement in the summary. It goes beyond what the propositions actually express. I am guiding the reader in an interpretation of the theory. In fact, no statement in the theory indicates that the change agent's programming behaviors moderate the adverse effects of some policy innovation characteristics. According to the present version of the theory the policy innovation properties and the change agent's programming behaviors operate independently on the implementer's understanding (C.52, C.53). A more sophisticated version of this theory might assume that this moderation of policy innovation properties by the change agent's efforts does occur.
short of attaining a goal or following a procedure. Such a behavior is
classified as modification. An example of an unintentional deficient
behavior may be failure to apply a new policy of all of the cases to
which it should apply. Unintentional deficient behavior is, according
to this sub-theory, a function of a behavioral intention to conform,
misunderstanding of the policy innovation and/or the behaviors re-
quired to implement the new policy, and/or a lack of resources needed to
implement the policy. In other words, as with excessive behavior, an
implementer's intention to perform as directed is thwarted by aspects
of the implementation situation. Defective behavior results when an
intention to conform is frustrated by either a lack of resources (lack
of ability) or lack of understanding.

We need no other new concepts for this sub-theory, but we do need
to present three new propositions in the intrinsic section of the theory.

3.2 intrinsic Part of the Sub-Theory of Deficient Behavior

The implementer will exhibit deficient behavior if 1) he/she
intends to implement the policy, but 2) lacks the needed resources, and/
or 3) does not understand the policy innovation, and/or 4) does not un-
derstand the behaviors required to implement the policy. These reasons are
expressed formally in the following propositions:

Pr. 58 AIS, the greater the 'implementer's behavioral intention to
perform conforming behaviors' at t₂, the greater the 'implementer's
deficient behavior' at t₃.

Pr. 36 AIS, the greater the 'implementer's possession of the resources
required to implement the policy innovation' at t₂, the lesser
the 'implementer's deficient behavior' at t₃.
Figure 11.2 Path Diagram of Deficient Behavior Sub-theory.
Pr. 31 AIS, the greater the 'implementer's understanding of the policy innovation' at \( t_2 \), the lesser the 'implementer's deficient behavior' at \( t_3 \).

Pr. 34 AIS, the greater the 'implementer's understanding of the behavior required of him/her to implement the policy innovation' at \( t_2 \), the lesser the 'implementer's deficient behavior' at \( t_3 \).

3.3 **Comments on the Sub-Theory of Deficient Behavior**

Theories predicting two types of error have been discussed. Someone may err by either exceeding goals and/or procedures or falling short of them. If you compare the two sub-theories that predict these behaviors you will note that the sub-theories are the same except for one factor. In both cases the implementer intends to conform and does not understand the innovation or the required behaviors. However, deficient behaviors occurs when the intended implementer also lacks the resources required to implement the policy innovation.

How does the sub-theory respond to the research question: Under what conditions will an intended implementer exhibit unintentionally deficient behavior? It answers: Deficient behavior will be observed when:

1. The implementer's behavioral intention to conform is positive.
2. The implementer's attitude toward performing conforming behavior and subjective norm about performing conforming behavior are positive.
3. When the implementer's understanding of the policy innovation and of the required behaviors is negative because the policy innovation is complex, and/or requires radical change in the implementer's behavior, and/or has low specificity of goals.
and means, and/or has undergone change; and when the change agent has not compensated for those characteristics by providing feedback mechanisms or by initiating efforts to clarify the implementer's understanding.

4. The implementer lacks the resources needed to perform the required behaviors.

4. **Sub-Theory of Modification**

4.1 **Extrinsic Part of the Sub-Theory**

We noted in Chapter 3 that Berman and McLaughlin claim that some types of innovations undergo change as they are implemented. The objective of this sub-theory is to predict when an implementer will modify the policy innovation as it is carried out. We begin by defining the dependent variable.

C.4. **Implementer's modifying behavior**: Behaviors which an evaluator judges are actions which intentionally alter the goals and/or procedures of a policy innovation as expressed in a policy statement.

Note that the implementer's modifying behavior is distinguishable from the two sub-types of error, excessive and deficient behavior, because modifying behavior is an intentional change in the policy, whereas error is unintentional change.

The sub-theory of modification and the remaining sub-theories predict behaviors which are intentionally non-compliant. Since we are dealing with intentional behaviors we will be introducing more concepts of behavioral intention and their determinants. Modifying behavior is
most directly related to "behavioral intention to modify."

C.11 Implementer's behavioral intention to perform modifying behaviors: An implementer's expression of his/her degree of certainty that he/she will perform modifying behaviors.

Behavioral intention is determined by attitude toward the behavior and the implementer's subjective norm.

C.18 Implementer's attitude toward modifying behavior: An implementer's attitude about performing conforming behavior. Attitude toward performing conforming behavior is a function of the perceived consequences of performing modifying behaviors and of the person's evaluation of those consequences. Thus

\[ A_B = \sum_{i=1}^{n} b_i e_i \]

where \( b \) is the belief that modifying behavior, \( B \); leads to consequence or outcome, \( e \) is the person's evaluation of outcome \( i \), and \( n \) is the number of beliefs the person holds about performing modifying behavior, \( B \).

C.25 Implementer's subjective norm about performing modifying behaviors: The person's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are not the same person), and peers familiar with the implementation situation think he/she should or should not perform modifying behaviors.

The subjective norm is determined by the perceived expectations of the referent individuals and/or groups just mentioned and by the person's motivation to comply with those expectations. Thus,
SN = \sum_{i=1}^{n} b_i m_i

where \( b \) is the normative belief, that is, the implementer's belief that reference group or individual thinks that he/she should or should not perform modifying behavior; \( m_i \) is the motivation to comply with referent \( i \)'s expectations; and \( n \) is the number of relevant referents.

Behavioral intention to modify is predicted by the sum of the attitudinal and normative factors, and so we introduce the following concept:

C.46 Sum of the implementer's attitude toward performing modifying behavior and the implementer's subjective norm about performing modifying behavior: Symbolically:

\[ A_B + SN \]

Where \( A_B \) is the attitude toward performing modifying behavior and \( SN \) is the subjective norm about performing modifying behavior.

The next two concepts included in the modification sub-theory are the determinants of the implementer's attitude and subjective norm about performing modifying behavior. The determinant of the implementer's attitude is:

C.32 Sum of the implementer's beliefs about the consequences of modifying behavior and the evaluation of those consequences:

Symbolically

\[ \sum b_i e_i \]

I have just described this concept in the discussion of \( A_B \) for modifying behavior. The implementer's beliefs about the consequences or outcomes
of performing modifying behaviors are the person's assessments of the probability that certain consequences are linked with their modifying the new policy as they implement it. A person's evaluation of a consequence of modifying the policy is the person's valuing or disvaluing of the consequence.

What beliefs about consequences and evaluations of consequences would produce a favorable attitude toward modifying the policy innovation? In Table II.1 I have listed consequences which, if they were valued positively by an implementer, would contribute to a positive attitude toward modifying a policy innovation. These consequences are arranged according to the element of the implementation situation with which they are related. The researcher who mentions the property is listed, however, they have used the property for a purpose different than the purpose considered here. I will choose one property of the implementer and one property of the policy innovation as illustrations of the concept.

If the implementer believed that by modifying the policy innovation that the modified policy would be more closely aligned with the implementer's policy preferences, assuming that this consequence is positively valued by the implementer, then this will contribute to a favorable attitude toward modifying the policy innovation. If the implementer believed that by modifying the policy innovation that the modified policy would be more efficient, assuming that the implementer positively valued increased efficiency, then this will contribute to a favorable attitude toward modifying the policy innovation. These beliefs and evaluations do not enter the theory as concepts but are the components of the referential formula for the concept. C.32, "sum of the implementer's
Table 11.1 Perceived Positively Valued Consequences That Would Produce a Favorable Attitude Toward Modifying a Policy Innovation

<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Which is the Focus of the Belief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2. Implementer</td>
<td>Modification will: favor subordinates interests align the policy with the implementer's policy preferences. Modification will allow implementer to cope with: Resource limitations, Lack of understanding of policy innovation, lack of understanding of required behaviors, Need to have the cooperation of others</td>
<td>Baum, Gross, Giaquinta, and Bernstein</td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>4. Innovation</td>
<td>Modification will: reduce financial cost, reduce impacts on interpersonal relations, reduce social cost, reduce risk and uncertainty, reduce performance radicalness, increase return on investment, increase efficiency, increase compatibility, increase relative advantage, increase or reduce pervasiveness, increase or reduce complexity, increase or reduce structural radicalness, increase or reduce terminality, increase or reduce reversibility</td>
<td>Zaltman, Duncan, and Høibek</td>
</tr>
<tr>
<td>5. Context</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
beliefs about the consequences of modifying behavior and the evaluation of those consequences.

The next concept included in the modification sub-theory is C.39. Sum of the products of the implementer's normative beliefs about modifying behavior and the motivation to comply with the expectations of referents.

I described this concept as I introduced the concept of SN for modifying behavior. Symbolically the concept is

\[ \sum_{i} b_{i}m_{i} \]

The implementer's normative belief about modifying behavior, \( b \), is an implementer's belief that a particular person or reference group thinks that the implementer ought to or ought not perform modifying behavior. The implementer's motivation to comply with a referent's expectations is the implementer's intention to comply with a referent whom the implementer believes holds a certain belief. The particular beliefs and motivations to comply are not complex. They are discussed in Appendix A since they appear in the referential formula for "\( \tau bm \)."

This concludes the review of concepts included in the modification sub-theory. Before I present the propositions I want to recognize that Berman and McLaughlin have commented on the determinants of modification of innovations. They have indicated that certain types of

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3Lest the reader confuse the contents of Table 11.1 with the contents of Table's 10.1 and 10.2 I wish to indicate that Table 11.1 contains the content of an implementer's beliefs about consequences and the evaluation of those consequences, whereas, in Table's 10.1 and 10.2 are listed properties which are influences on beliefs about consequences and evaluations.
innovations will be more susceptible to modification during implementation than others. Technological innovations because they have clearly stated and specific goals, specific means (procedures, a clear relation between procedures and goals, high certainty that goals will be reached when procedures are applied, and passive user involvement do not change as they are implemented (Berman and McLaughlin, p. 9). On the other hand, educational innovations do undergo change as they are put in place because they often do not have clearly stated and specific goals, do not have specific procedures, do not have a clear relation between procedures and goals, do not have high certainty that the procedures produce goal attainment, and do require active user involvement. Some of these properties may be related to the implementer's be and bm about modifying behavior, others may not. For example, an implementer who valued attainment of the goal of a policy innovation highly might have low motivation to comply with a change agent's belief that he or she should comply with the procedures mandated by the policy, if the implementer believed that the mandated procedures were unlikely to produce the highly desired goal of the policy. As the reader can see, such relationships may be difficult to sort out. I leave the task to a later date.

4.2 Intrinsic Part of the Modification Sub-Theory

As the implementer's attitude toward modifying behavior and subjective norm about modifying behavior increase, the greater will be the implementer's behavioral intention to modify the goals and/or procedures of the policy innovation, as behavioral intention increases, the likelihood of the implementer performing modifying behavior in-
creases. These ideas are expressed formally in the following propositions:

Pr. 2 AIS, the greater the implementer's behavioral intention to perform modifying behavior' at \( t_2 \), the greater the 'implementer's modifying behavior' at \( t_3 \).

Pr. 9 AIS, the greater the 'sum of the implementer's attitude toward performing modifying behavior and the implementer's subjective norm about performing modifying behavior' at \( t_2 \), the greater the 'implementer's behavioral intention to perform modifying behavior' at \( t_3 \).

Pr. 16 AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing modifying behavior and the motivation to comply with the reference groups' (\( \sum b_i m_i \)) at \( t_2 \), the greater the 'subjective norm about performing modifying behavior' at \( t_2 \).

Pr. 23 AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing modifying behaviors and the evaluation of those consequences' (\( \sum b_i e_i \)) at \( t_2 \), the greater the 'attitude toward performing modifying behaviors' at \( t_2 \).

As I conclude the exposition of this sub-theory I will note that this sub-theory is potentially relatable to several other sub-theories. You will recall that the conforming behavior sub-theory contain a concept "amount of change in the policy innovation" (C.63). This concept could be related to the 'implementer's modifying behavior' in a proposition like the following:
Figure 4.3 Path Diagram of Modification Sub-theory.

The diagram illustrates the relationships between variables such as Behavioral Intention to Modify, Subjective Norms, Behavioral Control, and the Composite Score (C.46), among others. The arrows indicate the direction of influence, with expressions like \( \sum b_i c_{i,j} \) and \( \sum b_i c_{k,j} \) indicating the weighted sum of certain variables. The process involves the influence of Attitude Toward Modifying Behavior, Subjective Norms, and Control, leading to the Modified Behavior (C.35).
AIS, the greater the 'implementer's modifying behavior' at \( t_1 \) the greater the 'amount of change in the policy innovation' at \( t_2 \).

The inclusion of such a proposition would increase the dynamism of the theory, that is, it would increase the theory's "inclusiveness of types of temporal relations." Consideration of modifying behavior also leads to the conclusion that it could have other effects on the policy innovation; all of the characteristics of the policy innovation included in the theory could be modified. Complexity, performance radicalness, specificity of goals and means, and divisibility could all be altered by the implementer's modifying behavior. These considerations open the door to many questions about the dynamics of policy implementation and point to the static nature of the theory which I am presenting here. Later versions of this theory should attempt to introduce some types of temporal relations. Let's turn to ritualistic behavior.

5. Sub-Theory of Ritualistic Behavior

5.1 Extrinsic Part of the Sub-Theory

When faced with a directive to implement a new policy the bewildered bureaucrat may continue to perform traditional behaviors instead of the newly required behaviors. In other words, he or she may behave ritualistically (Merton, 1968, pp. 238-241). Ritualistic behavior is defined as:

C.5. Implementer's ritualistic behavior: Behaviors which an evaluator judges are actions which are not intended to carry out the policy innovation and which are traditional
behaviors or behaviors which are in accord with an old standard operating procedure instead of the new policy statement.

Ritualistic behavior is an intentional behavior and can therefore be predicted by behavioral intention and its determinants. Therefore, the following concepts are introduced.

C.12. Implementer's behavioral intention to perform ritualistic behaviors: An implementer's expression of his/her degree of certainty that he/she will perform ritualistic behaviors.

C.47. Sum of the implementer's attitude toward performing ritualistic behavior and the implementer's subjective norm about performing ritualistic behavior: Symbolically:

$$A_B + SN$$

where $A_B$ is the attitude toward performing ritualistic behavior and $SN$ is the subjective norm about performing ritualistic behavior.

C.19. Implementer's attitude toward ritualistic behavior: An implementer's expression of his/her degree of favorableness or unfavorableness toward performing ritualistic behavior.

C.26. Implementer's subjective norm about performing ritualistic behavior: An implementer's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers familiar with the implementation situa-
tion think he/she should not perform ritualistic behaviors.

The "implementer's attitude toward ritualistic behavior" is determined thus

$$A_B = \sum_{i=1}^{n} b \cdot e$$

where $b$ is the belief that ritualistic behavior, $B$, leads to consequence or outcome $i$, $e$ is the person's evaluation of outcome $i$, and $n$ is the number of beliefs the person holds about performing ritualistic behavior, $B$. Therefore, I introduce

C.33. Sum of the implementer's beliefs about the consequence of ritualistic behavior and the evaluation of those consequences.

which I have just defined. What beliefs about consequences would produce a favorable attitude toward ritualistic behavior? In Table 11.2 I have listed perceived consequences which, if they were positively valued by an implementer, would contribute to a favorable attitude toward ritualistic behavior. These consequences are arranged according to the element of the implementation situation with which they are related. The researcher who mentions the property is listed, however they have used the property for a purpose different than the purpose considered here. As an example, consider that, if the implementer believed that by continuing to perform according to old standard operating procedures he or she would be able to maintain a preferred policy, that this positively valued consequence would contribute to a favorable attitude about continuing the SOP. Let me remind you once again that the information in Table 11.2 enters the theory as part of the referen-
Table 11.2  Perceived Positively Valued Consequences That Would Produce a Favorable Attitude Toward Ritualistic Behavior

<table>
<thead>
<tr>
<th>Implementation Situation Element Which is the Focus of the Belief</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td>Zaltman, Duncan, and Holbek</td>
</tr>
<tr>
<td>2. Implementer</td>
<td>Ritualism will:</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>maintain stability</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>maintain security</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduce anxiety</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>favor implementer's interests</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>maintain a policy which is aligned with the implementer's policy preferences</td>
<td>&quot;</td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>None</td>
<td>&quot;</td>
</tr>
<tr>
<td>4. Innovation</td>
<td>Ritualism will prevent:</td>
<td>Zaltman, Duncan, and Holbek</td>
</tr>
<tr>
<td></td>
<td>financial cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>social cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>inefficiency</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>risk and uncertainty</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>incompatibility</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>perceived relative disadvantage</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>structural change</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>performance change</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>required commitment</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>impact on interpersonal</td>
<td>&quot;</td>
</tr>
</tbody>
</table>
tial formula for C.33, not as a set of concepts.

Next we introduce the determinant of SN.

\[ SN = \sum_{i=1}^{n} b_m \]

thus, the concept is

C.40. Sum of the products of the implementer's normative beliefs about ritualistic behavior and the motivation to comply with the referents with those expectations.

The implementer's normative belief about ritualistic behavior is an implementer's belief that a particular person or reference group thinks that the implementer ought to or ought not perform ritualistic behavior.

The implementer's motivation to comply with a referent's expectations is the implementer's intention to comply with a referent's expectations.

See the referential formula for this concept in Appendix B for measures of these beliefs and motivations.

In addition to these concepts of the attitude-behavior core of the sub-theory includes concepts reflecting the implementer's understanding and ability and their determinants. The names of the concepts are listed below; all have been defined previously.

C.52. Implementer's understanding of the policy innovation.

C.53. Implementer's understanding of the behaviors required to implement the policy innovation.

C.54. Implementer's possession of the resources needed to perform the required implementing behaviors.

C.55. Extent to which the implementer's conforming behavior is dependent on the cooperation of others.
C.56. Change agent's provision of adequate feedback mechanisms.
C.57. Change agent's efforts to clarify the implementer's understanding of the policy innovation.
C.58. Change agent's efforts to clarify the implementer's understanding of the behaviors required to implement the policy innovation.
C.59. Change agent's provision of resources to aid implementation.
C.60. Policy innovation's specificity of goals and means.
C.61. Complexity of the policy innovation.
C.62. Divisibility of the policy innovation.
C.63. Amount of change that has occurred in the policy innovation.
C.64. Performance radicalness of the policy innovation.

5.2 Intrinsic Part of the Ritualistic Behavior Sub-Theory

Under what conditions will an implementer choose to continue to perform in a traditional manner rather than according to a new policy statement? This sub-theory answers: as the implementer's 1) attitude toward performing ritualistic behavior becomes more favorable, and 2) subjective norm about ritualistic behavior becomes more positive; as the implementer, 3) is increasingly dependent on the cooperation of others for performing conforming behavior, 4) decreasingly understands the policy innovation, and 5) the behaviors required to implement the new policy, and 6) as the resources required become more scarce. However, the most significant factors influencing this behavior are the implementer's beliefs about consequences of ritualistic
behavior and the implementer’s evaluation of these consequences. An implementer is most likely to continue to perform traditionally if doing so permits avoidance of anxiety, insecurity, instability, radical changes in required behavior, and so on down the list of beliefs in Table II.2.

The propositions of the ritualistic behavior sub-theory follow:

Pr. 3 AIS, the greater the 'implementer's behavioral intention to perform ritualistic behaviors' at t₂, the greater the implementer's ritualistic behavior' at t₃.

Pr. 10 AIS, the greater the 'sum of the implementer's attitude toward performing ritualistic behavior and the implementer's subjective norm about performing ritualistic behavior' at t₂, the greater the 'implementer's behavioral intention to perform ritualistic behavior' at t₂.

Pr. 17 AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing ritualistic behavior and the motivation to comply with the reference groups' (λ b₁m₁) at t₂, the greater the 'subjective norm about performing ritualistic behavior' at t₂.

Pr. 24 AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing ritualistic behaviors and the evaluation of those consequences' (ξ b₁v₁) at t₂, the greater the 'attitude toward performing ritualistic

---

4 In a later version of the theory, assertions like this one should be incorporated as explicit statements so that they may be tested as part of the formal structure of the theory.
Figure 11.4 Path Diagram of Ritualistic Behavior Sub-theory.
behaviors' at $t_2$.

The above constitute the propositions that make up the attitude-behavior core of the ritualistic behavior sub-theory. The following propositions relate aspects of the implementation situation to the "implementer's behavioral intention." To a great extent the propositions discussed below represent formalization of relations hypothesized by Gross, Giacquinta, and Bernstein in their study of the implementation of a teaching innovation at an elementary school. The reader may wish to compare the path diagram of this sub-theory (see figure 11.4) with the path-diagram representing their ideas (see figure 3.4 in Chapter 3, 1971). There is considerable overlap. Gross, Giacquinta, and Bernstein observed what I have called ritualistic behavior in an implementation situation that exhibited low implementer understanding, a lack of required resources and lack of facilitating efforts by change agents. Therefore, the following propositions are included in this sub-theory.

Pr. 61 AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the lesser the implementer's behavioral intention to perform ritualistic behaviors' at $t_3$.

Pr. 62 AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_3$.

The rationale for Pr. 61 and Pr. 62 is that lack of understanding may influence the implementer to choose behaviors which are familiar over behaviors which are not understood and which are instrumental for a policy innovation which is not understood.
Pr. 37 AIS, the greater the 'implementer's possession of the resources needed to perform the required implementing behaviors' at t₂, the lesser the 'implementer's behavioral intention to perform ritualistic behaviors' at t₂.

Pr. 64 AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at t₂, the greater the 'implementer's behavioral intention to perform ritualistic behaviors' at t₂.

Pr. 63 and Pr. 64 indicate that a lack of resources and a need for the cooperation of others will be positively related to a behavioral intention to perform ritualistic behaviors.

In addition to these new propositions, a glance of figure 11.4 will tell you that the familiar set of determinants of implementer's understanding and possession of resources are present here. As I conclude treatment of this sub-theory let me repeat that the most important determinant of ritualistic behavior is likely to be the set of implementer's beliefs about the consequences of continuing to perform as before and the evaluations of those consequences.

6. Sub-Theory of Delay

6.1 Extrinsic Part of the Sub-Theory

When will an implementer delay implementing a new policy? An implementer might put off performing the required behaviors because he or she 1) doesn't understand the new policy or 2) the behaviors required to implement it, or because 3) resources are lacking, or because 4) extensive cooperation of others is necessary. The foregoing seems
intuitively correct, but we have just seen in the last sub-theory that these same factors may lead to ritualistic behavior. How do we predict which of the two behaviors will occur? As I have stressed above, it is probably the attitudinal determinant which is most important for distinguishing which behavior will occur. Before I elaborate this argument I will introduce the new concepts found in the delay behavior sub-theory. We find the familiar attitude-behavior concepts:

C. 6 Implementer's delaying behavior: Behaviors which an evaluator judges delay carrying out the goals and procedures of the policy innovation as expressed in the policy statement.

C. 13 Implementer's behavioral intention to delay: An implementer's expression of his/her degree of certainty that he/she will delay performing implementing behaviors.

C. 48 Sum of the implementer's attitude toward delaying and the implementer's subjective norm about delaying: The name of the concept is also its definition.

C. 20 Implementer's attitude toward delay: An implementer's expression of his/her degree of favorableness or unfavorableness toward delaying performing implementing behaviors.

C. 27 Implementer's subjective norm about delay: An implementer's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers familiar with the implementation situation think he/she should or should not delay performing implementing beha-
viors.

C. 34 Sum of the products of the implementer's beliefs about the consequences of delaying and the evaluation of those consequences: The name of the concept is also its definition.

C. 41 Sum of the products of the implementer's normative beliefs about delaying and the motivation to comply with referents' expectations: The name of the concept is also its definition.

In addition to these concepts the sub-theory includes the concepts referring to the implementer's understanding (C. 52, C. 53) and ability to perform conforming behaviors (C. 54, C. 53) and concepts referring to all of the determinants of those concepts (see figure 11.5). As I indicated above the crucial factor in predicting delay of performing implementing behaviors is the set of beliefs and evaluations (C. 54, C. 53) that determine the "implementer's attitude toward delay." In Table 11.3 I have listed consequences which would contribute to a favorable attitude toward delaying performing implementing behaviors if 1) the implementer believed that they were likely to occur and 2) the implementer positively valued the consequences. For example, if the implementer believed that delaying performing implementer behavior would allow the change agent to provide needed resources and, if the implementer valued that consequence, then this belief and evaluation would contribute toward a favorable attitude toward delaying performing implementing behaviors.

Some of the entries in Table 11.3 raise an interesting problem
Table 11.3 Perceived Positively Valued Consequences That Would Produce a Favorable Attitude Toward Delay

<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Which is the Focus of the Belief</td>
<td>Delay will allow Time:</td>
<td></td>
</tr>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2. Implementer</td>
<td>to acquire needed resources</td>
<td>Gross,</td>
</tr>
<tr>
<td></td>
<td>to acquire knowledge of policy innovation</td>
<td>Giacquinta and Bernstein</td>
</tr>
<tr>
<td></td>
<td>to acquire knowledge of required behaviors</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>for needed action of others to occur</td>
<td></td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>Delay will allow:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>provision of feedback</td>
<td>Cross,</td>
</tr>
<tr>
<td></td>
<td>efforts to clarify understanding</td>
<td>Giacquinta and Bernstein</td>
</tr>
<tr>
<td></td>
<td>efforts to provide resources</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>efforts to make organizational arrangements compatible</td>
<td></td>
</tr>
<tr>
<td>4. Innovation</td>
<td>Delay will reduce:</td>
<td>Zaltman, Duncan and Holbeck</td>
</tr>
<tr>
<td></td>
<td>Risk and uncertainty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Delay will increase:</td>
<td>Van Meter and Van Horn</td>
</tr>
<tr>
<td></td>
<td>degree of goal consensus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>about policy</td>
<td></td>
</tr>
<tr>
<td>5. Context</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
for this sub-theory. Note the entries which refer to the implementer's properties. These are beliefs about consequences of delaying; for example, "delay will allow time to acquire needed resources."

As I said above, the "implementer possession of resources" is a probable factor in predicting delay. It appears as a concept in the sub-theory. But, particular beliefs of the implementer, for example the belief that "delay will allow time to acquire needed resources" do not appear as concepts in the sub-theory. They do appear as components of the referential formula for $\gamma$ be. Then, the reader may ask, why not relate those properties to $\gamma$ be. Why not have propositions of the form:

AIS, the greater the 'implementer's possession of the resources needed to perform the required implementing behaviors' at $t_2$, the greater the implementer's sum of the products of beliefs about the consequences of performing $\lambda$ behavior and the implementer's evaluation of those consequences' at $t_2$?

This cannot be done since there is not a linear relation between implementation situation element properties and "$\gamma$ be." For example, it is not necessarily true that "the lesser the availability of resources, the greater the $\gamma$ be for delay." We must remember that "belief about a consequence" is multiplied by the "evaluation of the consequence." The relation is not necessarily linear. So this is not a solution. Moreover, the relationship between the concepts referring to the implementer's understanding and capability and the implementer's behavior takes two forms in the sub-theories. In three of the sub-theories (ritualistic, bluffing, exit) it is not plausible that there
is a link in the implementer's mind between performing the behavior and
getting as a consequence a change in understanding or capability. For
example, in the case of ritualistic behavior it is not likely that
the implementer believes that continuing to perform in the traditional
manner will have as a consequence an increase in his/her understanding
of the policy innovation. However it is plausible that lack of under-
standing of the new policy may influence the implementer's intention to
perform in the traditional manner. In such cases it is reasonable to
relate the implementer's understanding and capability factors directly
to behavioral intention. This was done in the ritualistic behavior
sub-theory and will be done in the blufing and exit sub-theories.

On the other hand, there are some sub-theories where it is very
likely that the implementer does engage in a behavior to bring about
some change in his/her understanding or capability to implement the
policy. Take the case of delay. An implementer may very will believe
that delay of performing implementing behaviors has as a consequence an
increase in his/her understanding of the policy innovation. In these
cases (modification, delay, voice) it is reasonable to expect some
relation between "understanding of the policy innovation," "under-
standing of the behaviors required to implement the policy innovation,"
"possession of resources," and "extent to which implementer's con-
forming behavior depends on the cooperation of others" and the imple-
menter's beliefs about the consequence of performing the behavior. In
the sub-theories of modification, delay and voice we could relate the
above mentioned properties to the implementer's beliefs about conse-
quences if we wished to greatly increase the number of concepts and
statements employed in the theory. The option which I have chosen is
to merely indicate the potential relationships as I have done in Figure 11.5 by using dotted lines. This device will be used in presenting this sub-theory only. It was not employed in the modification sub-theory, nor will it be employed in the voice sub-theory. It is used here simply as an illustration of a possibility for future development of these sub-theories.

As I said, beliefs about consequences of performing various behaviors are not included as concepts in the theory because doing so would greatly increase the number of concepts and statements in the theory. A separate concept would be needed for each belief about a consequence of performing a behavior. If there were only five relevant beliefs for each behavior forty-five new concepts would be needed. That would require forty-five propositions, forty-five transformational statements and forty-five theorems; one hundred thirty-five additional statements in all. A new theory should be communicable, such a mass of statements would reduce the communicability of the theory considerably.

6.2 Intrinsic Part of the Sub-Theory of Delay

This sub-theory contains several new propositions all of which interrelate the concepts of the attitude-behavior core.

Pr. 4 AIS, the greater the 'implementer's behavioral intention to delay' at \( t_2 \), the greater the 'implementer's delaying behavior' at \( t_3 \).

Pr. 11 AIS, the greater the 'sum of the implementer's attitude toward delaying implementing behavior and the implementer's subjective norm about delaying implementing behavior' at \( t_2 \), the greater the implementer's behavioral intention to delay'
Figure 11.5 Path Diagram of the Delay Sub-theory.
at \( t_2 \).

Pr. 18 AIS, the greater the 'sum of the products of the implementer's normative beliefs about delay and the motivation to comply with referents' expectations (\( \lambda \) \( \cdot \) \( \beta m \)) at \( t_2 \), the greater the implementer's subjective norm about delay' at \( t_2 \).

Pr. 25 AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of delay and the evaluation of those consequences' at \( t_2 \), the greater the 'implementer's attitude toward delay' at \( t_2 \).

Those propositions interrelate the concepts of the attitude-behavior core. As I noted above, several concepts representing properties of implementation situation elements are related to the implementer's beliefs about consequences of delay and the evaluation of those consequences. Since these relationships cannot be expressed as propositions in the present version of the theory, they are represented ad dotted lines in the path-diagram in figure 11.5.

6.3 Comments on the Sub-Theory of Delay

In an earlier chapter I described a case study of implementation performed by Pressman and Wildavsky. They describe the failure of efforts to implement an Economic Development Administration Program in Oakland, California. They discuss the determinants of delay in that project. In their view delay is a function of resources, intensity of interest and direction of interest.

...each actor's relationship to a program may be characterized along three dimensions. What is the direction of his preference on the matter at issue? Is he for or against it? What is his intensity of preference? Does he care a lot about it, or is he
relatively indifferent? What resources can be bring
to bear to affect the outcome? Is he strong or

They illustrate the relationship among the variables graphically.

![Diagram]

Figure 11.6 Delay as a function of direction of interest, intensity
of interest, and commitment of resources (from Pressman
and Wildavsky, 1973, p. 120).

Looking at the diagram on the left we see that where the implementer has
a positive interest in the program, delay decreases as intensity of
interest and resource level increase. The diagram on the right indi-
cates that, for an implementer who opposes the program, delay increases
as resources and intensity of interest increase. This analysis is quite
different from that presented in the delay sub-theory. The term
"resources" as used by Pressman and Wildavsky refers to the power or
influence of the implementer, whereas in this sub-theory the term
refers to the material, equipment, personal, or money needed to carry
out a new policy. The notion of the power of the implementer does not
enter this version of the theory of implementer behavior but should
be considered for inclusion in later versions. Pressman and Wildavsky
concepts of direction and intensity of interest in the policy may be distinctly related to a concept of an "attitude toward a policy innovation", another concept which does not enter this theory. According to Fishbein's theory we would expect attitude toward the policy innovation to be related to attitudes about behaviors toward the policy, but not consistently related to either behavioral intention or behavior. This may lead us to conclude that two of the concepts employed by Pressman and Wildavsky to explain delay behavior, viz., direction and intensity of interest, may not be consistently related to delay behavior, whether conditioned by the power of the implementer or not. This concludes discussion of the delay sub-theory.

7. **Sub-Theory of Voice**

7.1 **Extrinsic Part of the Sub-Theory**

An implementer may respond to a directive to implement a policy innovation by exhibiting what Hirschman calls "voice." He defines voice as:

> Any attempt at all to change, rather than to escape from an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to change public opinion. (1970, p. 30)

Voice includes the following sub-types of behavior: bargaining for change in the policy or the method being used to implement it, protests, refusal to change behavior in the manner specified, work slow-downs, strikes, and intentional excessive or deficient behaviors. The formal definition of the concept is:
C. 7 Implementer's voice behavior: Behaviors which an evaluator judges are actions which are attempts to influence policy-makers or change agents to change the goals and/or means of policy innovation, or the way in which it is being implemented.

This behavior is predicted by the attitude-behavior concepts alone, at least in this version of the theory. Elements of the implementation situation influence the implementer's beliefs about the consequences as well as the implementers' bias for voice. However because of limitations I have discussed in the last sub-theory, such influences do not enter the theory as concepts and propositions. I will define the concepts for the sub-theory and list the contents of the implementer's beliefs about the consequences of voice:

C. 14 Implementer's Behavioral Intention to Voice: An implementer's expression of his/her degree of certainty that he/she will exhibit voice.

C. 49 Sum of the implementer's attitude toward voice and the implementer's subjective norm about voice: The name of the concept is also its definition.

C. 21 Implementer's attitude toward voice: An implementer's expression of his/her degree of favorableness or unfavorableness toward voice.

C. 28 Implementer's subjective norm about voice: An implementer's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers
familiar with the implementation situation think he/she should not exhibit voice.

C. 35 Sum of the products of the implementer's beliefs about the consequences of voice and the evaluation of those consequences: The name of the concept is also its definition.

C. 41 Sum of the products of the implementers normative beliefs about voice and the motivation to comply with referents expectations: The name of the concept is also its definition.

Some of the beliefs about consequences of voice (see C. 35) that may be important for predicting the "implementer's attitude toward voice" (C. 21) are listed in Table 11.4. These consequences would contribute to a favorable attitude toward voice if 1) the implementer believed that they were likely to occur if he/she exhibits voice, and 2) the implementer positively values the consequences. 5

7.2 intrinsic Part of the Sub-Theory of Voice

There is a paucity of references to voice behaviors in the literature on policy implementation and organizational innovation. Pressman and Wildavsky, in the only reference to any of the sub-types of voice that I have found in this literature, devote a few lines to bargaining. They indicate that person's who oppose a program will bargain over the peripheral aspects of a program if their intensity

\[5\] I could have added in concepts referring to implementation situation elements as I did in the sub-theory of delay. However, that was done for illustrative purposes. If the reader understands that those properties are potentially relatable to the concepts of the attitude-behavior core then it is not necessary to list them again.
Table 11.4 Perceived Positively Valued Consequences That Would Produce a Favorable Attitude Toward Voice.

<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Which is the Focus of the Belief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2. Implementer</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>Voice will induce change agent to:</td>
<td>Gross, Giacquinta and Bernstein</td>
</tr>
<tr>
<td></td>
<td>provide adequate feedback mechanisms</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>make efforts to clarity members' understanding of the innovation</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>provide materials and other necessary resources</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>make organizational arrangements compatible with the innovation</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>provide rewards for cooperation</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increase funding</td>
<td>Berman and &quot;</td>
</tr>
<tr>
<td></td>
<td>increase involvement, support and accessibility</td>
<td>McLaughlin &quot;</td>
</tr>
<tr>
<td></td>
<td>improve adequacy of inter-organizational communication activities</td>
<td>Van Meter and Van Hora &quot;</td>
</tr>
<tr>
<td>4. Innovation</td>
<td>Voice will result in:</td>
<td>Zaltman, Duncan and Holbek</td>
</tr>
<tr>
<td></td>
<td>reduced financial cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced social cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced risk and uncertainty</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced performance radicalness</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced structural radicalness</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced impact on interpersonal relations</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>reduced commitment required</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased return on investment</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased efficiency</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased communicability</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased divisibility</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased perceived relative advantage</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased or reduced complexity</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased or reduced terminality</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>increased reversibility</td>
<td>&quot;</td>
</tr>
<tr>
<td>5. Context</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
of dislike for the program is low and will bargain over essential aspects if their opposition is intense.

The sub-theory proposed here is slightly more complex. I argue that voice, in general, and bargaining in particular will occur if the implementer has a favorable attitude toward voice and a favorable subjective norm. Attitude toward voice will be favorable if the implementer believes that his/her voice behavior will result in consequences which he/she values. Pressman and Wildavsky do not consider the implementer's beliefs about the efficacy of his or her action, whereas this is part of the determinant of $A_n$ for voice. Nor do Pressman and Wildavsky consider the role that subjective norm may play in influencing an implementer's intention to engage in voice behaviors.

Thus despite its simplicity the sub-theory of implementer voice behavior does represent an advance over existing treatments of the behavior. Whether this sub-theory has greater predictive power is the test I consider important. The propositions are presented below.

Pr. 5 AIS, the greater the 'implementer's behavioral intention to voice' at $t_2$, the greater the 'implementer's voice behavior' at $t_3$.

Pr. 12 AIS, the greater the 'sum of the implementer's attitude toward voice behavior and the implementer's subjective norm about voice behavior' at $t_2$, the greater the 'implementer's behavioral intention to voice' at $t_2$.

Pr. 19 AIS, the greater the 'sum of the products of the implementer's normative beliefs about voice and the motivations to comply with referents' expectations ($\cap bm$)' at $t_2$, the greater the subjective norm about voice' at $t_2$. 
Figure 12: Path Diagram of Voice Sub-theory.
Pr. 26 AIIS, the greater the 'sum of the products of the implemen-
ter's beliefs about the consequences of voice and the eva-
ulation of those consequences' ($\gamma$ be) at $t_2$, the greater the
attitude toward performing voice behaviors' at $t_2$.

This concludes the discussion of the voice sub-theory. We
now turn to the problem of predicting when an implementer will bluff
instead of carrying out a policy innovation.

8. Sub-Theory of Bluffing

8.1 Extrinsic Part of the Sub-Theory

Bluffing is behavior which appears to carry out the policy
innovation but which actually does not.

C. 8 Implementer's bluffing behavior: Behaviors which an
evaluator judges are attempts to give the appearance
of carrying out the goals and/or procedures of the
policy innovation, but which actually do not.

An implementer will choose to bluff when the consequences of
non-compliance with the innovation are severe and when capability
(understanding, resources, cooperation of others) is lacking. The more
severe the consequences of non-compliance and the less the implementer's
capability, the greater the probability that the implementer will give
the appearance of implementing the policy while actually not doing so.

If we are to express this assertion in formal terms, the following con-
cepts are necessary:

C. 15 Implementer's Behavioral Intention to Bluff: An imple-
menter's expression of his/her degree of certainty that
he/she will bluff.
C. 50 Sum of the implemener's attitude toward bluffing and the implemener's subjective norm about bluffing: The name of the concept is also its definition.

C. 22 Implementer's attitude toward bluffing: An implementer's expression of his/her degree of favorableness or unfavorableness toward bluffing.

C. 29 Implementer's subjective norm about bluffing: An implementer's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers familiar with the implementation situation think he/she should or should not bluff.

C. 36 Sum of the products of the implementer's beliefs about the consequences of bluffing and the evaluation of those consequences: The name of the concept is also its definition.

C. 43 Sum of the products of the implementer's normative beliefs about voice and the motivation to comply with referents' expectations: The name of the concept is also its definition.

In addition to the above concepts which refer to the attitude-behavior core of the theory, the following concepts are also included:

C. 52 Implementer's understanding of the policy innovation.

C. 53 Implementer's understanding of the behaviors required to implement the policy innovation.

C. 54 Implementer's possession of the resources needed to
perform the required implementing behaviors.

C. 55 Extent to which the implementer's conforming behavior is dependent on the cooperation of others.

C. 56 Change agent's provision of adequate feedback mechanisms.

C. 57 Change agent's efforts to clarify the implementer's understanding of the policy innovation.

C. 58 Change agent's efforts to clarify the implementer's understanding of the policy innovation.

C. 59 Change agent's provision of resources to aid implementation.

C. 60 Policy innovations specificity of goals and means.

C. 61 Complexity of the policy innovation.

C. 62 Divisibility of the policy innovation.

C. 63 Amount of change that has occurred in the policy innovation.

C. 64 Performance radicalness of the policy innovation.

Before proceeding to the intrinsic part of the theory I will introduce Table 11,5 which contains the beliefs about the consequences of bluffing that would contribute toward a favorable attitude toward bluffing if 1) the implementer believed that they were likely to occur if he/she bluffs and 2) the implementer positively values the consequences.

8.2 Intrinsic Part of the Bluffing Sub-Theory

In the introduction to the extrinsic section of the sub-theory I suggested that bluffing was a function of perceived severe consequences for non-compliance and low capability to comply. This phrasing
<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2. Implementer</td>
<td>Bluffing will result in:</td>
<td>Zaltman, Duncan, Holbek</td>
</tr>
<tr>
<td></td>
<td>increased security</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>decreased anxiety</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>avoidance of implementing a policy I disagree with</td>
<td>Baum</td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>avoidance of sanctions</td>
<td>Berman &amp; McLaughlin, Van Meter &amp; Van Horn</td>
</tr>
<tr>
<td>4. Innovation</td>
<td>Bluffing will allow me to avoid a policy innovation that has:</td>
<td>Zaltman, Duncan, Holbek</td>
</tr>
<tr>
<td></td>
<td>high financial cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high social cost</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high risk and uncertainty</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high pervasiveness</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high complexity</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high structural radicalness</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high performance radicalness</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high commitment required</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>high impact on interpersonal relationships</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low return on investment</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low efficiency</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low compatibility</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low perceived relative advantage</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low terminality</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low reversibility</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>low susceptibility to successive modification</td>
<td>&quot;</td>
</tr>
<tr>
<td>5. Context</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
suggests dependence or interaction between those factors in determining the choice of bluffing behavior. Someone would not bluff given only a lack of capability or threat of a severe penalty for non-compliance. I am arguing that both factors are necessary to produce bluffing. However, it is not feasible to represent such a notion in this version of the theory. The complexity of this sub-theory would be much greater if this idea were attempted.

In order to incorporate this idea an interaction term composed of the product of a concept "perceived consequences of non-compliance" and a concept composed of the variables measuring resource availability (C. 54), understanding (C. 52 and C. 53), and dependence on cooperation (C. 53) would have to be constructed and related to the "implementer's behavioral intention to bluff." This task can be accomplished at a later date. The present sub-theory of bluffing will be constructed in a simpler way. The factor of capability will be considered independently from perception of consequences of non-compliance. The propositions included in the sub-theory follow:

Pr. 6 AIS, the greater the 'implementer's behavioral intention to bluff' at t_2, the greater the 'implementer's bluffing behavior' at t_3.

Pr. 13 AIS, the greater the 'sum of the implementer's attitude toward bluffing and the implementer's subjective norm about bluffing' at t_2, the greater the 'implementer's behavioral intention to bluff at t_2.'

Pr. 20 AIS, the greater the 'sum of the products of the implementer's normative beliefs about bluffing and the motivation to comply with referents expectations about bluffing' at t_2, the greater
Figure II.5 Path Diagram of Bluffing Behavior Sub-theory.
the 'subjective norm about bluffing' at $t_2$.

Pr. 27 AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of bluffing and the evaluation of those consequences' at $t_2$, the greater the 'attitude toward bluffing' at $t_2$.

Pr. 59 AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to bluff' at $t_2$.

Pr. 60 AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to bluff' at $t_2$.

Pr. 65 AIS, the greater the 'implementer's possession of the resources needed to perform the required implementing behaviors' at $t_2$, the lesser the implementer's behavioral intentions to bluff' at $t_2$.

Pr. 38 AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at $t_2$, the greater the implementer's behavioral intention to bluff' at $t_2$.

In addition to these propositions, which are new, we have the familiar determinants of the implementer's understanding and possession of resources. These are all diagrammed in figure 11.8. This concludes the exposition of the sub-theory of bluffing. We turn to the last sub-theory.

9. Sub-Theory of Exit
9.1 **Extrinsic Part of the Sub-Theory**

C. 9 **Implementer's exit behavior:** Behaviors which an evaluator judges to be attempts to avoid implementing a policy by requesting a transfer, trying to quit the organization, or trying to have the responsibility for implementing the policy shifted to someone else. We would expect an intended implementer to choose this behavior very rarely, only in extreme conditions, and only after the milder forms of noncompliance had been rejected as not feasible.\(^6\)

Unlike most of the other behaviors included in this theory some research has been done which is peripherally related to the problem of predicting when an implementer will try to exit from an implementation situation. March and Simon (1958, pp. 93-106) have discussed the determinants of job turnover. Miner and Brewer have reviewed the literature on turnover up to 1970 (1976, p. 1003). Some of what these reviews of the literature have found can be incorporated into the general approach that has been taken in constructing the theory of implementer behavior. The attitude-behavior core absorbs several of the concepts found relevant in these studies very nicely. The concepts included in the exit sub-theory are listed below.

C. 16 **Implementer's behavioral intention to exit:** An implementer's expression of his/her degree of certainty that they will exit.

---

\(^6\)Further research may discover that the noncompliant behaviors form a scale. Bluffing and exit may occur under severe conditions only, modification and voice in less severe situations, and delay and ritualism in least severe cases.
C. 51 **Sum of the implementer's attitude toward exit and the implementer's subjective norm about exit:** The name of the concept is also its definition.

C. 23 **Implementer's attitude toward exit:** An implementer's expression of his or her degree of favorableness or unfavorableness toward exit.

C. 30 **Implementer's subjective norm about exit:** An implementer's perception that the change agent, his/her immediate supervisor (assuming that the change agent and immediate supervisor are different persons), and peers familiar with the implementation situation think he or she should or should not exit.

C. 37 **Sum of the products of the implementer's beliefs about the consequences of exit and the evaluation of those consequences:** The name of the concept is also its definition.

C. 44 **Sum of the products of the implementer's normative beliefs about exit and the motivation to comply with referents' expectations:** The name of the concept is also its definition.

In addition to these concepts the sub-theory also includes the thirteen concepts which refer to the implementer's capability to implement and the determinants of capability (see the bluffing sub-theory for a list). These concepts are noted in figure 11.8, and have been defined previously.

Table 11.6 contains the beliefs about consequences of exit
Table 11.6 Perceived Positively Valued Consequences That Would Produce a Favorable Attitude Toward Exit

<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>Perceived Consequence</th>
<th>Researcher Who Mentions Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Which is the Focus of the Belief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Change Agent</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2. Implementer</td>
<td>If I exit I will be able to:</td>
<td>Zaltman, Duncan and Holbek</td>
</tr>
<tr>
<td></td>
<td>increase conformity of job to self image</td>
<td></td>
</tr>
<tr>
<td></td>
<td>increase compatibility of job and other roles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>increase satisfaction with the job</td>
<td></td>
</tr>
<tr>
<td></td>
<td>find another position easily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>increase my security</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reduce anxiety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>avoid implementing a policy which is contrary to my policy preferences</td>
<td></td>
</tr>
<tr>
<td>3. Change Agent's Programming Behavior</td>
<td>avoid sanctions</td>
<td>Van Meter and Van Horn</td>
</tr>
<tr>
<td>4. Innovation</td>
<td>If I exit I will be able to avoid implementing a policy which has:</td>
<td>Zaltman, Duncan and Holbek</td>
</tr>
<tr>
<td></td>
<td>high financial cost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high social cost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high risk and uncertainty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high pervasiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high complexity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high structural radicalness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high performance radicalness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>high impact on interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low compatibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low perceived relative advantage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low terminality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low reversibility</td>
<td></td>
</tr>
<tr>
<td>5. Context</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
that would contribute toward a favorable attitude toward exit if 1) the implementer believed that they were likely to occur if he/she exits and 2) the implementer positively values the consequences. It is through this concept that several of the concepts found to influence job turnover enter the sub-theory. See especially the factors listed under "implementer."

9.2 Intrinsic Part of the Sub-Theory

The form of the exit sub-theory is quite similar to that of the bluffing sub-theory. Therefore little exposition is necessary. I will present the new propositions of the sub-theory below.

Pr. 7 AIS, the greater the 'implementer's behavioral intention to exit' at $t_2$, the greater the 'implementer's exit behavior' at $t_3$.

Pr. 14 AIS, the greater the 'sum of the implementer's attitude toward exit and the implementer's subjective norm about exit' at $t_2$, the greater the 'implementer' behavioral intention to exit' at $t_2$.

Pr. 21 AIS, the greater the 'sum of the products of the implementer's normative beliefs about exit and the motivation to comply with referent's expectations about exit' at $t_2$, the greater the 'subjective norm about exit' at $t_2$.

Pr. 28 AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of exit and the evaluation of those consequences' at $t_2$, the greater the 'attitude toward exit' at $t_2$.

Pr. 54 AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to exit' at $t_2$. 

Figure 11.4 Path Diagram of the Exit Behavior Sub-theory.
Pr. 56 AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \( t_2 \), the lesser the 'implementer's behavioral intention to exit' at \( t_2 \).

Pr. 63 AIS, the greater the 'implementer's possessions of the resources needed to perform the required implementing behaviors' at \( t_2 \), the lesser the 'implementer's behavioral intention to exit' at \( t_2 \).

Pr. 66 AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at \( t_2 \), the greater the 'implementer's behavioral intention to exit' at \( t_2 \).

In addition to these propositions, which are now, glance at figure 11.8 will reveal the familiar set of propositions which express the determinants of the implementer's understanding and possession of resources. This concludes our discussion of the exit sub-theory.
CHAPTER 12. TESTING AND EXTENDING THE THEORY

1. Introduction.

In this concluding chapter I will discuss general procedures for testing the theory, what is new about the theory, that is, what contribution it makes, and last, what extensions of the theory might be made.


Two topics must be discussed concerning tests of the proposed theory. First, how do we formulate a universe of implementation situations on which to conduct tests of the theory. Second, what procedures should be followed in tests of the theory.

2.1 Formulating a Universe of Implementation Situations.

Tests of the theory depend on specification of a universe of implementation situations on which data can be gathered. Universes must be constructed carefully since a fundamental way in which knowledge advances is through the falsification of theories. Theories ought to be tested under conditions which are most likely to falsify their contents. Although this is desirable in the case of the theory of implementer behavior, research on universes of implementation situations that would
offer the maximum likelihood of falsification is probably too expensive to be feasible. Let me explain.

When constructing a universe of implementation situations each of the elements of the implementation situation should be considered: the implementor, change agent, the change agent's programming behavior, the policy innovation, and the context. To assure maximum potential falsifiability would require that implementation situations be chosen that allowed wide variation in values of the properties of the elements of the implementation situation. Consider the policy innovation. We would like to include in our universe policy innovations which varied in complexity, performance radicalness, divisibility, and so on. Consider the change agent's programming behavior, we would like to include in our universe implementation situations which had a wide variation in the various properties of the change agent's programming behavior. And so on for each of the elements of the implementation situation.

These conditions could be created only through field experiments or through a very expensive search for an optimal set of implementation situations. In a search for "naturally occurring" implementation situations many situations would have to be rejected because, although they contributed to variation on one property of an element (say, policy innovation complexity) they would not contribute to variation on another element (say, change agent provision of resources). The difficulties with conduct of field experiments have been catalogued elsewhere (e.g., see Seashore, 1964). Suffice to say that this avenue is as difficult as the former.
Although maximum potential falsifiability is not a reasonable goal the attempt to construct universes that have a high potential for falsification should not be abandoned. A reasonable attempt to increase the potential for falsification would be to try to get a gross variation among the elements of the implementation situation. For example, we would expect that the theory would be more likely to be falsified if more than one policy innovation were employed, more than one context, and more than one change agent were examined. (since it makes no sense to consider tests of the theory with one implementer and since change agent programming behavior is more likely to vary across change agents than "within" change agents, these two elements need not be attended.) Tests of the theory should be performed on universes of implementation that allow for gross variation in several of the elements of the implementation situation. By gross variation I mean variation in the referent of elements rather than properties of the elements. For example, we would merely include several different new policies in the universe with attention to the complexity, specificity, divisibility, etc. of these policies. Then we would include in the universe several different implementing units with attention to gross characteristics of the units, for example, organizational size and organizational function, etc. This procedure would not assure maximum potential falsifiability but would produce a universe that would be more likely to lead to falsification than if only one policy being implemented by one type of organization was the basis for constructing a universe.
2.2 Guidelines for Tests.

Guided by the above considerations the researcher setting out to test the theory of implementer behavior should describe how a set of implementation situations were chosen to construct a universe. Then data will be gathered on each implementation situation in the universe. The data is generated by applying the referential formulas. The resultant data is called a referent (Gibbs, 1972, p. 132). For example, the referent generated by applying RIUP (referential formula for implementer's understanding of the policy innovation) to an implementation situation might be a value of 3.1. This would be the average score of the responses on the item RIUP for a particular implementation situation. With these referents and others we could array our data in tables. As in the example below.

<table>
<thead>
<tr>
<th>Implementation Situation</th>
<th>RIUP Col. 1</th>
<th>RICB Col. 2</th>
<th>RIOB Col. 3</th>
<th>RIEB Col. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.1</td>
<td>4</td>
<td>2.9</td>
<td>2.6</td>
</tr>
<tr>
<td>2</td>
<td>4.2</td>
<td>3.6</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>3</td>
<td>2.9</td>
<td>3.2</td>
<td>3.1</td>
<td>3.2</td>
</tr>
<tr>
<td>4</td>
<td>2.5</td>
<td>2.1</td>
<td>3.7</td>
<td>1.9</td>
</tr>
<tr>
<td>5</td>
<td>2.1</td>
<td>3.2</td>
<td>2.7</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Referents such as those in the example above enter into three types of statements: epistemic statements, hypotheses, and descriptive statements. Two or more tests of a theory would yield different epistemic statements, hypotheses and descriptive statements. Note
Figure 12.1 Terms and Statements to be Employed in Tests of the Theory of Implementer Behavior.
that these statements are not part of the theory itself but are formulated in the process of testing the theory. They assure that tests will be related to the theory in a systematic way.

An *epistemic statement* includes as its substantive terms a referential formula and a referent (Gibbs, 1972, p. 292) for example:

Among the implementation situations included in the test, the greater the RIUP at $t_2$, the greater the referent in column 1.

This statement may seem superfluous, but it serves as a link in a chain of statements that tie theoretical statements to statements generated in tests of the theory. We can envision a set of these statements linking the referential formulas with the data collected to test the theorems of the theory.

An *hypothesis* in Gibbs' method is a formally derived prediction (p. 295-296). "An *hypothesis* is derived by the application of the sign rule to a theorem and two epistemic statements" (1972, p. 296). For example, Th. 30 reads:

(Tr 52, Pr 30, Tr 2) AIS, the greater the RIUP at $t_2$, the lesser the RIEB at $t_3$.

Hypothesis 30 would read:

Among the implementation situations used in the test, the greater the referent in Column 1, the greater the referent in Column 3.

The investigator describes the actual relation between the two sets of referents with a descriptive statement. Continuing our example:

Among the implementation situations included in the test, the rank-order coefficient of correlation between the referents in column 1 and the referents in column 3 is .792.
If these statements are constructed, and the above mentioned procedures followed, the test of the theory can be considered useful evidence about the predictive accuracy of the theorems from which the hypotheses are derived.

2.3 Comments on Levels of Measurement.

Before I go on to the next topic I should comment on the level of measurement assumed in some of the concepts of the theory and the level of measurement employed in tests of the theory. Several of the concepts of the attitude-behavior core of the theory assume a ratio or interval level of measurement. This includes those concepts which are defined as sums, products, and sums of products. For example, concepts 31-37 take the general form of "sum of the products of the implementer's beliefs about the consequences of performing various behaviors and the implementer's evaluation of those consequences" or

$$\sum_{i} b_{i} e_{i}.$$  

This concept assumes a ratio level of measurement. However none of the referential formulas in the current version of the theory generate data that could be considered interval or ratio data. There seem to be at least four ways of correcting this deficiency. First, reconstruct the theory with concepts assuming only an ordinal level of measurement. I reject this approach since movement away from sophisticated theories cannot be justified. Second, construct referential formulas that produce referents of a higher level of data. For example, the Thurstone Equal-Appearing Interval Technique could
be employed to construct scales that would produce a near-interval level of measurement. This seems to be a reasonable solution to the problem in the long run. Third, use ratio and interval level concepts and statistical techniques appropriate for ordinal level data. This approach ignores the problems with the use of ordinal measures (see Thomas P. Wilson, chapter 24 in Blalock, *Causal Models in the Social Sciences*). The fourth option would be to retain the concepts in the theory as they are, but to test the relations between concepts with the nonparametric statistics appropriate to an ordinal level of measurement. Given, the current version of the theory, and the state of the art of measurement in the social sciences this last proposal seems to be the most appropriate for the short run.

3. What's New About My Approach to Implementation?

In partial justification of leading the reader through a laborious text I would like to list the contributions that I hope this theory will make to the study of implementation. In this way I can argue that the effort we both expended was worthwhile.

A. The theory introduces several new concepts. Among the most interesting, from my point of view, were the concept of an implementation situation and the typology of implementer behaviors.

B. A mode of formal theory construction was employed. This is a great rarity in public administration and relatively rare in political science. I am not aware of any other cases in these disciplines where Gibbs' method has been employed.
C. I have introduced Fishbein's attitude - behavior theory into the study of implementation.

D. The theory of implementer behavior integrates concepts from both studies of organizational innovation and policy implementation in a theory of implementer behavior in policy implementation situations.


It seems just that I examine my theory in light of the same criteria I employed to evaluate the literature I reviewed.

A. Testability: The theory contains only operationalized concepts. This is a positive aspect. However, in my exposition of the theory I made statements that were suggestive and not explicit. These statements should be explicitly made in later versions. However, the theory is testable.

B. Range: The intended range of the theory is explicit. The theory is intended to predict the behavior of implementers of any rank of role in any policy implementation situation. The intended range is narrow in that it applies to only one type of innovation, new public policies, and not to the implementation of other types of innovations. The intended range is broad in that the theory purports to predict the behavior of implementer's of any rank or role, whatever the authority relations between policy maker, change agent and implementer, and irregardless of whether the policy maker, change agent and implementer belong to the same or different organizations.¹

¹See my discussion of simplifying assumptions in Chapter 8 for further information on these factors.
C. **Linguistic Exactness:** The intension and extension of all concepts has been made explicit. Concepts are explicitly related to implementation situation elements. Referential formulas are explicitly linked to concepts via transformational statements.

D. **Temporal Relations:** The temporal referents of all substantive terms are specified. However, the theory employs only a few of the types of temporal relations that might be considered. I will mention several examples. The possibility of predicting sequences of behavior has not been considered. That is, the theory says nothing about the likelihood that an implementer may delay at $t_3$, and then exit at $t_4$. Second, the possibility of feedback has not been considered. The result of the implementer modifying the policy innovation at $t_3$ may alter the properties of the innovation which predict implementer behavior at $t_4$. Finally, the theory contains no statements about how the pre-adoption history of the change agent-implementer relation or the context may influence implementer behavior. For example, it is reasonable to expect that a bad experience with implementing previous policies may influence present efforts.

E. **Falsifiability:** The theory meets the minimum qualifications for falsifiability. It is testable, its intended range is specified, and the statements are precise enough to risk being falsified. The theorist can do no more than this. Investigator's must conduct tests under conditions which are likely to falsify the theory. I have discussed these conditions.

In Tables 8.1 and 8.2 I noted the correlations and multiple correlations that had been obtained in tests of Fishbein's attitude
behavior theory. The typical values found average to .8. I will consider this figure to be the level of predictive accuracy to be aimed for by the theory of implementer behavior. However, I do not expect this level to be reached with this version of the theory. The theory fails to take account of factors which may modify the relations between variables. I have not constructed a "contingency theory". All of the propositions in the theory assume a linear relation between concepts, even though it is plausible to assume that other factors condition the relationships. The theory has been purposefully simplified in this way. Later elaborations should deal with contingent relationships.

5. Conclusion.

In this last chapter I have discussed the contributions made by the theory of implementer behavior and have made several general recommendations for extension of the theory. I discussed construction of a universe of implementation situations and general guidelines for conducting tests of theory.

My aspiration at this point is not that the theory be widely read and discussed but that it be tested.
APPENDIX A: THE EXPANDED TYPOLOGY OF IMPLEMENTER BEHAVIORS

The purpose of this Appendix is to elaborate the typology of implementer behavior discussed briefly in Chapter 7. The six dimensions of the typology produce 216 cells, most of which describe behaviors which are uninteresting for the problem of policy implementation. Figure A.1 portrays a six cell typology formed by two properties of the implementer's behavior: 1) the concurrent behavioral intention to conform or not to conform with the policy and 2) the evaluator's observation of either compliance with the policy, an old SOP, or a behavior which is neither mere compliance nor an old SOP.

Two cells of this general typology, viz., Cells 2 and 4, describe behaviors which would be observed infrequently by implementation situations. In Cell 1 will be found conforming behavior which has been described in Chapter 7. Cells 3, 5 and 6 contain behaviors which we will describe further.

In Figure A.2 we see the classification of three behaviors: excessive, deficient and voice. These behaviors are described in Chapter 7. Figure A.3 portrays the classification of ritualistic behavior, delay, and bluffing. Finally, Figure A.4 is a representation of the classification of modification, delay, voice, bluffing and exit. The empty cells in these figures are not likely to describe interesting implementer behaviors. Figure 7.2 and the description of the behaviors in the text of Chapter 7 should provide the reader sufficient
description of the classification scheme. Two points should be noted. First, as I said in Chapter 7, the typology is not perfect. It needs further work to reach complete mutual exclusivity of the types. Second, a test of the typology will require production of operational statements for each property. These are not provided with the referential formalas in Appendix B.
## Evaluator Observes

<table>
<thead>
<tr>
<th>Compliance</th>
<th>Old SOP</th>
<th>Neither Mere Compliance nor Old SOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Intention to Conform</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Behavioral Intention Not to Conform</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

See Figure A.2

See Figure A.3

See Figure A.4

Figure A.1 The Expanded Typology at a General Level
Behavioral Intention to Conform/Evaluator Observes Neither More Compliance nor old SOP.

![Figure A.2 Classification of Excessive, Deficient and Voice Behaviors](image)
Behavioral Intention Not to Conform/Evaluator Observes Old SOP

![Diagram showing classification of ritualistic behavior, delay, and bluffing.]

Figure A.3 Classification of Ritualistic Behavior, Delay, and Bluffing.
Behavioral Intention Not to Conform/Evaluator Observes
Neither More Compliance nor Old SOP

<table>
<thead>
<tr>
<th></th>
<th>Covert</th>
<th>Covert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excessive</td>
<td>Deficient</td>
</tr>
<tr>
<td>Policy</td>
<td>Modification</td>
<td>Modification</td>
</tr>
<tr>
<td>Stays Direct Target</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Covert</th>
<th>Covert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bluffing</td>
<td>Delay</td>
</tr>
<tr>
<td>Other Actors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are Direct Targets</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Covert</th>
<th>Covert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay</td>
<td>Exit</td>
</tr>
<tr>
<td>Neither Actors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nor Policy Is Direct Target</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure A.4 Classification of Modification, Delay, Voice, Bluffing and Exit
APPENDIX B: REFERENTIAL FORMULAS

1. Introduction

This appendix contains the referential formulas for the concepts of the theory of implementer behavior. It also contains instructions for applying the formulas to gather data for tests of the theory. The reader should note that the validity and reliability of these measures has not been determined. In some cases the measures are only suggestive of operational statements that should be constructed for tests of the theory.

2. (C.1–C.9) Referential Formulas for Implementer Behaviors

The behaviors and the corresponding acronyms for the referential formulas are: Referential for Implementer's Conforming Behavior (RICB), implementer's excessive behavior (RIEB), deficient behavior (RIDFB), innovative behavior (RIIB), ritualistic behavior (RIRB), delay (RIDB), voice (RIVB), bluffing (RIBB), exit (RIEXB).

In order to specify the referential formulas for Implementer Behaviors several matters have to be considered. 1) What is a policy statement? 2) How will an evaluator decide which policy statement to employ in judging implementer behavior if more than one policy statement seems to exist? 3) How is an evaluator to be chosen? 4) What procedure for judging implementer behavior will the evaluator employ? Specifying these procedures and definitions is a matter of judgement. Arguments about the value of my judgement can be made, but the ulti-
mate test of a theorist's judgement at each phase in the development of a theory is how well it predicts the occurrence of the phenomena in question.

For the purpose of this theory the policy statement may be in either verbal or written form. It may be a law, regulation, set of procedural guidelines, judicial ruling, or verbal directive. A written policy statement may be amended verbally; in some cases the policy statement that describes the policy innovation will not be clear. When there is disagreement among implementer's about what the policy statement contains, the investigator should depend on the definition of the policy statement provided by the change agent. (See the discussion of the implementation situation specification in Chapter 9 for the procedure for identifying the change agent.)

In the case of a test of the theory where several change agents are identifiable the change agents will identify the policy makers to whom they look for interpretation of the content of the policy. In cases where there is disagreement among change agents about who that policy maker is the policy maker designated by the majority of the change agents will be specified as the policy maker. When there is disagreement among change agents about the content of a policy statement, the policy statement's goals and means as specified by the policy maker will be used by the evaluator to make judgements about the implementer's behaviors.

There are two possible evaluators of implementer behaviors—the investigator and the change agent. The advantages of the investigator evaluating implementer behavior are 1) the investigator will not have an interest in the behaviors performed by implementers, as the
change agent may have, and, is likely to be more objective in comparing implementer behavior with policy statements, 2) the investigator may be able to standardize judgements about implementer behavior across implementation situations to a greater degree than would be the case if each change agent evaluated the implementer(s) under him/her.

The advantages of employing the change agent are 1) the change agent will have greater familiarity with the behavior of the implementer than the investigator will 2) the cost of employing change agents as evaluators would be much less than employing the investigator's resources to judge implementer behavior. The cost of employing the investigator as evaluator may be prohibitive in studies with large numbers of geographically dispersed implementation situations. Since there are advantages to both and the probability of change agent bias is unknown, the choice of evaluator is left to the investigator's discretion.

The desirable characteristics of a procedure/instrument for evaluating implementer behaviors are: 1) That the instrument be general enough to be applied across many different policy implementation situations and to the behavior of implementers of various organizational ranks and roles, 2) that it be applicable by either a change agent or an investigator, 3) that the instrument be valid and reliable. Empirical research will be needed to assess the extent to which the instrument I propose has those characteristics.

Instructions: Rate the person by comparing his/her behavior with the statement of the policy. Do not compare the person with other implementers. Focus on how their behavior relates to the standard of the policy statement.
1. (RICB) To what extent has the person carried out . . . (describe the policy or name it)? To what extent has he/she made the necessary decisions and taken the necessary actions to implement the policy?

2. (RIEB) To what extent has the person gone to extremes in carrying out the policy? To what extent has he/she exaggerated the goals and/or means that were intended?

3. (RIDFB) To what extent has the person made an error(s) carrying out the policy? To what extent have they mistaken the goals and/or means of the policy in spite of an intention to faithfully implement the policy?

4. (RIMB) To what extent has the person intentionally modified the goal and/or means of the policy statement in carrying out the policy.

5. (RIRB) To what extent has the person continued to perform behaviors traditionally performed, or, to what extent has the person reverted to, or never changed from, the old standard operating procedure?
6. (RIDB) To what extent has the person delayed his/her carrying out of the policy? (Delay may be intentional or out of the person’s control, in either case record the extent to which the person has delayed carrying out the policy.)

7. (RIVB) To what extent has the person attempted to change the policy’s stated goals and/or means or the way in which it is being implemented by appealing to higher authorities, alone or with others, or, through actions and protests, including those that are meant to change public opinion?

8. (RIIBB) To what extent has the person pretended to carry out the policy while actually not doing so? To what extent is the person bluffing?

9. (RIEXB) To what extent has the person attempted to avoid implementing the policy by trying to request a transfer, resign, or have the responsibility of implementing the policy assigned to someone else?

3. (C.10-C.16) Referential Formulas for Implementer Behavioral Intentions

Referential formulas for implementer behavioral intention to
conform (RIBIC), modify (RIBIM), ritualistic behaviors (RIBIR),
delay (RIBID), voice (RIBIV), bluffing (RIBIB), exit (RIBiEX)
(Fishbein and Ajzen, Chapter 7; Newman, 1974, pp. 610-615).

These items would be included in the implementer questionnaire. They are intended to be generalizable across implementation situations. Because implementers may be reluctant to frankly state their intentions, the investigator must ensure them that the information will be kept confidential.

1. (RIBIC) I intend to perform the actions and make the decisions required of me to carry out the policy (described policy).

<table>
<thead>
<tr>
<th>extremely likely</th>
<th>quite likely</th>
<th>uncertain</th>
<th>quite unlikely</th>
<th>extremely unlikely</th>
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2. (RIBIM) I intend to carry out the policy, but my actions will vary somewhat from the goals and/or means expressed in the policy.

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<tr>
<th>extremely likely</th>
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3. (RIBIR) I intend to continue to perform my duties as I have done in the past, in spite of the new policy.

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<th>extremely likely</th>
<th>quite likely</th>
<th>uncertain</th>
<th>quite unlikely</th>
<th>extremely unlikely</th>
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</table>

4. (RIBID) I intend to put off (delay) performing the behaviors required of me to carry out the policy.

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<th>extremely likely</th>
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<th>uncertain</th>
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</table>
5. (RIBIV) I intend to try to get the goals and/or means of the policy, or the way in which it is being implemented, changed. I will take some action, alone or with others, to try to change the policy or the way it is being carried out.

<table>
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<tr>
<th>extremely likely</th>
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6. (RIBIB) I intend to give the appearance of carrying out the policy while actually not performing the behaviors necessary to carry out the policy.

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<th>extremely likely</th>
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<th>uncertain</th>
<th>quite unlikely</th>
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7. (RIBLEX) I intend to try to avoid implementing the policy by resigning, asking for a transfer, or asking that someone else be made responsible for implementation.

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<tr>
<th>extremely likely</th>
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4. (C.17-C.23) Referential Formulas for Implementer's Attitude Toward Performing Behaviors

Referential formula for implementer's attitude toward performing conforming behaviors (RIAC), attitude toward modification (RIAM), ritualistic behaviors (RIAR), delay (RIAD), voice (RIAV), bluffing (RIAB), exit (RIAEX). These items would be included in the implementer questionnaire. They are intended to be generalizable across implementation situations.
1. (RIAC) I would like to carry out the behaviors required to implement the policy (describe policy if necessary) as they have been communicated to me.

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<tr>
<th>strongly agree</th>
<th>agree</th>
<th>uncertain</th>
<th>disagree</th>
<th>strongly disagree</th>
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</table>

2. (RIAM) I would like to contribute to carrying out the policy but want to modify the goal and/or means of the policy somewhat as I implement it.

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<tr>
<th>strongly agree</th>
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<th>uncertain</th>
<th>disagree</th>
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3. (RIAR) I would like to continue to do things in the way I have done them in the past, or, according to the old standard operating procedure.

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<tr>
<th>strongly agree</th>
<th>agree</th>
<th>uncertain</th>
<th>disagree</th>
<th>strongly disagree</th>
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4. (RIAD) I would like to put off carrying out the policy until later.

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<tr>
<th>strongly agree</th>
<th>agree</th>
<th>uncertain</th>
<th>disagree</th>
<th>strongly disagree</th>
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5. (RIAV) I would like to take some action to get either the goals of the policy, the means the policy specifies for attaining those goals, or the way in which the policy is being implemented changed.

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<tr>
<th>strongly agree</th>
<th>agree</th>
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<th>disagree</th>
<th>strongly disagree</th>
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6. (RIAB) I would like to give the appearance of carrying out the po-
olicy while actually not carrying it out.

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<th>strongly agree</th>
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<th>uncertain</th>
<th>disagree</th>
<th>strongly disagree</th>
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7. (RIAEX) I would like to avoid implementing the policy altogether by resigning, asking for a transfer, or requesting that someone else be made responsible for implementing the policy.

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<th>strongly agree</th>
<th>agree</th>
<th>uncertain</th>
<th>disagree</th>
<th>strongly disagree</th>
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</table>

5. (C.24-C.30) Referential Formulas for Implementer's Subjective Norms:

Referential formula for implementer's subjective norm about conforming behavior (RISNC), subjective norm about modification (RISNM), ritualistic behavior (RISNR), delay (RISND), voice (RISNV), bluffing (RISNB), exit (RISNEX). The following items would be included in the implementer questionnaire. They are intended to be generalizable across implementation situations. (Fishbein and Ajzen, 1975, p. 314)

1. (RISNC) Most people who are important to me think
   I should \( \frac{5}{4} \frac{3}{2} \frac{1}{1} \) I should not carry out the actions/make the decisions required of me to implement the policy (describe policy).

2. (RISNM) Most people who are important to me think
   I should \( \frac{5}{4} \frac{3}{2} \frac{1}{1} \) I should not carry out the policy, in general, but change the goal or means
somewhat, or change the way the policy is being implemented in some way.

3. (RISNR) Most people who are important to me think
I should ______ ______ ______ ______ ______ I should not continue to perform my duties as I have in the past, or, according to the old standard operating procedure, in spite of the new policy.

4. (RISND) Most people who are important to me think
I should ______ ______ ______ ______ ______ I should not put off carrying out the policy until a later date.

5. (RISNV) Most people who are important to me think
I should ______ ______ ______ ______ ______ I should not attempt to persuade my immediate superior, or higher authorities, to change the policy or the way it is being implemented by expressing my dissatisfaction either directly or indirectly, including through acts taken to change public opinion about the policy.

6. (RISB) Most people who are important to me think
I should ______ ______ ______ ______ ______ I should not give the appearance of carrying out the policy while actually not carrying it out.

7. (RISNEX) Most people who are important to me think
I should ________ ________ ________ I should not

avoid implementing the policy by resigning, asking for a transfer, or, requesting that responsibility for implementing the policy be shifted to someone else.

6. (C.31–C.37) Referential formulas for 'sum of the products of beliefs about the consequences of behaviors and the evaluation of those consequences. (Conforming behavior (RISAC), modification (RISAM), ritualistic behavior (RISAR), delay (RISAD), voice (RISAV), bluffing (RISAB), exit (RISAEX).) Two alternative ways of constructing the formula are possible. First, the investigator may use the set of beliefs referred to in the tables in Chapter's 10 and 11 as "Perceived Positively Valued Consequences that would Produce a Favorable Attitude Toward X Behavior." The beliefs can be used in items in the implementer's questionnaire. A second method would consist of the following steps. First, a set of salient beliefs about the consequences of performing conforming behaviors, innovative behaviors, ritualistic behaviors, delay, voice, bluffing, and exit must be identified. This is done by asking an independent sample of implementer's in the universe of implementation situations to identify (list) up to five consequences or outcomes that they believe are associated with performing the seven behaviors. (Five consequences are elicited because research on human information processing indicates that 5 to 9 items of information is the upper limit of human ability to attend to or process at a point in time (Fishbein and Ajzen, 1975, p. 218).

The five most frequently mentioned consequences are used in the
next steps. Step two involves constructing measures of evaluation of the five consequences. These measures will become part of the implementer questionnaire. Suppose that one of the beliefs most frequently associated with conforming behavior is that conforming behavior will contribute to implementing a policy that is important and beneficial. Then an item might be constructed like this:

Instructions: Indicate your feeling about the following consequences of your cooperating with carrying out the new policy.

My cooperation will contribute to implementing a policy that is important and beneficial.

Good 5 4 3 2 1 Bad

Items would be constructed in this way for the other four (if there are that many) consequences identified by the independent sample. In turn, the consequences identified for other behaviors would be handled in the same way. For example:

Instructions: Indicate how you feel about the following consequences that might result from your resigning your job, asking for a transfer, or, asking that someone else be made responsible for implementing the policy rather than implementing the policy.

These actions would result in bad relation with my superiors

Good 5 4 3 2 1 Bad

Now we have a measure of the implementer's evaluation of the consequences of performing the various behaviors that can be plugged into the formula \( b_1 \cdot e_1 \) as \( e_1 \). The third step is to use the sets of conse-
quences of behaviors identified by our independent sample to construct measures of the subjective probability that the consequences are related to performing behaviors. Using the same consequences as examples we can show what an item might look like on the implementer questionnaire.

If I cooperated with implementing policy (describe) I will contribute to implementing a policy that is important and beneficial.

probable __________ improbable
5 4 3 2 1

If I attempted to resign, request a transfer, or ask that someone else be made responsible for implementing the policy it would result in bad relations with my superiors.

probable __________ improbable
5 4 3 2 1

These items constructed for each consequence of each behavior will produce our $b_i$ values. The last step is to calculate the sum of the products of the beliefs about the consequences of performing the behaviors and the evaluations of the consequences.

7. (C.38-C.44) Referential formulas for 'sum of the products of the implementer's normative beliefs about behaviors and the motivation to comply with the referents with those expectations' (conforming behavior (RISC), modification (RISM), ritualistic behavior (RISR), delay (RISD), voice (RISV), bluffing (RISB), exit (RISEX):

This referential formula is used in three steps. The first step consists of constructing measures of the implementer's normative beliefs for the change agent, the implementer's immediate supervisor
(assuming that the immediate supervisor is not the change agent), and
the implementer's work-related peers. The second step is to construct
measures of the implementer's motivation to comply with these referents.
The third step is to gather the data and plug it into the formula -

\[ y_i = b_i \cdot m_i \]

It will be necessary to gather data on implementer's normative
beliefs and motivation to comply for each of the three referents.
However, I will illustrate the items in a general form. The blanks in
the items can be filled in with the appropriate name or identification
of change agent, supervisor or peers. The investigator should allow the
implementer to designate these referents, for example, by asking merely
for the normative beliefs of "peers".

1. [Name] thinks

I should [5 4 3 2 1] I should not take the necessary actions to carry out the policy.

2. [Name] thinks

I should [5 4 3 2 1] I should not carry out the policy, in general, but change the goal or means
somewhat, or change the way the policy is being implemented in some way.

3. [Name] thinks

I should [5 4 3 2 1] I should not continue to perform my duties as I have in the past, or according
to the old standard operating procedure, in spite of the new policy.

4. _________ thinks
I should [5 4 3 2 1] I should not put off carrying out the policy until a later date.

5. _________ thinks
I should [5 4 3 2 1] I should not attempt to persuade my immediate superior, or higher authorities, to change the policy or the way it is being implemented by expressing my dissatisfaction either directly or indirectly, including through acts taken to change public opinion about the policy.

6. _________ thinks
I should [5 4 3 2 1] I should not give the appearance of carrying out the policy while actually not carrying out the policy.

7. _________ thinks
I should [5 4 3 2 1] I should not avoid implementing the policy by resigning, asking for a transfer, or, requesting that responsibility for implementing the policy be shifted to someone else.

Measure of motivation to comply with referent: (Fishbein and Ajzen,
1975, p. 309). One indicator would be needed for each referent individual.

1. I intend to do what ________ think(s) I should do

| extremely likely | quite likely | uncertain | quite unlikely | extremely unlikely |

8. (C.45-C.51) Referential formulas for 'sum of the implementer's attitudes toward behaviors and the implementer's subjective norm about the behaviors' (conforming behavior (RIASNC), modification (RIASNM), ritualistic behavior (RIASNR), delay (RIASN), voice (RIASN), bluffing (RIASN), exit (RIASNEX):

In the present, simplified version of the theory the referential formula for these concepts are merely the sums of the data gathered for the referential formulas for the 'implementer's attitudes toward performing behaviors' and the 'implementer's subjective norms about performing behaviors'. Thus,

RIAC + RISNC = RIASNC
RIAI + RISNI = RIASNI
RIAR + RISNR = RIASNR
RIAD + RISND = RIASND
RIAV + RISNV = RIASNV
RIAB + RISNB = RIASNB
RIAEX + RISNEX = RIASNEX

The reader will recall that the concepts 'sum of the implementer's attitudes toward behaviors and the implementer's subjective norms about behaviors' are related in propositions 8-14 to the concepts 'implement-
ter's behavioral intention to perform behaviors.

In later versions of the theory these referential formulas should be modified to allow for assumptions or propositions about the differential weights of the attitudinal and normative components in predicting behavioral intention (Fishbein and Ajzen, 1975, pp. 302-303). We might speculate for example that for implementation situations within organizations, the importance (weight) of the normative component would vary with the 'centralization' of the organization. We might construct a proposition that says: the greater the centralization of the organization (a property of the contextual element of the implementation situation), the greater the weight of the normative component in predicting the behavioral intention.  

9. (C.52) Referential formula for 'implementer's understanding of the policy innovation' (RIUP):

This is a state property of the implementer. The item on the implementer questionnaire should read:

a) I understand what the goal of the new policy is. I understand what the policy is intended to accomplish:

<table>
<thead>
<tr>
<th>Strongly Agree (4)</th>
<th>Agree (3)</th>
<th>Disagree (2)</th>
<th>Strongly Disagree (1)</th>
</tr>
</thead>
</table>

Baum, for example, applies his theory of judicial implementation to hierarchical (centralized) relations between the court and the implementer.
b) I understand the general procedures and guidelines that constitute the way the policy is to be administered:

| strongly agree disagree strongly disagree |
| AGREE (4) (3) (2) DISAGREE (1) |

c) I understand the strategy or plan according to which the new policy will be introduced?

| strongly agree disagree strongly disagree |
| AGREE (4) (3) (2) DISAGREE (1) |

RIUP is the sum of the scores on a, b and c.

10. (C.53) Referential formula for 'implementer's understanding of the behavior required of him/her to implement the policy innovation' (RIUB):

This is a state property of the implementer. The item on the implementer questionnaire should read:

I think I understand what I am required to do to assure that the policy is implemented:

| strongly agree disagree strongly disagree |
| AGREE (4) (3) (2) DISAGREE (1) |

RIUB is the score on this item.

11. (C.54) Referential formula for 'implementer's possession of the resources needed to perform required implementing behaviors' (RIPR):
This is a state property of the implementer. The investigator may want to use the change agent's assessment of the extent to which the implementer possesses required resources in situations where the implementer's report might be suspect. If the implementer is the referent the item would look like this:

I feel that I have the resources I need to carry out the behaviors required of me to implement the new policy.

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<th>strongly agree</th>
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<th>disagree</th>
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<tbody>
<tr>
<td>AGREE (4)</td>
<td>(3)</td>
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<td>DISAGREE (1)</td>
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If the change agent is used as the referent, a different acronym should be used to designate that referential formula.

12. (C.55) Referential formula for 'extent to which implementer's conforming behavior is dependent on the cooperation of others' (RIDC):

This is a state property of the implementer as it is measured here. It could conceivably be treated as a relational property, but I treat it as a perception of dependence by the implementer. The item in the implementer questionnaire would be:

It seems that I have to depend on others in order for me to successfully carry out the behaviors required to implement the policy.

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<th>strongly agree</th>
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<th>disagree</th>
<th>strongly disagree</th>
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<tr>
<td>AGREE (4)</td>
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<td>DISAGREE (1)</td>
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</table>
13. (C.56) Referential formula for 'change agent's provision of adequate feedback mechanisms' (RCAF):

Since we are interested in predicting the implementer's behavior it is assumed that their preceptions would be more useful than those of the change agent. This is an action property of the change agent. The item in the implementer questionnaire would be:

In general when I have wanted to get information from, complain, or make suggestions about the implementation of the policy, ________ (identify change agent) has been available

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<th>strongly agree</th>
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14. (C.57) Referential formula for 'change agent's efforts to clarify the implementer's understanding of the policy innovation' (RCACUP):

This is an action property of the change agent. The question would appear in the implementer questionnaire:

_______ (identify change agent) has made an effort to communicate an understanding of the new policy to me.

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<tr>
<th>strongly agree</th>
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15. (C.58) Referential formula for 'change agent's efforts to clarify the implementer's understanding of the behavior required to implement the policy innovation' (RCACUB):

This is an action property of the change agent. The item in the implementer questionnaire would be:
(identify change agent) has made an effort to communicate an understanding of the behaviors I should perform to help carry out the policy.

<table>
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<tr>
<th>strongly agree</th>
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<th>disagree</th>
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16. (C.59) Referential formula for 'change agent's provision of resources to aid implementation by the implementer' (RCACR):

This is an action property of the change agent. The following item would appear in the implementer questionnaire:

I feel that (identify change agent) has committed sufficient resources to the implementation of the policy to permit me to carry out my part in implementing the policy.

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<th>strongly agree</th>
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17. (C.60) Referential formula for 'policy innovation's specificity of goals and means' (RPIS):

The use of the implementer as the referent is preferable to using another actor in the implementation situation (viz. the change agent) since it is the implementer's perception of the innovation which will most directly influence the implementer's behavior (Rogers and Shoemaker, 1971, p. 138). Use of the implementer as referent is preferable to using the policy innovation itself as the subject unit (which amounts to using the investigator's perceptions of the policy
innovation properties) because in many cases the implementer's perception of the innovation property is actually a perception of the relationship between the innovation and some other aspect of the implementation situation. (Down's and Mohr (1976) label such properties secondary properties of innovation.) The following item will be used to measure the policy innovation's specificity of goals and means:

I feel that the way the policy is stated gives me very little latitude in interpreting the goals of the policy and the procedures for administering it as I implement the policy.

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<th>strongly agree</th>
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<tr>
<td>AGREE</td>
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18. (C.61) Referential formula for 'complexity of the policy innovation' (RPIC):

(See discussion of 'specificity of policy innovation' above.)

The implementer questionnaire would contain this item:

I feel that the goals and/or the procedures for this policy are quite complicated.

<table>
<thead>
<tr>
<th>strongly agree</th>
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<tbody>
<tr>
<td>AGREE</td>
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19. (C.62) Referential formula for 'divisibility of the policy innovation' (RPID): The item on the implementer questionnaire will read:

It has been possible to implement the new policy gradually.
I have been able to work on one goal or procedure at a
time or have been able to apply the policy to one segment
of my area (or duties or department) at a time.

| strongly agree disagree strongly disagree |
|---------|--------|--------|---------|
| AGREE   | (4)    | (2)    | DISAGREE| (1)    |

20. (C.63) Referential formula for 'amount of change that has occurred
in the policy innovation' (RPICH):

Since this policy was adopted there have been quite a few
changes in its goals (intent) and procedures.

| strongly agree disagree strongly disagree |
|---------|--------|--------|---------|
| AGREE   | (4)    | (3)    | DISAGREE| (2)    |

21. (C.64) Referential formula for 'performance radicalness of the
policy innovation' (RPIPR):

The new policy will result in quite a lot of change in
the way I perform my duties.

| strongly agree disagree strongly disagree |
|---------|--------|--------|---------|
| AGREE   | (4)    | (3)    | DISAGREE| (2)    |
APPENDIX C: PROPOSITIONS, TRANSFORMATIONAL STATEMENTS AND THEOREMS

1. Propositions

Pr.1. Among Implementation Situations (AIS), the greater the 'implementer's behavioral intention to perform conforming behaviors' at $t_2$, the greater the 'implementer's conforming behavior' at $t_3$.

Pr.2. AIS, the greater the implementer's behavioral intention to perform modifying behaviors' at $t_2$, the greater the 'implementer's modifying behavior' at $t_3$.

Pr.3. AIS, the greater the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_2$, the greater the 'implementer's ritualistic behavior' at $t_3$.

Pr.4. AIS, the greater the 'implementer's behavioral intention to delay' at $t_2$, the greater the 'implementer's delaying behavior' at $t_3$.

Pr.5. AIS, the greater the 'implementer's behavioral intention to voice' at $t_2$, the greater the 'implementer's voice behavior' at $t_3$.

Pr.6. AIS, the greater the 'implementer's behavioral intention to bluff' at $t_2$, the greater the 'implementer's bluffing behavior' at $t_3$.

Pr.7. AIS, the greater the 'implementer's behavioral intention to exit' at $t_2$, the greater the 'implementer's exit behavior' at $t_3$. 
Pr. 8. AIS, the greater the 'sum of the implementer's attitude toward performing conforming behavior and the implementer's subjective norm about performing conforming behavior' at $t_2$, the greater the 'implementer's behavioral intention to perform conforming behavior' at $t_3$.

Pr. 9. AIS, the greater the 'sum of the implementer's attitude toward performing modifying behavior and the implementer's subjective norm about performing modifying behavior' at $t_2$, the greater the 'implementer's behavioral intention to perform modifying behavior' at $t_3$.

Pr. 10. AIS, the greater the 'sum of the implementer's attitude toward performing ritualistic behavior and the implementer's subjective norm about performing ritualistic behavior' at $t_2$, the greater the 'implementer's behavioral intention to perform ritualistic behavior' at $t_2$.

Pr. 11. AIS, the greater the 'sum of the implementer's attitude toward delaying implementing behavior and the implementer's subjective norm about delaying implementing behavior' at $t_2$, the greater the 'implementer's behavioral intention to delay' at $t_2$.

Pr. 12. AIS, the greater the 'sum of the implementer's attitude toward voice behavior and the implementer's subjective norm about voice behavior' at $t_2$, the greater the 'implementer's behavioral intention to voice' at $t_2$.

Pr. 13. AIS, the greater the 'sum of the implementer's attitude toward bluffing and the implementer's subjective norm about bluffing' at $t_2$, the greater the 'implementer's behavioral intention to bluff' at $t_2$. 
Pr.14. AIS, the greater the 'sum of the implementer's attitude toward exit and the implementer's subjective norm about exit' at $t_2$, the greater the 'implementer behavioral intention to exit' at $t_2$.

Pr.15. AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing conforming behavior and the motivation to comply with the reference groups ($\sum b_{i1}m_{i1}$) at $t_2$, the greater the 'subjective norm about performing conforming behavior' at $t_2$.

Pr.16. AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing modifying behavior and the motivation to comply with the reference group ($\sum b_{i1}m_{i1}$) at $t_2$, the greater the 'subjective norm about performing modifying behavior' at $t_2$.

Pr.17. AIS, the greater the 'sum of the products of the implementer's normative beliefs about performing ritualistic behavior and the motivation to comply with the reference groups' ($\sum b_{i1}m_{i1}$) at $t_2$, the greater the subjective norm about performing ritualistic behavior' at $t_2$.

Pr.18. AIS, the greater the 'sum of the products of the implementer's normative beliefs about delay and the motivation to comply with referents' expectations ($\sum bm$) at $t_2$, the greater the implementer's subjective norm about delay' at $t_2$.

Pr.19. AIS, the greater the 'sum of the products of the implementer's normative beliefs about voice and the motivations to comply with referent's expectations ($\sum bm$) at $t_2$, the greater the
'subjective norm about voice' at $t_2$.

Pr.20. AIS, the greater the 'sum of the products of the implementer's normative beliefs about bluffing and the motivation to comply with referent expectations about bluffing' at $t_2$, the greater the 'subjective norm about bluffing' at $t_2$.

Pr.21. AIS, the greater the 'sum of the products of the implementer's normative beliefs about exit' at $t_2$, the greater the 'subjective norm about exit' at $t_2$.

Pr.22. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing conforming behaviors and the evaluation of those consequences' ($\sum b_{i_j} e_{i_j}$) at $t_2$, the greater the 'attitude toward performing conforming behavior' at $t_2$.

Pr.23. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing modifying behaviors and the evaluation of those consequences' ($\sum b_{i_j} e_{i_j}$) at $t_2$, the greater the 'attitudes toward performing modifying behaviors' at $t_2$.

Pr.24. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of performing ritualistic behaviors and the evaluation of those consequences' ($\sum b_{i_j} e_{i_j}$) at $t_2$, the greater the 'attitude toward performing ritualistic behaviors' at $t_2$.

Pr.25. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of delay and the evaluation of those consequences' at $t_2$, the greater the 'implementer's attitude toward delay at $t_2$. 
Pr. 26. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of voice and the evaluation of those consequences' (\(\text{Bel}\)) at \(t_2\), the greater the attitude toward performing voice behaviors' at \(t_2\).

Pr. 27. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of bluffing and the evaluation of those consequences' at \(t_2\), the greater the 'attitude toward bluffing' at \(t_2\).

Pr. 28. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of exit and the evaluation of those consequences' at \(t_2\), the greater the 'attitude toward exit' at \(t_2\).

Pr. 29. AIS, the greater the 'implementer's understanding of the policy innovation' at \(t_2\), the greater the 'implementer's conforming behavior' at \(t_3\).

Pr. 30. AIS, the greater the 'implementer's understanding of the behaviors required to implement the policy innovation' at \(t_2\), the lesser the 'implementer's excessive behavior' at \(t_3\).

Pr. 31. AIS, the greater the 'implementer's understanding of the policy innovation' at \(t_2\), the lesser the 'implementer's deficient behavior' at \(t_3\).

Pr. 32. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at \(t_2\), the greater the 'implementer's conforming behavior' at \(t_3\).
Pr.33. AIS, the greater the 'implementer's understanding of the behaviors required to implement the policy innovation' at $t_2$, the lesser the 'implementer's excessive behavior' at $t_3$.

Pr.34. AIS, the greater the 'implementer's understanding of the behavior required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's deficient behavior' at $t_3$.

Pr.35. AIS, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$, the greater the 'implementer's conforming behavior' at $t_3$.

Pr.36. AIS, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$, the lesser the 'implementer's deficient behavior' at $t_3$.

Pr.37. AIS, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_2$.

Pr.38. AIS, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to bluff' at $t_2$.

Pr.39. AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at $t_2$, the lesser the 'implementer's behavioral intention to perform conforming behaviors' at $t_2$.

Pr.40. AIS, the greater the 'change agent's provision of adequate feedback mechanisms' at $t_2$, the greater the 'implementer's understanding of the policy innovation' at $t_2$ (Gross, Giacquinta, and Bernstein, 1971, p. 213).
Pr.41. AIS, the greater the 'change agent's provision of adequate feedback mechanisms' at $t_2$, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$.

Pr.42. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the policy innovation' at $t_2$, the greater the 'implementer's understanding of the policy innovation' at $t_2$ (Gross, Giacquinta, and Bernstein, 1971, p. 202).

Pr.43. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the behaviors required of the implementer to implement the policy innovation' at $t_2$, the greater the implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$.

Pr.44. AIS, the greater the 'change agent's provision of resources to aid implementation by the implementer' at $t_2$, the greater the 'implementer's possession of the resources required to implement the policy innovation' at $t_2$.

Pr.45. AIS, the greater the 'policy innovation's specificity of goals and means' at $t_2$, the greater the 'implementer's understanding of the policy innovation' at $t_2$ (Berman and McLaughlin, p. 9).

Pr.46. AIS, the greater the policy innovation's specificity of goals and means' at $t_2$, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$. 


Pr.47. AIS, the greater the 'complexity of the policy innovation' at t₂, the lesser the 'implementer's understanding of the policy innovation' at t₂.

Pr.48. AIS, the greater the 'complexity of the policy innovation' at t₂, the lesser the implementer's understanding of the behaviors required of him/her to implement the policy innovation at t₂.

Pr.49. AIS, the greater the 'divisibility of the policy innovation' at t₂, the greater the implementer's possession of the resources required to implement the policy innovation' at t₂.

Pr.50. AIS, the greater the 'amount of change that has occurred in the policy innovation' at t₂, the lesser the implementer's understanding of the policy innovation' at t₂.

Pr.51. AIS, the greater the 'amount of change that has occurred in the policy innovation' at t₂, the lesser the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at t₂.

Pr.52. AIS, the greater the 'performance radicalness of the policy innovation' at t₂, the lesser the 'implementer's understanding of the policy innovation' at t₂.

Pr.53. AIS, the greater the 'performance radicalness of the policy innovation' at t₂, the lesser the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at t₂.

Pr.54. AIS, the greater the 'implementer's understanding of the policy innovation' at t₂, the lesser the implementer's behavioral intention to exit' at t₂.
Pr.55. AIS, the greater the 'extent to which implementer's conforming behavior is dependent on the cooperation of other's at $t_2$, the lesser the 'implementer's conforming behavior' at $t_3$.

Pr.56. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to exit' at $t_2$.

Pr.57. AIS, the greater the 'implementer's behavioral intention to perform conforming behaviors' at $t_2$, the greater the 'implementer's excessive behavior' at $t_3$.

Pr.58. AIS, the greater the 'implementer's behavioral intention to conform' at $t_2$, the greater the 'implementer's deficient behavior' at $t_3$.

Pr.59. AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to bluff' at $t_2$.

Pr.60. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to bluff' at $t_2$.

Pr.61. AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_3$.

Pr.62. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation' at $t_2$, the lesser the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_3$. 
Pr.63. AIS, the greater the 'implementer's possessions of the resources needed to perform the required implementing behaviors' at \( t_2 \), the lesser the 'implementer's behavioral intention to exit' at \( t_2 \).

Pr.64. AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at \( t_2 \), the greater the 'implementer's behavioral intention to perform ritualistic behaviors' at \( t_3 \).

Pr.65. AIS, the greater the 'implementer's possession of the resources needed to perform the required implementing behaviors' at \( t_2 \), the lesser the implementer's behavioral intentions to 'bluff' at \( t_2 \).

Pr.66. AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at \( t_2 \), the greater the 'implementer's behavioral intention to exit' at \( t_2 \).

Pr.67. AIS, the greater the 'implementer's understanding of the policy innovation' at \( t_2 \), the greater the 'implementer's behavioral intention to perform conforming behaviors' at \( t_2 \).

Pr.68. AIS, the greater the 'implementer's understanding of the behavior required of him/her to implement the policy innovation' at \( t_2 \), the greater the 'implementer's behavioral intention to perform conforming behaviors' at \( t_2 \).

Pr.69. AIS, the greater the 'implementer's possession of the resources needed to perform the required behaviors' at \( t_2 \), the greater the 'implementer's behavioral intention to perform conforming behaviors' at \( t_2 \).
2. Transformational Statements of Theory

Transformational statements are an integral part of the theory of implementer behavior. Each transformational statement is an assertion that a referential formula is a valid and reliable measure of a concept. I have arrayed together the transformational statements for the entire theory. I present them this way rather than arranging them by sub-theory because so many of the concepts are employed in several of the sub-theories.

Tr.1. Among Implementation Situation (AIS), the greater the 'implementer's conforming behavior' at $t_3$, the greater the RICB at $t_3$.

Tr.2. AIS, the greater the 'implementer's excessive behavior' at $t_3$, the greater the RIEB at $t_3$.

Tr.3. AIS, the greater the 'implementer's deficient behavior' at $t_3$, the greater the RIDB at $t_3$.

Tr.4. AIS, the greater the 'implementer's modification behavior' at $t_3$, the greater the RIMB at $t_3$.

Tr.5. AIS, the greater the 'implementer's ritualistic behavior' at $t_3$, the greater the RIRB at $t_3$.

Tr.6. AIS, the greater the 'implementer's delaying behavior' at $t_3$, the greater the RIDB at $t_3$.

Tr.7. AIS, the greater the 'implementer's voice behavior' at $t_3$, the greater the RIVB at $t_3$.

Tr.8. AIS, the greater the 'implementer's bluffing behavior' at $t_3$, the greater the RIEB at $t_3$.

Tr.9. AIS, the greater the 'implementer's exit behavior at $t_3$, the
greater the RIXE at $t_3$.

Tr.10. AIS, the greater the 'implementer's behavioral intention to perform conforming behaviors' at $t_2$, the greater the RIBIC at $t_2$.

Tr.11. AIS, the greater the 'implementer's behavioral intention to perform modification behaviors' at $t_2$, the greater the RIBIM at $t_2$.

Tr.12. AIS, the greater the 'implementer's behavioral intention to perform ritualistic behaviors' at $t_2$, the greater the RIBIR at $t_2$.

Tr.13. AIS, the greater the 'implementer's behavioral intention to delay' at $t_2$, the greater the RIBID at $t_2$.

Tr.14. AIS, the greater the 'implementer's behavioral intention to voice' at $t_2$, the greater the RIEIV at $t_2$.

Tr.15. AIS, the greater the 'implementer's behavioral intention to bluff' at $t_2$, the greater the RIBIE at $t_2$.

Tr.16. AIS, the greater the 'implementer's behavioral intention to exit' at $t_2$, the greater the RIBIX at $t_2$.

Tr.17. AIS, the greater the 'implementer's attitude toward performing coforming behavior' at $t_2$, the greater the RIAE at $t_2$.

Tr.18. AIS, the greater the 'implementer's attitude toward performing modification behavior' at $t_2$, the greater the RIAM at $t_2$.

Tr.19. AIS, the greater the 'implementer's attitude toward performing ritualistic behavior' at $t_2$, the greater the RIAR at $t_2$.

Tr.20. AIS, the greater the 'implementer's attitude toward delay behavior' at $t_2$, the greater the RIAD at $t_2$. 
Tr.21. AIS, the greater the 'implementer's attitude toward voice behavior' at $t_2$, the greater the RIAV at $t_2$.

Tr.22. AIS, the greater the 'implementer's attitude toward bluffing behavior at $t_2$, the greater the RIAB at $t_2$.

Tr.23. AIS, the greater the 'implementer's attitude toward exit behavior' at $t_2$, the greater the RIAEX at $t_2$.

Tr.24. AIS, the greater the 'implementer's subjective norm about conforming behavior' at $t_2$, the greater the RISNC at $t_2$.

Tr.25. AIS, the greater the 'implementer's subjective norm about modification behavior' at $t_2$, the greater the RISNM at $t_2$.

Tr.26. AIS, the greater the 'implementer's subjective norm about ritualistic behavior' at $t_2$, the greater the RISNR at $t_2$.

Tr.27. AIS, the greater the 'implementer's subjective norm about delay at $t_2$, the greater the RISND at $t_2$.

Tr.28. AIS, the greater the 'implementer's subjective norm about voice' at $t_2$, the greater the RISNV at $t_2$.

Tr.29. AIS, the greater the 'implementer's subjective norm about bluffing at $t_2$, the greater the RISNB at $t_2$.

Tr.30. AIS, the greater the 'implementer's subjective norm about exit at $t_2$, the greater the RISNEX at $t_2$.

Tr.31. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of conforming behavior and the evaluation of those consequences' at $t_2$, the greater the RISAC at $t_2$.

Tr.32. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of modification behavior and the
evaluation of those consequences' at $t_2$, the greater the RISAM at $t_2$.

Tr.33. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of ritualistic behavior and the evaluation of those consequences' at $t_2$, the greater the RISAR at $t_2$.

Tr.34. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of delaying and the evaluation of those consequences' at $t_2$, the greater the RISAD at $t_2$.

Tr.35. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of voice and the evaluation of those consequences' at $t_2$, the greater the RISAV at $t_2$.

Tr.36. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of bluffing and the evaluation of those consequences' at $t_2$, the greater the RISAB at $t_2$.

Tr.37. AIS, the greater the 'sum of the products of the implementer's beliefs about the consequences of exit and the evaluation of those consequences' at $t_2$, the greater the RISAX at $t_2$.

Tr.38. AIS, the greater the 'sum of the products of the implementer's normative beliefs about conforming behaviors and the motivation to comply with the referents with those expectations' at $t_2$, the greater the RISC at $t_2$.

Tr.39. AIS, the greater the 'sum of the products of the implementer's normative beliefs about modification behavior and the motivation to comply with the referents with those expectations' at $t_2$, the greater the RISM at $t_2$. 
Tr.40. AIS, the greater the 'sum of the products of the implementer's normative beliefs about ritualistic behavior and the motivation to comply with referents with those expectations' at $t_2$, the greater the RISK at $t_2$.

Tr.41. AIS, the greater the 'sum of the products of the implementer's normative beliefs about delaying and the motivation to comply with those expectations' at $t_2$, the greater the RISD at $t_2$.

Tr.42. AIS, the greater the 'sum of the products of the implementer's normative beliefs about voice and the motivation to comply with those expectations' at $t_2$, the greater the RISV at $t_2$.

Tr.43. AIS, the greater the 'sum of the products of the implementer's normative beliefs about bluffing and the motivation to comply with the referents with those expectations at $t_2$, the greater the RISB at $t_2$.

Tr.44. AIS, the greater the 'sum of the products of the implementer's normative beliefs about exit and the motivation to comply with those expectations' at $t_2$, the greater the RISEX at $t_2$.

Tr.45. AIS, the greater the 'sum of the implementer's attitude toward performing conforming behavior and the implementer's subjective norm about performing conforming behavior' at $t_2$, the greater the RIASNC at $t_2$.

Tr.46. AIS, the greater the 'sum of the implementer's attitude toward modification and the implementer's subjective norm about performing innovative behavior' at $t_2$, the greater the RIASNM at $t_2$. 
Tr.47. AIS, the greater the 'sum of the implementer's attitude toward performing ritualistic behavior and the implementer's subjective norm about performing innovative behavior' at $t_2$, the greater the RIASNR at $t_2$.

Tr.48. AIS, the greater the 'sum of the implementer's attitude toward delaying and the implementer's subjective norm about delaying' at $t_2$, the greater the RIASND at $t_2$.

Tr.49. AIS, the greater the 'sum of the implementer's attitude toward voice and the implementer's subjective norm about voice' at $t_2$, the greater the RIASNV at $t_2$.

Tr.50. AIS, the greater the 'sum of the implementer's attitude toward bluffing and the implementer's subjective norm about bluffing' at $t_2$, the greater the RIASNB at $t_2$.

Tr.51. AIS, the greater the 'sum of the implementer's attitude toward exit and the implementer's subjective norm about exit at $t_2$, the greater the RIASNEX at $t_2$.

Tr.52. AIS, the greater the 'implementer's understanding of the policy innovation' at $t_2$, the greater the RIUP at $t_2$.

Tr.53. AIS, the greater the 'implementer's understanding of the behaviors required of him/her to implement the policy innovation at $t_2$, the greater the RIUB at $t_2$.

Tr.54. AIS, the greater the 'implementer's possession of the resources needed to perform the required implementing behaviors' at $t_2$, the greater the RIPR at $t_2$.

Tr.55. AIS, the greater the 'extent to which the implementer's conforming behavior is dependent on the cooperation of others' at $t_2$. 
the greater the RIDC at $t_2$.

Tr.56. AIS, the greater the 'change agent's provision of adequate feedback mechanisms' at $t_2$, the greater the RCAF at $t_2$.

Tr.57. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the policy innovation' at $t_2$, the greater the RCACUP at $t_2$.

Tr.58. AIS, the greater the 'change agent's efforts to clarify the implementer's understanding of the behavior required to implement the policy innovation' at $t_2$, the greater the RCACUB at $t_2$.

Tr.59. AIS, the greater the 'change agent's commitment of resources to aid implementation by the implementer' at $t_2$, the greater the RCACR at $t_2$.

Tr.60. AIS, the greater the 'policy innovation's specificity of goals and means' at $t_2$, the greater the RPIS at $t_2$.

Tr.61. AIS, the greater the 'complexity of the policy innovation' at $t_2$, the greater the RPIC at $t_2$.

Tr.62. AIS, the greater the 'divisibility of the policy innovation' at $t_2$, the greater the RPID at $t_2$.

Tr.63. AIS, the greater the 'amount of change that has occurred in the policy innovation' at $t_2$, the greater the RPICG at $t_2$.

Tr.64. AIS, the greater the 'performance radicalness of the policy innovation' at $t_2$, the greater the RPIPR at $t_2$. 
3. Theorems

Theorems are formally derived statements composed of referential formulas. In Gibbs' method of theory construction theorems are derived from propositions and transformational statements according to the "sign rule", "according to which the direction of the relation between any two referentials is given by the cumulative product of the intervening relational terms" (Gibbs, 1972, p. 190). I will illustrate the application of the rule with a theorem from the theory of implementer behavior. The first step is to translate the relational terms to signs: "lesser...lesser" translates to a negative sign, it indicates an inverse or negative relation. Therefore each proposition and transformational statement has a positive or negative sign. Theorem 30 will be used for an illustration. This theorem is derived from proposition 30 and transformational statements 52 and 2. The figure below should be referred to as I continue to explain the method. One of transformational statements is entered in the first row and one in the last row and the proposition is entered in the middle row.

In column 4 the sign of each relational term is given and the cumulative product of the signs is shown in column 5. The first cumulative product (second row of the table) is the product of the two signs in the first and second row of column 4: \([+)(-)=(-)\]. From that point onward, the cumulative product in each row is \((x)(y)\), where \(x\) is the cumulative product in the row above and \(y\) is the sign (column 4) in the given row. Thus, the last cumulative product (bottom row of column 5) is \((+), and that is the sign of the relation between RIUP and RIEB. Theorem 30 reads:
<table>
<thead>
<tr>
<th>Intrinsic Statement</th>
<th>Second Term</th>
<th>First Term</th>
<th>Sign</th>
<th>Cumulative Product of Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Col. 1</td>
<td>Col. 2</td>
<td>Col. 3</td>
<td>Col. 4</td>
<td>Col. 5</td>
</tr>
<tr>
<td>Transformational Statement 52</td>
<td>RIUP</td>
<td>'implementer's understanding of the policy innovation'</td>
<td>(+)</td>
<td></td>
</tr>
<tr>
<td>Proposition 30</td>
<td>Implementer's excessive behavior</td>
<td>'implementer's understanding of the policy innovation'</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>Transformational Statement 2</td>
<td>RIE8</td>
<td>'implementer's excessive behavior'</td>
<td>(+)</td>
<td>(-)</td>
</tr>
</tbody>
</table>

Figure C.1 Illustration of the Sign Rule
(modified from Table 6.1, Gibbs, 1972, p. 191).
(Tr52, Pr30, Tr2) AIS, the greater the RIUP at $t_2$, the greater the RIEB at $t_3$.

Before each theorem is listed the transformational statements and proposition from which it is derived. A quick scan of the signs of the theorems and the signs of the propositions of this theory will show that the signs of the theorems and corresponding propositions are the same. I could have eliminated the discussion of derivation of theorems except that I wished to show that the theorems are derived according to a logical rule. Although this does not seem significant for this version of the theory it should be heeded in extending the theory.

Th.1. (Tr10, Pr1, Tr1) Among Implementation Situations (AIS), the greater the RIBIC at $t_2$, the greater the RICB at $t_3$.

Th.2. (Tr11, Pr2, Tr4) AIS, the greater the RIBIM at $t_2$, the greater the RIBB at $t_3$.

Th.3. (Tr12, Pr3, Tr5) AIS, the greater the RIBIR at $t_2$, the greater the RIRB at $t_3$.

Th.4. (Tr13, Pr4, Tr6) AIS, the greater the RIBID at $t_2$, the greater the RIBB at $t_3$.

Th.5. (Tr14, Pr5, Tr7) AIS, the greater the RIBIV at $t_2$, the greater the RIVB at $t_3$.

Th.6. (Tr15, Pr6, Tr8) AIS, the greater the RIBIB at $t_2$, the greater the RIBB at $t_3$.

Th.7. (Tr16, Pr7, Tr9) AIS, the greater the RIBIE at $t_2$, the greater the RIEB at $t_3$.

Th.8. (Tr45, Pr8, Tr10) AIS, the greater the RIASNC at $t_2$, the greater the RIBIC at $t_2$. 
Th. 9. (Tr46, Pr9, Tr11) AIS, the greater the RIASNM at \( t_2 \), the greater the RIB1M at \( t_2 \).

Th. 10. (Tr47, Pr10, Tr12) AIS, the greater the RIASNR at \( t_2 \), the greater the RIB1R at \( t_2 \).

Th. 11. (Tr48, Pr11, Tr13) AIS, the greater the RIASND at \( t_2 \), the greater the RIB1D at \( t_2 \).

Th. 12. (Tr49, Pr12, Tr14) AIS, the greater the RIASNV at \( t_2 \), the greater the RIB1V at \( t_2 \).

Th. 13. (Tr50, Pr13, Tr15) AIS, the greater the RIASN5 at \( t_2 \), the greater the RIB1B at \( t_2 \).

Th. 14. (Tr51, Pr14, Tr16) AIS, the greater the RIASNEX at \( t_2 \), the greater the RIB1EX at \( t_2 \).

Th. 15. (Tr38, Pr15, Tr24) AIS, the greater the RISC at \( t_2 \), the greater the RISNC at \( t_2 \).

Th. 16. (Tr39, Pr16, Tr25) AIS, the greater the RISM at \( t_2 \), the greater the RISNM at \( t_2 \).

Th. 17. (Tr40, Pr17, Tr25) AIS, the greater the RISR at \( t_2 \), the greater the RISNR at \( t_2 \).

Th. 18. (Tr41, Pr18, Tr27) AIS, the greater the RISD at \( t_2 \), the greater the RISND at \( t_2 \).

Th. 19. (Tr42, Pr19, Tr28) AIS, the greater the RISV at \( t_2 \), the greater the RISNV at \( t_2 \).

Th. 20. (Tr43, Pr20, Tr29) AIS, the greater the RISB at \( t_2 \), the greater the RISNB at \( t_2 \).

Th. 21. (Tr44, Pr21, Tr30) AIS, the greater the RISEX at \( t_2 \), the greater the RISNEX at \( t_2 \).
Th.22. (Tr31, Pr22, Tr17) AIS, the greater the RISA at $t_2$, the greater the RIAC at $t_2$.

Th.23. (Tr32, Pr23, Tr18) AIS, the greater the RISAM at $t_2$, the greater the RIAM at $t_2$.

Th.24. (Tr33, Pr24, Tr19) AIS, the greater the RISAR at $t_2$, the greater the RIAR at $t_2$.

Th.25. (Tr34, Pr25, Tr20) AIS, the greater the RISAD at $t_2$, the greater the RIAA at $t_2$.

Th.26. (Tr35, Pr26, Tr21) AIS, the greater the RISAV at $t_2$, the greater the RIAV at $t_2$.

Th.27. (Tr36, Pr27, Tr22) AIS, the greater the RISAB at $t_2$, the greater the RIAB at $t_2$.

Th.28. (Tr37, Pr28, Tr23) AIS, the greater the RISAEX at $t_2$, the greater the RIAEX at $t_2$.

Th.29. (Tr52, Pr29, Tr1) AIS, the greater the RIUP at $t_2$, the greater the RICB at $t_3$.

Th.30. (Tr52, Pr30, Tr2) AIS, the greater the RIUP at $t_2$, the lesser the RIEB at $t_3$.

Th.31. (Tr52, Pr31, Tr3) AIS, the greater the RIUP at $t_2$, the lesser the RIDFB at $t_3$.

Th.32. (Tr53, Pr32, Tr1) AIS, the greater the RIUB at $t_2$, the greater the RICB at $t_3$.

Th.33. (Tr53, Pr33, Tr2) AIS, the greater the RIUB at $t_2$, the lesser the RIEB at $t_3$.

Th.34. (Tr53, Pr34, Tr3) AIS, the greater the RIUB at $t_2$, the lesser the RIDB at $t_3$. 
Th. 35. (Tr54, Pr35, Tr1) AIS, the greater the RIPR at $t_2$, the greater the RICB at $t_3$.

Th. 36. (Tr54, Pr36, Tr3) AIS, the greater the RIPR at $t_2$, the lesser the RIDF at $t_3$.

Th. 37. (Tr54, Pr37, Tr12) AIS, the greater the RIPR at $t_2$, the lesser the RIBIR at $t_3$.

Th. 38. (Tr54, Pr38, Tr15) AIS, the greater the RIPR at $t_2$, the lesser the RIBIB at $t_3$.

Th. 39. (Tr54, Pr39, Tr10) AIS, the greater the RIPR at $t_2$, the lesser the RIBIC at $t_2$.

Th. 40. (Tr56, Pr40, Tr52) AIS, the greater the RCAF at $t_2$, the greater the RIUP at $t_2$.

Th. 41. (Tr56, Pr41, Tr53) AIS, the greater the RCAF at $t_2$, the greater the RIUB at $t_2$.

Th. 42. (Tr57, Pr42, Tr52) AIS, the greater the RCACUP at $t_2$, the greater the RIUP at $t_2$.

Th. 43. (Tr58, Pr43, Tr53) AIS, the greater the RCACUB at $t_2$, the greater the RIUB at $t_2$.

Th. 44. (Tr59, Pr44, Tr54) AIS, the greater the RCAUCR at $t_2$, the greater the RC-IPR at $t_2$.

Th. 45. (Tr60, Pr45, Tr52) AIS, the greater the RPIIS at $t_2$, the greater the RIUP at $t_2$.

Th. 46. (Tr60, Pr46, Tr53) AIS, the greater the RPIIS at $t_2$, the greater the RIUB at $t_2$.

Th. 47. (Tr61, Pr47, Tr52) AIS, the greater the RPIIC at $t_2$, the lesser the RIUP at $t_2$. 
Th.48. (Tr61, Pr48, Tr53) AIS, the greater the RPIE at $t_2$, the lesser
the RIUB at $t_2$.

Th.49. (Tr62, Pr49, Tr54) AIS, the greater the RIID at $t_2$, the
greater the RC-IPR at $t_2$.

Th.50. (Tr63, Pr50, Tr52) AIS, the greater the RIICH at $t_2$, the lesser
the RIUP at $t_2$.

Th.51. (Tr63, Pr51, Tr53) AIS, the greater the RIICH at $t_2$, the
lesser the RPIUB at $t_2$.

Th.52. (Tr64, Pr52, Tr52) AIS, the greater the RIPR at $t_2$, the
lesser the RIUP at $t_2$.

Th.53. (Tr64, Pr53, Tr53) AIS, the greater the RIPR at $t_2$, the
lesser the RIUB at $t_2$.

Th.54. (Tr52, Pr54, Tr16) AIS, the greater the RIUP at $t_2$, the lesser
the RIBIEX at $t_2$.

Th.55. (Tr55, Pr55, Tr1) AIS, the greater the RICD at $t_2$, the lesser
the RICB at $t_3$.

Th.56. (Tr53, Pr56, Tr16) AIS, the greater the RIUB at $t_2$, the lesser
the RIBIEX at $t_2$.

Th.57. (Tr10, Pr57, Tr2) AIS, the greater the RIBIC at $t_2$, the
greater the RIFB at $t_3$.

Th.58. (Tr10, Pr58, Tr3) AIS, the greater the RIBIC at $t_2$, the
greater the RIFDB at $t_3$.

Th.59. (Tr52, Pr59, Tr15) AIS, the greater the RIUP at $t_2$, the
lesser the RIBIB at $t_2$.

Th.60. (Tr53, Pr60, Tr15) AIS, the greater the RIUB at $t_2$, the
lesser the RIBIB at $t_2$. 
Th.61. (Tr52, Pr61, Tr12) AIS, the greater the RIUF at $t_2$, the lesser the RIBIR at $t_2$.

Th.62. (Tr53, Pr62, Tr12) AIS, the greater the RIUB at $t_2$, the lesser the RIBIR at $t_2$.

Th.63. (Tr55, Pr63, Tr16) AIS, the greater the RIDC at $t_2$, the greater the RIBIEX at $t_2$.

Th.64. (Tr55, Pr64, Tr12) AIS, the greater the RIDC at $t_2$, the greater the RIBiIR at $t_2$.

Th.65. (Tr55, Pr65, Tr15) AIS, the greater the RIDC at $t_2$, the greater the RIBiB at $t_2$.

Th.66. (Tr54, Pr64, Tr16) AIS, the greater the RIRPR at $t_2$, the lesser the RIBJEX at $t_2$.

Th.67. (Tr55, Pr67, Tr10) AIS, the greater the RIUP at $t_2$, the greater the RIBiC at $t_2$.

Th.68. (Tr53, Pr68, Tr10) AIS, the greater the RIUB at $t_2$, the greater the RIBiC at $t_2$.

Th.69. (Tr55, Pr69, Tr10) AIS, the greater the RIDC at $t_2$, the lesser the RIBiC at $t_2$. 


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