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COMPARING PUBLIC AND PRIVATE: CONCEPTUAL AND EMPIRICAL
ANALYSIS OF INCENTIVES AND MOTIVATION AMONG
GOVERNMENT AND BUSINESS MANAGERS

DISSertation

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

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CHAPTER I

THE NATURE AND IMPORTANCE OF THE STUDY

The Nature of the Study

This dissertation brings together two topics: incentives and motivation in organizations, and the unique attributes of public organizations which distinguish them from other types of organizations, such as private ones. It reviews literature, presents conceptual analysis, and reports empirical research on both topics, with primary emphasis on the comparison and contrast of public and private organizations on matters pertaining to incentives and motivation. The empirical results which this study ultimately presents, after taking into account a number of conceptual and methodological difficulties, are based on questionnaire responses from middle managers in four business and five government organizations. Mainly, the data represent comparisons of the government sample to the business sample on questions and scales relevant to incentives and motivation. For example, they are compared on scales of motivation and work satisfaction, on scales concerning the clarity of performance guidelines and criteria, on scales concerning the manager's feelings about the relationship of his or her performance to the attainment of various incentives, on scales concerning the flexibility with which various incentives, such as pay, promotion, and job security, can be administered (and hence,
tied to performance) under the personnel rules and procedures governing the organization, and on a number of other pertinent scales and questions. (Performance itself is not measured in this research).

While a number of difficulties in interpretation will be discussed, the results are useful in a number of ways. First, there are statistically significant differences between the two samples, which have practical and theoretical implications. The government managers see less of a connection between their performance and the attainment of such "extrinsic" incentives as pay, promotion, and job security, and they tend to feel that the personnel procedures governing their organizations allowed much less flexibility in tying such incentives to performance. This finding joins only one other study as the only empirical substantiation, located by this writer, of an assertion frequently made about government organizations, but seldom systematically tested. They also provide the only empirical substantiation known to this writer of frequent assertions about the impact of civil service systems on the incentive structures of government organizations. The data also indicate that the government managers showed lower satisfaction with certain aspects of their work, and were different in the importance they attached to various work rewards (lower valuation of financial rewards, higher valuation of engagement in "meaningful public service"). These findings join a growing number of empirical studies which have found differences of this nature between government and business managers. Other differences were indicated by
the data, as well. The main point, however, is that these findings suggest certain relatively enduring and widely applicable differences between public and private organizations and employees, which have practical and theoretical implications.

Second, there were no government-business differences on many of the scales, and a number of these findings represented failures to substantiate assertions made often in the literature. These results suggest the need to refine or reconsider a number of these notions, and point to some conclusions about what is not likely to be different about public and private organizations.

Finally, as already indicated, this research process raises a number of questions for future research and clarification. This is in part because the study leaves considerable uncertainty on a number of matters, but at least it will be useful in further research on such matters. In sum, then, this dissertation provides useful information for those concerned with management of public organizations, as well as for those concerned with organization theory in general.

Overview of the Rationale and Organization of the Dissertation

An overview of the progression and logic of this study, at the very outset, will help the reader. It was decided that, in spite of numerous methodological and conceptual difficulties, the study should involve collection of empirical data, rather than concentration solely on the conceptual problems, which would leave
the empirical questions open to speculation. Moving to the empirical research requires a number of decisions and assumptions, and this dissertation addresses a number of complexities in considerable detail. An overview now will help to guide the reader through this process.

The study begins with general discussion of the importance of incentives and motivation in public policy and public organizations, especially as distinguished from private organizations (Chapter I). Then it turns to the definition of "incentive" and related terms, and elaborates on difficulties in definition and analysis of such concepts (Chapter II). In spite of the difficulties, provisional definitions are stated: an incentive is an object or event which an individual seeks to attain because s/he sees it as valuable; motivation refers to the willingness or tendency to try to work hard and well in the organization.

These definitions have important implications for the research, but are quite broad; there is a wide array of issues which could be considered under them. The focus must be narrowed for movement towards empirical research. So, from literature concerning unique incentive issues or problems for public organizations, and differences between public and private organizations which are relevant to incentives and motivation, three general propositions or research questions are selected for further refinement into empirical hypotheses (Chapter III). The first of these propositions concerns replication and extension of several empirical studies which found differences between responses by government and business managers on
work satisfaction scales, on questions about the relationship of their pay to their performance, and similarly relevant scales. The other two propositions concern the weakening of the relationship between performance and incentives in government organizations, and hence the weakening of motivation, due to: a) the constraints on administration of certain incentives imposed by civil service systems, and b) vague goals and performance criteria in most public organizations, especially as compared to most private ones. A major assumption here is that, in spite of the conceptual difficulties with "incentive" and "motivation," empirical inquiry into these general propositions can provide meaningful information which is relevant to the topic of this dissertation.

Subsequent chapters turn to the search for concepts and measures to be used in translating these general propositions into empirical hypotheses. First, some general theories which treat organizations as systems of incentives are reviewed--these important references could not be ignored in an effort such as this one--but they are ultimately rejected for present purposes (Chapter IV). Then, a number of concepts and measures from the literature on organizational research are chosen as appropriate representations of ideas contained in the general propositions (Chapter V). For example, questionnaire items derived from the expectancy theory of work motivation, scales of individual motivation and satisfaction, role ambiguity and role conflict scales, and other scales and questionnaire items are selected as reasonable empirical operationalizations of ideas represented in the general propositions. Here, a
major assumption is that it is valuable to utilize concepts and measures which have been used in the literature, to the extent possible. Where the literature offers no appropriate instrument, an effort is made to develop one; a scale concerning the perceived flexibility of personnel procedures is developed to fill such a gap. The measures for all of the concepts are questionnaire scales, and of course in making such selections another important assumption is involved: in spite of numerous methodological problems, including the well-known limitations of self-report data, it is nevertheless useful to collect individuals' responses about the operation of incentives in their organizations, about their own motivation and satisfaction, and so on.

Next, the concepts selected in Chapter V are entered into specific empirical hypotheses which apply to the general propositions, and a research design for testing the hypotheses is described (Chapter VI). Most of the hypotheses predict differences between government and business managers in responses on the scales used, although some concern relationships among the variables. Of course, such comparisons involve still more major assumptions: even though we cannot precisely define "public" and "private" organizations for the purposes of sampling, we can still learn from comparing samples from sets of government and business organizations, which are matched as well as possible on several major dimensions; it is useful, for a number of reasons, to focus on the "middle manager" and to compare reasonably well-matched sets of such persons; it is
reasonable to compare scale responses for such samples, even though such measures are not very precise.

The results of the hypothesis tests are then reported (Chapter VII), and their interpretation is discussed (Chapter VIII). Interpretation involves many complexities, and the results are not as conclusive as one might wish. As suggested earlier, however, the results are useful and meaningful, and therefore the assumptions and decisions seem justified.

This description of organization and rationale should help maintain the reader's orientation to the general progression, as the discussion proceeds through detailed consideration of a number of matters. It is only one form of introduction, however; another useful way of introducing the study is to present reasons for interest in the general topic. For that purpose, the following section argues the importance of research on the general issue of incentives and motivation in public policy, and in public organizations, especially as distinguished from private ones.

The Importance of Incentives and Motivation in the Study of Public Policy and Public Organizations

Recently, a number of authors have concerned themselves with "incentives" as a major consideration in public policy and public administration. They see the proper arrangement of incentives as a means of enhancing the effectiveness and efficiency with which public policies and the work of government organizations are carried out. Schultze (1970), for example, has noted the harmful effects of "perverse incentives" under public policies and laws. Some laws
and regulations, he argues, inadvertently set up rewards for actions which are inconsistent with the avowed purpose of the law or policy, or which are actually contrary to it; more careful attention to the incentives established by such actions might avert such problems. Similarly, Schultze and others (Weidenbaum, 1976) suggest that manipulation of incentives is preferable to the more frequently-chosen strategy of administering policies by use of detailed regulations and procedural specifications. Weidenbaum (1976) provides a ready example of this argument: present efforts to reduce injuries to industrial employees involve enforcement of detailed safety regulations by government agents; the objectives could be achieved more efficiently—-with less "bureaucracy" and "red tape"—by simply offering financial payments or tax allowances to companies that actually reduced their accident rates. Similar considerations have been made of the possibility of using incentives for achieving policy objectives in the areas of population control (Pohlman, 1971), performance contracting in education (Gramlich and Koshel, 1975) guaranteed income payments (Pechman and Michael, 1975), and pollution control (Kneese and Schultze, 1975).

A More Specific Concern: Incentives and Motivation Within Government Organizations.

While these authors are concerned with a broad range of incentive phenomena, including incentives to individuals as members of the labor force and incentives to entire organizations or political entities, this dissertation focuses on one subset of these incentive phenomena: incentives to members of government organizations, and
the influence of such incentives on the motivation of those persons. Schultze (1970, p. 163), in his wide-ranging comments on incentives, makes a special point of the need for designing appropriate incentives for those who are responsible for program execution. He argues that incentives to institutions and organizations can be effective only insofar as those incentives have an appropriate impact on individuals within those institutions: "...incentive for more effective and efficient performance of public programs cannot be considered apart from the structure of motivations, rewards, and penalties which determine the attitudes and actions of the bureaucracy" (p. 169).

Indications of Problems with Incentives and Motivation in Government Organizations

Schultze's statement reflects a broad concern in the United States with how hard and how well government employees work, and the existence of this concern is part of the justification for research on incentives and motivation. Several studies give evidence that many Americans regard government employees, as compared to business employees, as lacking in initiative and drive, and as being security-conscious (Levy, 1963; Kilpartick, et al, 1964). Katz, et al (1975) report data indicating that, while clients of a number of government agencies tended to be well-satisfied with their individual encounters with those agencies, they tended to give lower ratings of the performance of government agencies in general--indicating the existence of a negative stereotype of government workers and organizations. A recent Lou Harris poll indicated that 39 percent of those
sampled felt that government employees were below average in productivity, while only 11 percent felt they were above average (National Commission on Productivity and Work Quality, 1975). Thus, there is considerable popular concern in the United States over the efficiency and effectiveness with which government employees perform. Interestingly, for the purposes of this dissertation, the National Commission which authorized the Lou Harris poll, mentioned above, regards incentives to employees as a major strategy for improvement of government productivity.

In addition to this popular concern, there have been more scholarly considerations of the effectiveness of government organizations. Many of the most prominent of these have reached conclusions or made assumptions similar to those popular beliefs mentioned above—that government organizations, as compared to business or market-oriented organizations, are particularly subject to dysfunctions and inefficiencies. The explanation of these dysfunctions often refers to incentives and motivation, or phenomena interpretable under an analysis centering on the concept of incentive. Certain economists, for example, tend to assume particular motivations of government bureaucrats, such as the desire to increase their budget allocations (Niskanen, 1971) and to distort or monopolize information on which their superiors might be dependent (Stockfisch, 1972; Tullock, 1965). Since the outputs of most government agencies are not sold in economic markets—which, according to these arguments, provide performance constraints and information in the form of prices, sales, and profits—these motivations on the
part of bureaucrats are more likely to lead to inefficiencies. In a market-oriented organization, these authors would contend, performance can be evaluated by criteria which are more valid as indicators of results which the organization is aimed at achieving. Thus, for example, a subdivision engaged in production of a good for which there is low economic demand would be more quickly curtailed in a market-oriented organization than a government organization, where a division head can obtain resources by "political" means, as opposed to performance in sales, etc. Similarly, Weidenbaum (1969) expresses concern that when certain business organizations become highly reliant on government contracts, they become like government agencies, in that they lose their proactive, risk-taking, innovative character. Implicitly, Weidenbaum attributes this difference to the market's provision of incentives to innovate and to take risks, incentives which are not available when resources are provided via appropriations processes. Much of this discussion of the motivations of bureaucrats, and of the impact of different sources of resources and performance evaluation, can be recast in terms of particular incentives in government organizations, and thus stresses the importance of studying incentives.

In a similar vein, in that they involve concern over dysfunctions due to incentives and incentive structures in government organizations, are observations by writers on the "merit system" and government personnel practices. Some of these authors lament the tendency of most, if not all, civil service personnel systems to base rewards such as salary increases and promotions on seniority and examinations,
and to ensure job tenure except in cases of outrageous misconduct. The result, it is argued, is low productivity of government employees (Savas and Ginsburg, p. 71) and failure to provide incentives for innovation (Beaumont, 1974).

Still further indication of possible difficulties with incentive systems and with employee motivation in government organizations is the finding in several empirical studies that samples of government managers show lower average job satisfaction than do samples of business managers (Buchanan, 1974; Rhinehart, et al, 1969). In one study, a sample of government managers was also lower in commitment to their organizations (Buchanan, 1974).

The preceding references and a few others represent the full extent of published empirical research which focuses specifically on public sector employee incentives and motivation. Nevertheless, it is often simply taken for granted that there are dysfunctional incentives in the public sector. A good example of this tendency comes from Morris (1975). In a discussion of work and productivity he states, in matter-of-fact fashion, "...(government) agencies suffer from severe and obvious difficulties. The incentive to productivity is often weak..." (p. 23). Similarly, the Committee for Economic Development (1976) says bluntly, without reference to any empirical substantiation, "the incentives for improved management have been weak in many jurisdictions...motivation is also weak among managers at lower levels" (p. 41). So, although this matter is very complicated, as noted below, and although there has been relatively little empirical research, a lot of minds are already made up.
Unique Attributes of Government Organizations Which Are Relevant to Incentives and Motivation.

In addition to these suggestions of problems with incentive systems, there are a handful of assertions and empirical studies which note particular attributes of government organizations and their employees which are relevant to incentives. These references do not necessarily suggest dysfunctions or problems, but they are often consistent with some of those assertions.

First, there are indications that government employees tend to place different values on various rewards or incentives which organizations use. Lawler (1971, 1973) argues that a person's job and career choice are influenced by his/her valuation of the rewards which are perceived to be available in a particular job or career. Lawler (1971, p. 55-56) cites extensive evidence that those attracted to business careers tend to place a higher value on financial rewards than those attracted to careers in government or nonprofit organizations. Similarly, Rawls, et al (1975) have recently reported that students desiring employment in profit and nonprofit organizations show differences in responses on a number of personality inventory items, including economic values. They also found the nonprofit students were more likely to have been "change agents" in the school. Although they might be criticized for overstating the implications of their findings, they argue strongly that schools of business should consider changes in their procedures to accommodate the differences. Banfield (1976), somewhat cryptically, observes that certain rewards "figure more importantly" in government
organizations—"power and glory" at the highest levels, "involvement in large affairs" at middle levels, and security at the lowest levels. This observation is so vague as to prompt skepticism, but it is the observation of an experienced and reputable scholar, and suggests some unique incentives which may be particularly attractive to government employees. Of course, all of the references noted in this paragraph may prompt skepticism on a number of bases, but they at least serve as suggestions of possible tendencies on the part of many government employees to have valuations of rewards and incentives which are different from those of business employees.

Second, there are some empirical findings and some assertions which simply point up distinct attributes of government organizations, relevant to incentives. Porter and Lawler (1968, p. 95) found that, as compared to a sample of business managers, government managers gave lower average ratings of the degree to which they perceived their pay as being based on their performance, and as being a "satisfier"—a reward for good performance. As they note, such a finding is not surprising in light of civil service pay systems. They had no way to compare directly the job performance of the business and government sample, and thus could not relate this difference in perceived pay-performance contingency to a difference in actual performance (that is, they could not comment on whether business employees actually performed better). Yet they noted a general finding that pay can serve as an incentive to better performance when pay is important, and when it is contingent on performance.
Also in this same vein of positing distinct attributes of government organizations are a large number of observations concerning the greater difficulty of specifying and quantifying organizational performance measures in many government and nonprofit organizations, as compared to many business organizations (for many references, see Rainey, Backoff, and Levine, 1976). This is a difficult observation to interpret clearly, since one could argue that goals and performance criteria tend to be vague and multiple in all organizations, but what these authors are saying apparently involves the degree of multiplicity and vagueness involved in the "public service" or "public interest" thrust of many of the activities of government organizations and programs. The reason that these observations are important to the consideration of incentives is that, as Schultze (1970, p. 168) notes, the effective application of an incentive usually requires a relatively clear and valid performance measure—the desired behavior or action that is to be induced by the incentive must be specified, if the incentive is to work.

Conclusion: Importance of Studying Incentives and Motivation in Public Organizations, Especially as Compared to Private Ones.

Thus, from a number of fairly disparate sources and perspectives, there are questions about productivity, satisfaction, motivation, and efficient administration in government organizations, which suggest the importance of carefully studying incentives and motivation in those organizations. Some of these references indicate distinctions between government organizations and other types of
organizations, particularly business organizations. So, although the same concepts and conceptual frameworks for the study of incentives may well be applicable to all organizations, there may also be some particular attributes or magnitudes which must be taken into account in studying government organizations. Most important, however, is that most of these statements about incentives and motivation in government organizations, and about distinctions in these matters between government and business organizations, are based on assumption, assertion, or unsystematic observation. Efforts at empirical substantiation have been few and sporadic. Paradoxically, students of business organization and management, who have been much concerned with conceptual models of factors which influence employee motivation and performance, have tended to assume that public-private or business-government distinctions are relatively unimportant, and the necessary adjustments or elaborations of their models and findings for applications in the public sector have received only slight attention (Buchanan, 1975). So, an attempt at empirical investigation of some of the frequent assertions about incentives and motivation in government organizations, especially as compared to business or private organizations, seems of obvious value.

The design of such research is made difficult, however, by a number of conceptual and methodological problems. Among the most important of these are difficulties in definition and analysis of the concepts "incentive" and "motivation" in themselves. Yet a first
step towards empirical research is the definition of basic terms, so the next chapter discusses the problems and then states definitions.
It would be desirable to begin a study of this nature with precise definitions of such basic concepts as incentive and motivation. There are, however, fundamental difficulties in arriving at such definitions. These problems are discussed at length here, and then provisional definitions of the two central terms, and closely-related ones, are stated. (Most of the discussion concerns the definition of incentive; motivation is defined here, but that concept is discussed more elaborately in Chapter V). These definitions have important implications for the research, and at least serve to indicate the sense in which the terms are used. This is quite important since it is often recognized that "the term incentive has acquired so many meanings that it has become meaningless" (Florence, 1958, p. 26).

The discussion of difficulties in definition may be more elaborate than some readers would prefer. Those concerned with moving quickly to the empirical research may wish to omit these first two sections. They are included here because the problems reflect fundamental and enduring challenges to research of this nature, which should be acknowledged, even if they cannot be conclusively resolved. In accordance with this argument, the discussion will turn first to some basic problems in attaining conceptual clarity in the social sciences.
Difficulties with Definitions in Social Science

First, some comments about the meanings of "meaning" and "definition" themselves are necessary. The importance of considering what a major concept "means" has been stressed by Locke (1969), who complained that after voluminous research on job satisfaction, it was still unclear what that term meant. Yet a reader might complain that Locke's discussion achieved only one limited approach to conveying meaning—to relate the term to other, familiar terms such as "values." The problem with this sort of definition is that the alternative terms are often of uncertain meaning or definition themselves. One is reminded here of Isaak's argument that social science need not concern itself with what colloquially might be termed "showing what a concept really means," nor with the more sophisticated but similar concern over platonic ideal or real meanings. Rather, a science needs to devise nomic definitions, which specify the empirical phenomena which, when observed to occur, justify application of the term. (Of course, not all concepts need be directly related to empirical phenomena, as in the case of complex concepts and of theoretical concepts.)

One might accuse Locke of being too close to the colloquial concern mentioned above, and of purveying what Kaplan (1964) calls the "semantic fallacy," the argument that social science suffers from excessive vagueness in its concepts, and that the main concern of social scientists should be to apply themselves assiduously to making clear the definitions of their concepts. Kaplan apparently
means that there is an ineluctable vagueness in all terms, and that preoccupation with eradication of vagueness should not be the main concern.

Yet there are reasons to be sympathetic with Locke's concern. Recent discussions of major, much-researched concepts in the social sciences have emphasized the conceptual confusion which has surrounded their use. Fishbein and Ajzen (1975, p. 6) report the great diversity and disagreement in usages and measures of "attitudes." Rokeach (1973, p. 17) has noted the "conceptual disarray," the lack of clarity and consensus, in the study of the concept "values." It seems that even if we agree that we need not concern ourselves with a vague objective of showing what a concept "really means," and accept the argument that we must seek nomic definitions, we are still faced with the problem that, after much research, social scientists are still unable to agree on appropriate empirical referents for central concepts. It seems also that these disagreements are a long way from being firmly resolved by reference to other criteria which might be resorted to, such as predictiveness, fruitfulness, etc. It seems that human behavior, including cognition, is so complex as to make it extremely difficult to devise conceptual categories which "map down" to empirical phenomena in such fashion as to be demonstrably exclusive and exhaustive; this in turn creates difficulties in specifying how common concepts are related to each other and differentiated from each other.
Difficulties in Definition of "Incentive" and Similar Terms

Nowhere is this difficulty more evident than in the case of concepts which refer to purposeful or motivated human behavior, of which "incentive" is an example. Among a wide array of such terms, such as motive, goal, purpose, value, incentive, objective, need, means-ends, and so on, there are some, such as goal and objective, for which any differentiation is simply arbitrary (Friedman, 1973). Others, such as goal and value, may seem readily differentiable, but upon review of definitions offered by scholars, seem less so. Review of some of these complexities in dealing with what we might call the "purposeful" concepts may be somewhat tedious and confusing for the reader, but is necessary for demonstration of the complexities and the implications of the concept of incentives. The sections immediately following, then, undertake to characterize some of the major sources of difficulty in arriving at definitions.

Multiplicity of Referents

The sheer number and variety of objects or phenomena which might be placed under any of these concepts is a source of trouble in concept formation. Kaplan (1964, p. 72) among others, has noted that one way of defining a concept is by way of ostension--the specification of its denotation, the total set of phenomena or objects to which the concept refers. Yet efforts to compile lists of needs, rewards, goals, incentives, and other purposeful concepts have not been successful. An example of the problem is provided...
by Lawler's (1973, pp. 26-40) review of efforts by earlier psychologists to compile lists of "needs;" such a list would be of great help in predicting human behavior, because verification of the set of needs would allow us to begin positing ways in which humans would go about fulfilling those needs, and to posit ways of designing incentives or rewards to appeal to those needs. Lawler shows that numerous lists have been attempted, but some are so lengthy that they are difficult to use in research. Other, more parsimonious sets or typologies, such as Maslow's well-known need hierarchy, are shorter, but have not been proven valid as representations of relatively discreet categories of behavior or cognition. One can see how one of Maslow's categories, "self-actualization," is diffuse in its denotation, and actually represents an uncertain cluster of other needs, only partially encompassed in frequent efforts to operationalize it. Lawler argues that the way out of this impasse is to select that set of categories or clusters which is most predictive of behavior, but he notes that the voluminous research on the topic is still not adequately voluminous to have given an indication of which clusters meet such a criteria. This problem of the sheer multiplicity of objects or events which could be listed under the concept of need applies to the other concepts of concern here. The great number and variety of things that could be listed as "goals" has been noted (Thibaut and Kelley, 1959; Mitnick, 1975). Rokeach (1973) does research with a finite list of values, but it contains many--eighteen instrumental values and eighteen terminal values--and one might argue
against the completeness of the list. Skinner (1953, p. 73) emphasizes the multiplicity of things which could be called rewards when he argues that the only way to know if something will serve as a reinforcer (an event which will increase probability of recurrence of a preceding event) is to try it out in a specific context—he thus implies the impossibility of a priori generalizations about the effects of any specific reward on behavior. The multiplicity problem applies to incentives, as is evident from a perusal of a sampling of the objects or events which scholars have designated as incentives (see Appendix A). One can feel sympathy with Behling and Shapiro (1974, p. 64), who comment that "the wide variety of incentives to which individuals respond clearly indicates the need for a theory based on the possibility that almost anything can act as an incentive for greater work effort."

Categorical Overlap between Concepts, and between Referents within a Concept.

Closely related to this multiplicity problem is the problem of overlap among and within these purposeful concepts, in several senses.

Overlap between purposeful concepts. First, there is definitional overlap between the concepts of concern here. Among innumerable definitions which have been offered for each, one can find numerous examples of definitions applied to different terms which seem to be equivalent or at least overlapping. Perusal of a sampling of definitions or uses of the term incentive (see Appendix B) reveals that the term is sometimes difficult to differentiate from other terms,
particularly the term "goals." For example, an authoritative definition by English and English (1958 - see Appendix B) defines incentive as "an object or condition, perceived as satisfying an aroused motive, that tends to elicit action to attain the object or condition," or "a supplementary goal object that elicits behavior toward attainment of the main goal." Both alternatives overlap with the concept of goal. The same reference gives one of the definitions of "goal" as "the end result, immediate or remote, which an organism is seeking..." (p. 227). Yet a goal in this sense must be perceived as somehow satisfying or it would not be pursued, and it must elicit action to attain it or it is not really a goal; thus goal, and incentive in the first sense above, overlap. The second alternative above actually equates incentive with goal; one need not belabor the difficulty of saying what "the main goal" is, at least in a general sense (that is, if we are not willing to posit such a goal). In the English and English example (Appendix B) of offering a child a reward for conscientious study, which is the main goal for the child? It seems that such a distinction can be made only within a particular context where we distinguish main goals and incentives by reference to the point of view of one member of an exchange relationship, as does Mitnick (1975) in his theory of agency. In spite of this possibility, it is obviously difficult to distinguish goals from incentives under a general definition. For further evidence of this problem, one can point to treatments in which the term "values" has been used interchangeably with "goals," such as that of Dahl and Lindblom (1953, p. 26). Rokeach (1973) distinguishes values from
a number of other concepts, but not from goals, or even needs:

"The Value Survey can be used as a diagnostic tool to identify the needs, goals, aspirations and conflicts within and between individuals and groups" (p. 330). To him, a value is a belief about the preferability of a specific mode of conduct or end-state of existence (p. 5). Obviously, an end-state could be called a goal. Lawler (1973, p. 31) also adds to the confusion in his efforts to suggest a way of clarifying the confusion over "needs," noted earlier; he suggests that needs be regarded as "clusters of outcomes that people seek as ends in themselves." How, then, would needs be distinct from goals, or from "terminal values" in the sense intended by Rokeach? Also, "motive" has been used in a manner that makes it seem synonymous with incentive (English and English, 1958, p. 256) and goal (Simon, 1973, p. 127). Still another way of emphasizing the problem is to point out that, in various of the references mentioned in this discussion, several terms, such as "security," are given as examples of an incentive, a goal, and a value. This treatment stresses the points of overlap, to the exclusion of some useful clarifications by these and other authors. Yet it is clear that a reader can encounter great difficulty in trying to retain clear distinctions among the concepts mentioned.

Overlap of referents within concepts. The second sense in which one could speak of a problem of overlap in dealing with these concepts might be characterized as a categorical overlap within each concept. Whether the objective is extension or parsimony, any listing of needs, goals, incentive, etc. seems to involve items or
categories which overlap with each other. Quick examples should suffice here: promotion is often cited as a specific example of an incentive, and it is one which overlaps with salary and prestige as specific incentives, since they usually are increased by promotion. Similar examples could be given for specific items under other of the concepts of interest here, and of problems with overlap between conceptual types or categories which have been attempted in the interest of parsimony. The point is simply that the phenomena of interest are so complex that it seems virtually impossible to specify a general set of mutually exclusive terms for application to them.

Interrelatedness of Referents: The Level of One Affects Others

Another, very closely related conceptual difficulty might be called interconnectedness or interrelatedness. Many specific examples of goals, values, incentives, etc., are related in such fashion that fulfillment or achievement of one is often closely related to fulfillment or achievement of another, in at least two roughly distinguishable senses.

Hierarchical interrelationships: instrumental or means-ends relations. First, there is what might be called a hierarchical interrelationship or interconnectedness. Simon (1957, p. 63-64; 1973, p. 127) reminds us that all purposeful behavior involves means-ends hierarchies, in which one goal or end is sought as a means to a broader or more important goal. Dahl and Lindblom (1953, p. 26) refer to "means-end chains." Thus, we seek the end or goal of finding a mailbox as a means to the end of communicating with a friend which is a means to another end, and so on. Expectancy theories, which will
be reviewed more thoroughly later, have pointed out that a projected future circumstance which has some 'valence' or value for the individual, and thus motivates behavior conducive to its attainment, gains that valence by virtue of instrumentality for achievement of a full set of other outcomes which have positive or negative valence (see Vroom 1964, for example). Later formulations of expectancy theories have sought to elaborate this complex interrelatedness of outcomes, and have illustrated their point with sets of interrelated outcomes which look like decision trees or wiring diagrams (see Campbell, Dunnette, Lawler, and Weick, 1970, p 347). Similarly, but for a different term, Rokeach (1973) refers to instrumental values, which he conceives as modes of conduct which are valued as conducive to terminal values, which are valued end-states. One could also focus on the concept of need, and show how some specific needs could actually be regarded as subneeds, derived from other, more general needs. Thus, when Dahl and Lindblom (1953, p. 26) note that the means-end language is 'slippery and cumbersome' one could add that a similar difficulty inheres in use of all of the purposeful concepts. The hierarchical interrelationships create immense difficulty in analysis of the behavior of humans and human groupings. It is obviously very difficult, if not impossible, to verify a set of ultimate, real, final, or most important goals, needs, etc., and the inability to do so is a major reason for difficulty in analyzing behavior. However, even if ultimate goals, etc., could be specified, difficulties would still exist because of the variety of possible
hierarchies, of various means to the same ends. There would be instabilities and varieties due to the individual, situational and temporal variables which could influence such perceived interconnections. A central value to one person may be inconsequential to another. An "end in itself" to one may be a means to an end for another, or for the same person in a different context. Finally, there often are major uncertainties as to hierarchical connections--whether a certain means will lead to an end, and so on--and even as to what ends are actually being sought.

"Lateral" interrelationships: the level of one affects reaction to another. Interconnectedness in a second sense refers to the effect on one goal, need, etc., of the level of another, reasonably differentiable one. The valuation or importance of one need, goal, incentive or value may be influenced by the availability, attainment or value of another. Economists provide a convenient example of this idea when they refer to complementary goods. Simon (1964) conceives of goals as sets of constraints similar to those in a linear programming problem--some are to be maximized or minimized, others held constant or kept above a minimum or below a maximum, etc. Thus, any goal (and incentive, need, etc. as well) actually is a member of a set of goals or constraints, and alterations of other members of the set can influence its importance. Even in a highly simplified example, where the singularity of a particular goal seems evident, one can demonstrate such interdependence, as follows: Of a runner in the last race of his/her career, one might say (and s/he might say) that the only goal is to cross the finish line first and
win. Yet increase the perceived possibility of permanent injury and, even though there is no need for concern over future running ability, the runner may ease off and demonstrate that the goal of victory was primary only as long as another constraint (or goal) -- maintaining physical health -- was satisfied up to some minimum level. We might, for convenience, call this sense of interconnectedness a lateral interconnectedness, to distinguish it from the previous hierarchical sense. The reference is to effects of levels of attainment or fulfillment of goals, needs, etc. on importance, attainment or value of others, where one is not necessarily a subsidiary step towards the attainment or fulfillment of the other, and in fact there may be conflict between them. Thus, paradoxically, Maslow's needs (the lowest level) are not fulfilled with a view to, or in the service of, the higher needs, they are merely those which are fulfilled first. The hierarchy is one of primacy, with each successive step receiving primary focus until fulfilled. The "hierarchical sense" referred to here concerns a hierarchy of instrumentality or generality, where one thing is conducive to, or aimed at, another more general or more important thing. Actually, it is obvious that these different sources of difficulty which are discussed here are hard to keep distinct, and tend to be interrelated. However, that tendency in itself emphasizes the complexity involved in specifying any general definition and meaning of the purposeful concepts.
Problems in Observation or Verification of the Concepts and Their Operation.

A further difficulty might be characterized as a problem of verifiability or observability, and this matter raises some crucial considerations. As often used, a number of the purposeful concepts are actually inferred from observations of behavior, and are not directly observable. There is a longstanding debate in the field of psychology over the acceptability and usefulness of such inferred constructs, dating at least from Tolman's argument that "hypothetical constructs," such as "motive," although not directly observable, are theoretically useful in explaining the relationship of directly-observable independent variables (such as deprivation and stimulus conditions—rewards, etc.) and dependent variables (such as speed of rats running mazes, number of trials to learn a maze) (Valle, 1975, pp. 41-44). The debate is still unresolved, and some, such as Skinner, militantly reject the usefulness of such concepts as goal, purpose, incentive, or other concepts which are based on inferences as to the existence of unobservable cognitive processes. Some theorists adhere to a "purposive, cognitive" approach which includes goal-oriented behavior and cognitive processes in the study of behavior, while others reject these assumptions and constructs in favor of a "nonpurposive, acognitive" approach (Behling, Schriesheim, and Tolliver, 1973). The implications of this disagreement for the present project are frustrating; it indicates that even in research in relatively simple, well-controlled contexts (laboratory studies with animals), no clear consensus has yet been reached on the
appropriate concepts and constructs. Even among those who posit hypothetical constructs (which correspond to what are here called the "purposeful" concepts) there is wide variety in the constructs proposed (see Valle, 1975). To further complicate the matter, it can be argued that conclusions concerning the usefulness of hypothetical or purposeful constructs (such as conclusions as to the superfluity of such constructs) which are drawn from animal experiments may not apply to more complex human behavior (Madsen, 1974, p. 318).

Another implication of this disagreement is that it points up some further difficulties in using and defining the purposeful concepts, in studies of human behavior. There are only two general ways to verify or observe a construct such as a value, goal, incentive; we can ask the person or observe his/her behavior (does s/he approach or avoid?). In both cases, we are actually inferring the existence or operation of the construct, and a major difficulty is that the two general methods can give contradictory results. A person may say that s/he has a certain goal, or that a certain object serves as an incentive to her/him, but s/he may not work to achieve the goal or to obtain the incentive, or vice versa. The problem is analogous to the difficulty of specifying organizational goals, where there is a distinction between formal and "operative" goals (Hall, 1972). That and other complications make definition and determination extremely difficult, and have led some scholars to suggest rejection of the goal paradigm in favor of alternative approaches (Yuchtman and Seashore, 1967; Georgiou, 1973). Similarly, as noted above, Skinner has argued for rejection of such concepts as
goal, purpose, value, and incentive in the study of individual behavior (Skinner, 1953, p. 87). Interestingly, both Skinner (1953) and Dahl and Lindblom (1953), apparently without mutual awareness, relate a relevant example concerning a man going to a mailbox to mail a letter. Skinner makes the point that, even if the man tells us that his purpose or goal is to mail a letter, and we observe him to do so, a change in the events surrounding his behavior might reveal the inaccuracy of his claim and our inference. If, for example, the pretty girl who normally walks by the mailbox at a certain time stops doing so, the letter-mailing might also stop, revealing that the goal was not as claimed and inferred. Skinner thus argues that we can study behavior productively only by specification and manipulation or observation of specific empirical phenomena, and observing subsequent specific behavioral outcomes. Dahl and Lindblom relate a similar example to demonstrate the cumbersome nature of the means-end language, i.e. the difficulty of specifying and observing ends. Also contributing to these difficulties of observation and verification are the instabilities and varieties due to individual, time, and circumstance, and due to uncertainty, which have already been mentioned (p. 28 above). Finally, there are a number of potential obstacles to observation of the purposeful concepts which are well known to social scientists, including social desirability phenomena, the possibility of unconscious or at least nonverbal dispositions or motivations, and numerous other methodological problems.
The Preceding Difficulties, As Encountered in Defining "Incentive."

The preceding discussion of problems with the purposeful concepts makes evident a number of the difficulties involved in devising a general definition of "incentive," justifying the use of that term in preference over others, and making useful statements about the effects of specific incentives and their relations with other factors. Human behavior is so complex that, as indicated, such problems pertain to any of the concepts proposed for use in analyzing it. This point is not original; Campbell (1963) has argued that over eighty different concepts which various scholars have used to refer to acquired behavioral dispositions are essentially equivalent (his list includes goal, attitude, motive, value, etc.). Yet the discussion of these general problems elucidates some of the difficulties in defining "incentive." The multiplicity problem is evident in any list of the many and various things which authors have called incentives (Appendix A). In that list and in definitions (Appendix B) one finds reference to tangibles and intangibles, to internal or cognitive phenomena and external events, to persuasion, opportunities, informational cues. There appears a danger that a definition will inflate to the point where incentive refers vaguely to any and all constraints or influences on behavior, and corresponding psychological processes. Overlap with other concepts is evident, as already pointed out. How is incentive different from goal, value, motive, and other words, and why is it preferable? Overlap and partial or complete tautology within incentive lists is also evident; this raises a difficulty in specifying a set of incentives to be studied and in analyzing the
impact of any given incentive. When we offer a promotion, we may
unavoidably be offering more salary, prestige, power, and so on.
Incentives are clearly hierarchically or sequentially interrelated,
where one is actually of value as a means to another. They are
laterally interrelated in that level of availability of one may be
related to the level of another. Both of these problems make it
difficult to devise general statements about effects of particular
incentives, and about relations among them. Verifiability is also
a major problem. Even in the rare cases where we can control and
carefully observe the impact of a specific incentive on a specific
behavior, we are constrained in our ability to generalize such find-
ings across time, individuals and groups, and circumstances (in-
cluding juxtaposition with other incentives). We must even face
the possibility that the effect of the specific incentive is mediated
by a perceived connection to another incentive not specifically
observed or manipulated. As an afterthought, we might add under
the verifiability notion a particular stress on the problem of
temporal and circumstantial instability, in recognition of prominent
discussions of changes due to adaptation level, level of aspiration,
and comparison levels (March and Simon, 1958; Katona, 1975).

It seems, then, that as with other purposeful concepts, the
phenomena to which we refer by use of the word incentive are elusive
and complex. If we were to try to represent in a visual form the
incentives acting on an individual, that representation could not
resemble a relatively simple, orderly network, but would be more
like a vastly complex lattice inside a constantly-turning Kaleidoscope,
with points and connections shifting along various dimensions due to innumerable variables. This complexity will frustrate efforts at general definition, but such efforts at clarification must be attempted. First, an effort will be made to clarify and distinguish concepts closely related to incentive because even though the distinctions will involve some arbitrariness and nuance, they should help clarify the use of "incentive" in this project.

**Definition of Incentive, Motivation, and Related Terms**

In general, all of the purposeful concepts have in common a reference to dispositions to behave so as to attain or avoid certain objects or circumstances. This theme underlies the distinctions which follow.

**A Value**

A value is a general conception of the desirability or undesirability, the goodness or badness, of a general mode, end-state or circumstance of life, which tends to guide or influence behavioral choices concerning more specific circumstances. Most definitions of values stress their ideal, abstract, global, or overarching nature (even in the case of instrumental values, which are more specific modes, valued as conducive to terminal values—Rokeach, 1973). Thus "values" are relatively vague or unspecific as to time, place, or object. Also, even though values may sometimes be inferred from observations of group or individual behavior, they are internal to individuals, either in a conscious or cognitive sense, or at least in the sense of a consistent behavioral disposition. These two
attributes—vagueness and internal location—are important to distinctions between values and other concepts, as elaborated below. As noted before, this notion of values—of the existence of internal conceptions of desirable states, which influence behavior—is controversial, due in large part to the two attributes just mentioned. Since they are internal, they cannot be directly observed, and due to their vague nature, a multiplicity of different, even conflicting, behaviors can be conducive to their fulfillment, so it is also difficult to infer their existence and nature.

The closely-related concept of an object's having value or being valuable concerns the degree to which an individual (or group) will tend to choose, prefer, and exchange resources for the attainment of an object or circumstance. A person might value money, but money would not then be a value or one of his set of values, as defined above, since "money" does not refer to a general conception of a desirable mode or circumstance of life. Thus, although the distinction is not easily maintained, this second use of the word value will be regarded here as mainly concerned with more specific objects and circumstances. It is roughly synonymous with valence, which is discussed in Chapter IV below.

Goal

A goal is an object or situation which a person or set of persons seeks to attain. Although some uses of "goal"—especially in its most general senses—make it synonymous with "a value," as defined above, most definitions or uses imply the following distinctions, which are accepted here. Goals are more specific in time, place, and object.
Usually, moreover, the term, as compared to the term "value," carries a stronger implication of effort to achieve the desirable circumstance or attain the object, etc. (Certainly, goals are sometimes of little behavioral import, and are stated, but not pursued. In these cases, however, the artificial nature of the goals is usually acknowledged by use of such terms as "formal" goals.) This implication of effort or more directness of effort is consistent with the more specific nature of goals, since specificity makes the relation of efforts to goals more clear than the relation of efforts to values. In fact, one could say—somewhat arbitrarily—that goals are pursued in the fulfillment of values, and that values are overarching, general conceptions which influence the choices of goals.

A complication which further distinguishes goals from values is that "goal" can be used in a sense implying internal or external location of goals. While in many uses the term clearly refers to external phenomena being pursued, a goal can also be thought of as an internal or cognitive representation of the external phenomena to be attained or brought about. This is especially clear as goals become more general and abstract, such that there is no clear, simple external referent for the goal. English and English (1958) refer to this internal representation as a "goal idea" and note that it is a complication often ignored, even though it is a particularly important—and controversial—matter in the consideration of human behavior.

There are other implications of the concept "goal" which are important for distinguishing goals from other concepts besides values,
as elaborated later. One implication concerns whether value or attractiveness inheres in the goal being sought, that is, whether the goal is sought as an end in itself (even though the notion of "end in itself" is difficult to explicate, in view of the cumbersomeness of means-ends language, as already discussed). It seems that "goal" bears no necessary connotation of attractiveness or value of the goal itself. A superior can assign a performance goal to a subordinate, and the subordinate will pursue it, even though the goal itself is of no value or even repulsive to him. This implication becomes important when, further below, we define incentives to include things which are sought due to their inherent value or attractiveness. Another, closely related aspect of the goals concept concerns point of view: in specifying goals, there is always a problem of whose point of view or perspective we are adopting in defining goals. In the superior-subordinate relationship mentioned above, the main goal from the point of view of the superior is different from that of the subordinate. This implication figures importantly in the consideration of incentives.

Motive

Motive is one of the most general terms used by motivation theorists in psychology, and thus overlaps, in many uses, with goal, incentive, drive, and other terms. Yet it tends to be used in reference to an internal psychological force or impulse, conscious or unconscious, which initiates or regulates behavior. Thus it is akin to "goal" in its specificity relative to "value," but it is synonymous with goal only in the usage of that term which refers to
an internal representation of an external state to be achieved.

**Need**

A need is an internal, physiological or psychological deprivation or lack of something which would further the individual's welfare or facilitate its behavior (English and English, 1958, p. 338). This lack is sometimes regarded as giving rise to action, thus making need synonymous with motive. When need is used so as to focus primarily on tension resulting from the deprivation, need becomes interchangeable with the psychological construct "drive," and thus distinct from motive in that a need is regarded as giving rise to a motive.

**Motivation**

In this study, motivation will be taken to refer broadly to an individual's willingness or tendency to try to work hard and work well within an organization. There are a number of conceptual difficulties in dealing with this term, as well, but since they are closely related to provisions for measurement of this concept in this study, they are elaborated in Chapter V.

**Incentive**

Differing definitions of incentive. Turning, finally, to definition and distinction of incentive requires some further belaboring of implications, uses, and complications of that concept. A brief review of definitions helps emphasize some of these implications, and demonstrates the variety of definitions, which sometimes increases to the point of conflict among them. A perusal of Appendix B will show that many definitions consider incentives to be external
conditions which influence behavior (English and English, Locke Polilman, Herbert, and others). Under other definitions and uses, incentive refers to an internal psychological construct. Vroom notes that incentive is one of several terms which refer to affective orientations toward outcomes. Florence says that incentive refers to increased willingness. Bolles notes that incentive refers to anticipation of reinforcement, and that in some uses incentive actually replaces the construct of drive (an inferred, internal construct). Although in Appendix B only these few definitions stress the internal sense of incentive--i.e., of incentive not as an attractive external condition but as an internal representation of it or impulse toward it--this usage has apparently been fairly common among experimental psychologists. It is incentive in this sense that Skinner was objecting to in the reference made to him earlier (p. 32). Yet, an interesting illustration of the confusion in use of the term is provided by a statement by Bolles concerning the superiority of Skinnerian approaches over theories which use cognitive constructs (quoted in Madsen, p. 318). Bolles says that motivational phenomena are explained more parsimoniously by reference to incentives, as in a Skinnerian approach. He thus seems to regard "incentive" as synonymous with Skinner's idea of external reinforcers, while Skinner himself, in the quote just noted, considers incentive to involve a reference to an internal impulse. This problem of internal or external location must be accounted for in a definition of incentive.
Another important aspect of the definitions in Appendix B is that, among those which stress external influences on behavior, some refer broadly to external inducements or incitements to action. Such broad usages raise again a concern mentioned in the earlier discussion of the multiplicity problem in defining incentives (pp. 33-34), the concern that the definition will blow up to include all conceivable external influences on behavior. Certainly there are influences on behavior, which could be broadly construed as inducements, which we would not want to call incentives. As suggested in the definition by Florence, certain factors, such as physical surroundings, might induce certain behaviors by constraining capacity, without actually affecting willingness, intention, or motivations. How do we separate out incentive from the universe of influences on behavior?

Another major question is raised by several definitions and uses which refer to incentives as informational influences from the environment. Bobbitt says an incentive is a psychological cue. Scott speaks of a stimulus which incites action. In lists of incentives (Appendix A) some authors include items which involve information concerning access to, or availability of, valued objects or events. Locke mentions "knowledge of the score" in performance tests, and competition. Wilson includes persuasion. Clearly, behavior and intentions can be aroused, energized, and directed by informational cues, and one must address the question of whether such information should be called incentives.
The definition and its implications. With these questions in mind, the following definition is offered:

An incentive is an object or event external to an individual which, because it is perceived as valuable or rewarding, will increase the individual's intentions to engage in behaviors perceived as leading to the attainment of that object or event. External cues or informational inputs, which are not valued in themselves, but which affect the perceived behavior-attainment linkage, are not called incentives under this definition, but are obviously crucial considerations.

This definition clearly opts for use of "incentive" as a reference to external objects and events (including informational events), even though internal perceptions and intentions are clearly important to the definition; these internal phenomena, however, are not be called incentives. This specification of external phenomena differentiates incentive from those terms which, as noted in the preceding discussion, refer to internal phenomena: values, motives, needs, drives, and the internal sense of goal ("goal idea"). This distinction has important implications for evaluation of previous research which will be reviewed in later chapters--research on values, motives, needs and goals of officials and employees. Application of this research to the analysis of incentives in organizations is complicated by its emphasis on internal states, which involves a relative deemphasis on the external conditions which influence behavior. While research on internal states or impulses is certainly relevant as a source of suggestions about the appeal of various incentives, emphasis on incentives as defined above shifts the focus to external conditions, and thus is more appropriate to questions of design and control, which are of particular concern in analysis of
organizations. Moreover, one can see, in view of the distinctions already made, that the frequent tendency to use incentives interchangeably with other terms, such as motive, can create confusion. In the research proposed later, we will maintain this distinction by asking respondents for their perceptions concerning access to, and value of, certain objects or events, rather than asking about their "reasons" or "motives."

The definition addresses the concern over excessive broadness of the concept, by focusing the definition on those external objects or events which the individual seeks in anticipation of reward or satisfaction (as opposed to all external constraints or influences). It also acknowledges the importance of information relevant to attainment of incentives. These two provisions of the definition have major implications: first, the emphasis on anticipation of reward from external events, and the emphasis on the importance of informational cues (which stress the importance of individual perceptions and intentions in the definition) make the definition appropriate to a "cognitive" approach to motivation, even though incentives are clearly defined in the external sense. Not surprisingly, then, the research proposed in later chapters is heavily influenced by expectancy and "SEU" theories of motivation. The research design emphasizes individuals' perceptions about access to, and value of, various "incentives," and their perceptions about various sorts of information pertaining to such access. Second, this cognitive emphasis is related to basic assumptions underlying the research proposed later, which include the assumption that individuals' reports of their
intentions and perceptions concerning events external to them are useful and important. As elaborated later, this assumption is largely forced by methodological constraints—the only available source of data for present purposes is to ask people about their perceptions and intentions with regard to incentive. A third implication emphasizes some weaknesses of the definition. The cognitive emphasis and related assumptions leave major problems with the definition: the definition cannot account for unconscious responses to incentives due to the emphasis on perception and intention. Also, the assumptions concerning the usefulness of self-report are challenged by well-known weaknesses of that method—social desirability, etc.

There are, as well, other problems with the definition, some of which cannot be resolved for now, without extensive discussion. For example, there might appear to be inconsistencies between the definition and the research design: We will later be concerned with "intrinsic" incentives, mediated within the person; this is apparently inconsistent with our emphasis on external objects or events. In addition, we will not choose incentives on the basis of their perceived value or their ability to induce behavior changes. Rather, we will simply posit some important incentives (in Chapter V) on the basis of previous literature. Such objections can be answered; the intrinsic incentives can be considered external in time, if not place. We could say we are choosing incentives for the design which might well be assumed to be valuable and capable of inducing behavior changes—responses are gathered which confirm their value to the individuals involved. Nevertheless, detailed discussion of such
difficulties would be extensive, and would raise points which would likely remain moot. Suffice it to conclude that the definition is a provisional one, with implications for the research which are important, although quite broad.

Since the definition is quite broad, it is applicable to a wide array of potential questions, and the discussion must turn immediately to specification of those questions about incentives and motivation which are of interest. To that end, the next chapter will present a review of literature pertaining to incentives and motivation in government organizations, especially as distinguished from private or business organizations, which will serve as basis for the selection of major questions or propositions to be pursued.
CHAPTER III

UNIQUE INCENTIVE AND MOTIVATION FACTORS
IN PUBLIC ORGANIZATIONS

The preceding chapter has shown that there are conceptual and methodological difficulties in studying incentives and motivation. Nevertheless, there are some ways to perform useful empirical analysis of the operation of such phenomena in public organizations. To that end, this chapter will review literature concerning unique incentive and motivation factors in public organizations, often stated in terms of their differences from private organizations. There is a wide array of factors which might be considered as relevant to these two concepts, but it is not feasible to pursue them all empirically. The focus must be narrowed to a subset of questions which are amenable to research within the constraints on the present project. Therefore, the literature review will serve as basis for selection of three general research questions, here called "general propositions." These propositions will be further refined, as described in later chapters, into specific empirical hypotheses. The propositions are chosen on the basis of several criteria: 1) They are important questions, as indicated by the emphasis they receive in the literature. 2) They are relatively amenable to empirical research, in that there are questionnaire instruments available (to be described in Chapter V) which are reasonable empirical representations.
of the same ideas. 3) Some have already received a degree of empirical support.

These general propositions will be stated in the form of contrasts between public and private organizations. Such differences are of major interest in their own right (Rainey, Backoff, and Levine, 1976), but the comparative perspective is also particularly useful for analysis of incentives and motivation in public organizations. This approach requires attention to definitions of "public" and "private" organizations, and to differentiations between the two. Accordingly, the discussion will first turn to this topic. Then there will be brief consideration of the broad range of public-private differences which have been asserted to exist, and the point will be made that the focus must be narrowed for empirical research, not just to differences pertaining to incentives and motivation, but even further, to several researchable questions within this set. Then the literature on unique incentive and motivation factors in government organizations will be presented, emphasizing three topics: 1) Empirical studies suggesting public-private differences, or unique characteristics of public organizations and employees, on matters pertaining to incentives and motivation. 2) Literature concerning constraints on incentives due to government personnel procedures. 3) Literature concerning vague performance criteria in government organizations. Finally, the three general propositions are presented, and the chapter closes with a brief summary of the progress of the dissertation to that point. As noted,
then, the discussion will begin with consideration of the definition of "public" and "private" organizations.

**Defining and Differentiating Public and Private Organizations**

**Difficulties in Defining "Public" and "Private"**

Before itemizing a number of the particularities of public organizations, and differences in public and private organizations, which have been found to exist or have been claimed to exist, one must try to make clear what one means by "public" and "private" organizations. This clarification is by no means simple or easy. Rainey, Backoff, and Levine (1976) gave brief attention to this problem of definition and differentiation, and noted the inability of a number of able efforts to draw a clear distinction and make clear definitions. There seems to be an increasing intermixing of the organizations in the two sectors, as exemplified by privately-owned and operated organizations performing government services under contract or grant from the government, and by government regulation or intervention into the operations of private organizations. There is also a frequent similarity of role, situation, or attribute among organizations in the two sectors; examples of this phenomena are the plethora of "semi-government" private organizations which perform the same services as do some government organizations (these might be classified by some as "third sector" organizations), and large corporations which, according to some, have so much market influence that they become like government organizations in their exemption from a true
market test and in their extensive influence on the public interest. In addition, some argue, government regulation and contracting moves many private organizations toward a similarity with government organizations, in that they become more subject to hierarchical constraints (and "red tape") in the case of regulation, and less subject to market constraints, as a result of contracting.

Previous Efforts at Definitions and Distinctions

This intermixing and similarity, which some observers feel to be rapidly increasing, makes precise definitions and distinctions virtually impossible. Yet such efforts are useful and even necessary, in view of the importance of the issue. In looking, then, at the attempts that have been made, one might characterize them as involving at least two types of approach. (A more elaborate typology of approaches is presented in Rainey, Backoff, and Levine.) Some authors seek to specify what might be called fundamental or "defining" attributes of the two types of organizations, while others simply point out particular attributes, processes, tendencies, and so on, which characterize public or private organizations, sectors, administration— or whatever term is summoned up to express the unit of analysis—but which do not serve to define the entity in some basic or fundamental sense. In the most useful approaches, both sorts of observations are included. Examples of the first sort of undertaking are definitions of public organizations in terms of the nature of their outputs, usually put forward by economists. Burkhead and Miner (1971) say that the crucial distinction between organizations engaged in "general government activity" and those engaged in "market activity"
is that the government organizations have no price tags attached to their products. One could point to a number of similar references by economists to the differences in packageability, excludability, marketability or specifiability of outputs. Dahl and Lindblom (1953), although not both economists, distinguish between "enterprises" which are responsive to a market system, and "agencies" which are controlled by a central, hierarchical authority system. Thus, they distinguish on the basis of the means by which the organization is controlled. In all of these cases, the distinction is put forward as fundamental or basic.

Concerning the second sort of effort mentioned above, one could cite a number of references which simply note differences or particularities in process, tendency or attribute, which are not advanced as fundamental or basic to definition, but merely as interesting or important. A number of these references and suggestions will be reviewed later, and in fact those observations are, to a great extent, what this chapter and this dissertation are about. As the most interesting examples, however, one can cite some of the characteristics suggested by Burkhead and Miner and Dahl and Lindblom, who mention a number of attributes which tend to be related to, or to follow from, the more basic differences they posit. The absence of clear prices on outputs, Burkhead and Miner argue, is related to several results: the loss of profit maximization as a decision-making guide, a greater vagueness and multiplicity of objectives, the presence of objectives other than economic efficiency and greater difficulty in attaining economic efficiency, and less incentive to
reduce costs or return appropriations unspent. Dahl and Lindblom note the following particularities of agencies: They are controlled more by superiors or other political actors then they are by a price system. They must cope with funding that is more highly contingent upon previous experience and perceptions of superiors. They tend to have more vaguely defined or multiple goals, among which cost-reduction does not receive very high priority. They are relatively insulated from automatic penalties and rewards of the price system. They generally lack objective tests of efficiency by product or service. They are able at times to shift their costs to other agencies rather than face them or go under. Cost reduction does not generally provide opportunity for growth. (From Walmsley and Zald, 1971).

Choice of a Definition

While such differences are of major concern, and the discussion will return to them soon, it is necessary for now to concentrate on the suggestions about "defining" differences. They can serve as means of identifying organizations as belonging to one or the other of the types, and are therefore useful as ways of orienting the present discussion. They are also particularly important as guides to sampling for the empirical tests proposed in later chapters. One can easily imagine how difficult it is to sample organizations on the basis of vagueness of goals, incentive to cost reduction, and others of the non-defining differences mentioned above. A more basic, as well as easily-identifiable, set of criteria is required.
The approach which best meets this need is one which was not previously mentioned as an example, that of Walmsley and Zald (1973). They distinguish, and thus define, public and private organizations on the basis of two factors—ownership and source of funding. Private organizations, such as the YMCA and food stores, are owned by individual citizens or groups of citizens, and obtain their financial resources from private sources. Public organizations in the United States are "owned" publicly, by the citizenry, although it should be noted that it is not easy even to apply the concept of ownership to such organizations. Their source of funding is the public fisc, i.e., distributions of tax money via appropriations or grants.

Obviously, this definition will not clearly cover all organizations. Walmsley and Zald actually present a four-cell diagram to show that there are publicly "owned" organizations, such as the Post Office and COMSAT, which have private sources of funding, in the form of user charges or private capital markets. There are privately owned organizations, such as RAND Corporation, certain aerospace firms, and Oak Ridge National Laboratories, which are owned privately but receive all, or a major part of their resources from public sources, via government contracts or grants.

In spite of the need to acknowledge the existence of these organizations which Walmsley and Zald call "mixed," their approach to classification will be accepted for present purposes. One reason for accepting it is that it tends to coincide with or encompass some of the other classificatory mechanisms. For example, the specification of a private source of funding for private organizations coincides
with distinctions on the basis of market exposure. Private sources of funding, and therefore market exposure, can also be closely related to "nature of output" distinctions, since excludability, package-ability, absence of significant externality, and similar concepts are closely related to the ability to place outputs on the market, and thus to the tendency for those outputs to be handled via economic markets, and financial resources to be obtained thereby. The main reason for using the Walmsley and Zald scheme, however, is its relative clarity and ready usefulness. Although one is frustrated by the need to leave a number of important organizations in an interim status, it is nevertheless possible to separate a great many organizations—probably the majority of them—into two fairly distinct groups with this scheme. It is fairly easy to demarcate a set of privately owned organizations that obtain the major percentage of their funds privately, and another set that are "owned" by the government (or the people) and funded via the public fisc. This classification has major limitations, but it can at least serve as a provisional conceptualization to guide our discussion of the differences between the two types of organizations. As elaborated later in the chapter on empirical design, a more restrictive version of this classification will guide the sampling. It will be assumed that such differences as may exist will, if they are observable at all, be most readily detectable when private business firms and government agencies are compared. This comparison is in accordance with the Walmsley and Zald classification, but excludes a number of organizations which would have fallen into the private category, such as private hospitals, schools, and other
private social service organizations. The rationale here is that such organizations have tasks or technologies that are so similar to those of their public-sector counterparts that this similarity may wash out some of the differences that tend to exist between the two broad sets in general, and thus inclusion of them might complicate this preliminary inquiry into the differences.

The Range of Possible Differences Between Public and Private Organizations

In view of the inadequacies of these efforts at basic distinctions, one might expect even further complications in the broad array of differences which have been suggested or observed with varying degrees of rigor and substantiation. Indeed that is the case, as indicated in Rainey, Backoff, and Levine (1976). That reference reported an effort to compile as much as possible of the literature in which the question of differences or particularities of one or the other type of organization was directly addressed. The observations, assertions, or findings made by several different sources were compiled, and an effort was made to state those points of apparent consensus as propositions with potential for empirical testing. Those propositions are presented in Figure 1.

Narrowing the Focus to Assertions about Differences in Incentives and Motivation

It is evident that there is a wide array of statements about distinctions or differences to be considered, covering a wide range of the major aspects of organizations—environments, internal structure and process, personnel, and so on. Sorting and evaluating this
Figure 1

SUMMARY OF LITERATURE ON DIFFERENCES BETWEEN PUBLIC AND PRIVATE ORGANIZATIONS: MAIN POINTS OF CONSENSUS

The following table presents a summary of the points of consensus by stating them as propositions regarding the attributes of a public organization, relative to those of a private organization.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Proposition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Environmental Factors</strong></td>
<td></td>
</tr>
<tr>
<td>I. 1. Degree of market exposure (Reliance on appropriations)</td>
<td>I. 1.a. Less market exposure results in less incentive to cost reduction, operating efficiency, effective performance.</td>
</tr>
<tr>
<td></td>
<td>I. 1.b. Less market exposure results in lower allocational efficiency (reflection of consumer preferences, proportioning supply to demand, etc.)</td>
</tr>
<tr>
<td></td>
<td>I. 1.c. Less market exposure means lower availability of market indicators and information (prices, profits, etc.)</td>
</tr>
<tr>
<td>I. 2. Legal, formal constraints (courts, legislature, hierarchy)</td>
<td>I. 2.a. More constraints on procedures, spheres of operations (less autonomy of managers in making such choices)</td>
</tr>
<tr>
<td></td>
<td>I. 2.b. Greater tendency to proliferation of formal specifications and controls</td>
</tr>
<tr>
<td></td>
<td>I. 2.c. More external sources of formal influence, and greater fragmentation of those sources.</td>
</tr>
<tr>
<td>I. 3. Political influences</td>
<td>I. 3.a. Greater diversity and intensity of external informal influences on decisions (bargaining, public opinion, interest group reactions)</td>
</tr>
<tr>
<td></td>
<td>I. 3.b. Greater need for support of &quot;constituencies&quot;—client groups, sympathetic formal authorities, etc.</td>
</tr>
<tr>
<td><strong>II. Organization-Environment Transactions</strong></td>
<td></td>
</tr>
<tr>
<td>II. 1. Coerciveness (&quot;coercive,&quot; &quot;monopolistic,&quot; unavoidable nature of many government activities)</td>
<td>II. 1.a. More likely that participation in consumption and financing of services will be unavoidable or mandatory. (Government has unique sanctions and coercive powers.)</td>
</tr>
<tr>
<td>II. 2. Breadth of impact</td>
<td>II. 2.a. Broader impact, greater symbolic significance of actions of public administrators. (Wider scope of concern, such as &quot;public interest.&quot;)</td>
</tr>
</tbody>
</table>
### Figure 1 (continued)

<table>
<thead>
<tr>
<th>III. Internal Structures and Processes</th>
<th>III. 4. Unique public expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>III. 1. Complexity of objectives, evaluation and decision criteria</td>
<td>III. 4.a. Greater public expectations that public officials act with more fairness, responsiveness, accountability, and honesty.</td>
</tr>
<tr>
<td>III. 1.a. Greater multiplicity and diversity of objectives and criteria.</td>
<td></td>
</tr>
<tr>
<td>III. 1.b. Greater vagueness and intangibility of objectives and criteria.</td>
<td></td>
</tr>
<tr>
<td>III. 1.c. Greater tendency of goals to be conflicting (more &quot;tradesoffs&quot;).</td>
<td></td>
</tr>
<tr>
<td>III. 2. Authority relations and the role of the administrator</td>
<td>III. 2.a. Less decision-making autonomy and flexibility on the part of public administrators.</td>
</tr>
<tr>
<td>III. 2.b. Weaker, more fragmented authority over subordinates and lower levels. (1. Subordinates can bypass, appeal to alternative authorities. 2. Merit system constraints.)</td>
<td></td>
</tr>
<tr>
<td>III. 2.c. Greater reluctance to delegate, more levels of review, and greater use of formal regulations. (Due to difficulties in supervision and delegation, resulting from III. 1.b.)</td>
<td></td>
</tr>
<tr>
<td>III. 2.d. More political, expository role for top managers.</td>
<td></td>
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<tr>
<td>III. 3.b. More frequent turnover of top leaders due to elections and political appointments results in greater disruption of implementation of plans.</td>
<td></td>
</tr>
<tr>
<td>III. 4.b. Lower valuation of pecuniary incentives by employees.</td>
<td></td>
</tr>
<tr>
<td>III. 5 Personal characteristics of employees</td>
<td>III. 5.a. Variations in personality traits and needs, such as higher dominance and flexibility, higher need for achievement, on part of government managers.</td>
</tr>
<tr>
<td>III. 5.b. Lower work satisfaction and lower organizational commitment.</td>
<td></td>
</tr>
</tbody>
</table>

(III. 5.a. and III. 5.b. represent results of individual empirical studies, rather than points of agreement among authors.)

**Source:** Rainey, Backoff, and Levine (1976), pp. 236-237.
array of propositions represents a major undertaking, perhaps a life's work, and is beyond the scope of this dissertation. It is more feasible, and more appropriate for present purposes, to concentrate on those propositions which are relevant to the operation of incentives in those organizations, and to the motivation and work effort of individuals in them.

Even within this more restricted area, there are still numerous complicated propositions to consider. The terms incentive and motivation are so broad, potentially, that almost everything can be regarded as relevant to them. It can be argued that strict formal and procedural requirements in government organizations result in a tendency to cautiousness (Golembiewski, 1969), which could be termed a disincentive or lack of motivation to innovate. Reliance on appropriations, rather than market performance, as a source of resources, is said to create peculiar incentives, in that a bureaucrat will see virtually all desirable things as increasing with an increase in budget appropriations. Selfish impulses, such as desire for the greater power or self-esteem associated with administering a larger operation, as well as unselfish impulses, such as a desire to increase services to clients, tend to be fulfilled by higher budget allocations. As a result, bureaucrats will tend to seek higher budget appropriations, whether or not the returns from these increases are clearly specifiable (Niskanen, 1971). Tullock (1965) followed a somewhat similar argument in reaching another conclusion. In large public bureaucracies, he said, career advancement depends on recommendations from superiors, and subordinates are
therefore motivated to distort the information that they provide their superiors. The political environment and public scrutiny of government organizations may provide a disincentive to innovation or any behavior that might arouse controversy, and the turnover of politically-appointed administrators may create a disincentive to long-range planning. The lack of clear performance indicators in government programs and organizations is said to create problems in making incentives of various kinds contingent on performance (Schultze, 1970), and in devising productivity improvement programs (Balk, 1975).

Further Narrowing the Focus

These and a number of other assertions mentioned by Rainey, Backoff, and Levine (1976) and by other sources might all be taken as relevant to the issue of incentives and motivation in government organizations, either because they use those two terms explicitly, or because they can be reconstrued in statements using those terms. As mentioned above, the broadness of the terms is a problem here. For any behavior, one might posit an incentive, and any behavior can be discussed in terms of motivation to engage in that behavior, and so on through a number of other complications. This complexity forces a still narrower focus, onto a subset of phenomena which are more feasible for handling in the present project. That can be achieved by adhering more closely to the definitions from earlier chapters, and thinking of incentives as valued outcomes which persons seek to attain, and the information relevant to their attainment. "Motivation" will refer to the propensity or willingness of organizational members to exert effort— to work hard, and to try to work well and be
productive. Under this approach, the review below will concentrate on research and writing pertaining to the work effort and work productivity of organization members, and the impact of incentives and incentive mechanisms on those behaviors. This will tend to preclude a major emphasis on a number of the interesting propositions already noted, such as those about the incentive effects of budgets and about incentive effects of the political environment, although some of these phenomena will be drawn in on occasion. Since we are concerned with particularities of public organizations and public-private distinctions, the review will also concentrate heavily on these matters.

This review will also serve as basis for selection of several "general propositions" which, as described in subsequent chapters, will be further refined for empirical testing. These general research questions, chosen on the basis of criteria mentioned at the beginning of this chapter, will be listed after the literature review.

**Empirical Studies Suggesting Peculiarities or Differences in Incentives and Motivation**

A good place to begin the review of relevant research and writing is with the empirical evidence, because the aim in this dissertation is empirical research. Although not all of these studies provide direct and clear evidence concerning the effects of incentives on work effort and productivity, they give important suggestions of distinctions in such matters between public and private organizations. The available empirical findings concern work satisfaction, organizational
commitment, job involvement, feelings about connections between pay and performance, and some possible differences in values and attributes between individuals in the two sectors. None of these variables touches precisely on motivation, effort, or performance—that is one reason for proposing more research—but they are certainly relevant. The procedure here will be to consider the handful of empirical studies in considerable detail, since this is an undeveloped area and many possibilities must be considered. Some comments in interpretation and criticism will be made in the process, but the major interpretive effort will be presented at the end of the review of the empirical studies.

Work Satisfaction Comparisons

First, there are several empirical studies which have found that samples of Federal government managers show lower work satisfaction than business managers. Two of the studies found lower satisfaction in the sense of greater need dissatisfaction, as measured by a frequently-used method developed by Lyman Porter. Porter's procedure involves asking the respondent for three ratings in response to items concerning certain specific needs. (An example of a need item is, "the feeling of security in my management position"). First, the respondent rates the importance of the item to him, then he makes a rating of how much of that item is presently provided by his job, and finally he makes a rating of how much there should be—how much his job should be providing him with. Satisfaction is measured in an inverse sense of need dissatisfaction, by subtracting the "is now" rating from the "should be" rating; i.e. how deficient is the available
amount, as compared to what "should be." The 13 questionnaire items to which the responses are made are designed as operationalizations of five need categories which are drawn from Maslow's need hierarchy—security, social, esteem, autonomy, and self-actualization needs.

The Paine, et al study. The earliest of these two government vs. business need satisfaction studies which used Porter's method was reported by Paine, Carroll, and Leete (1966) in a brief article in the Journal of Applied Psychology. They introduced their study as an effort to extend earlier findings by Porter of differences among managers with respect to need satisfaction. They used Porter's questionnaire instrument to draw need-satisfaction ratings from a sample of 95 government managers in a new government agency. Paine, et al then compared the responses of those government managers working in the central office to the responses of managers engaged in field work. They also compared the responses from their total sample of 95 government managers to the responses of Porter's sample of 659 managers from private industry, which Porter had reported in an earlier publication.

In comparing the government sample to Porter's sample from private industry, Paine, et al could make no tests for statistical significance of the differences, since Porter had reported no data on the variances of his measures. However, for every one of the thirteen items, the private industry sample indicated higher satisfaction than the government sample; for most of the items, the differences were quite large, by the standards of this type of
research. Thus, there was a strong indication of greater dissatisfaction on the part of the government sample, which, the authors noted briefly, was similar to the private industry sample in age and organizational level. However, in discussing these results, Paine, et al were cautious about drawing conclusions about general differences in satisfaction between government and business managers. They noted that government "norms" with respect to need satisfaction might be quite different from those in private industry—meaning, presumably, that satisfaction levels are lower in government—but that more studies would be needed to confirm this difference. For this particular study, however, they felt that a more likely explanation arose from the existence of doubt about the future of the particular agency studied—its funds had been cut back, and it was under attack by elements of the press and of Congress. This resulted in very high concern over job security, as indicated in the questionnaire responses and other information available to the authors. In other studies, they noted, concern over job security had been found to have a "halo effect," in that concern over security had apparently spread to other aspects of job satisfaction, causing generally-lower satisfaction ratings. The authors felt that a similar effect might have influenced their findings, and thus were apparently reluctant to draw conclusions about public-private or government-business differences. The study raises a number of conceptual and methodological considerations which are taken up further below.
The Rhinehart, et al study. In a second, vastly similar study, Rhinehart, Barrell, DeWolfe, Griffin and Spaner (1969) made the same comparisons of a government sample to the results for Porter's business and industry sample. These authors were more directly concerned with government-business differences, and saw their study as an effort to extend the comparison made by Paine, et al. They were particularly interested in the implications of the comparison for government personnel policy, and introduced their study with references to some research and writing, which will be mentioned again below, which was inspired by concern over the ability of the Federal government to attract and keep good managerial-level personnel.

The Rhinehart, et al sample consisted of 2026 respondents from the Department of Medicine and Surgery of the Veterans Administration. As in the Paine, et al study, this government sample showed lower satisfaction (greater need dissatisfaction) as compared to the business and industry managers, when all five need areas and all levels of management were considered together. This finding was statistically significant for the total sample, and the differences in all need areas were in the direction of greater dissatisfaction among the government (Department of Medicine and Surgery) sample. When the need areas were considered individually, the government sample showed greater dissatisfaction in the "social" and "self-actualization" need areas to a statistically significant degree. (The two items concerning social needs referred to the opportunity in the job to develop close friendships and to give help to other people. The three items concerning self-actualization called for ratings of the opportunity for
personal growth and development, the feeling of self-fulfillment, and the feeling of worthwhile accomplishment.)

Rhinehart, et al also drew information concerning age, educational level, and management level of the respondents. To deal with management level, they separated the sample into four levels—top, upper-middle, lower-middle, lower—which they equated, on the basis of job title and responsibilities, with management level categories which Porter used to classify his sample. Analyzing the data in this way, they found greater dissatisfaction on the part of the government managers, as compared to the business managers, in each of the top three management levels. At the lowest management level, however, this difference did not hold, and in fact the sample of business managers showed somewhat greater dissatisfaction than the government managers at this low level. The authors referred to the data on educational level for a possible explanation of this finding at the low level; they noted that, while a higher percentage of top-level government managers were college graduates than top-level members of the business sample were, at all the other levels the percentage of college graduates was highest for business managers. This difference was particularly large at the lowest level, where about 76% of the business managers were college graduates, but only 18% of the sample of government managers were. This difference at the lowest level, they thought, might be related to the finding of a difference from the other levels in the dissatisfaction results. Perhaps, they reasoned, the business managers at this lowest level had higher aspiration levels, due to their higher educational levels, and therefore
tended to show higher dissatisfaction, particularly when dissatisfac-
tion is measured in the sense of discrepancy between "is now" and
"should be." Except for this one major difference which surfaced in
the consideration by level, the results indicated general similarities
between the government and business samples in the patterns of sat-
isfaction across levels. These patterns were consistent with previous
findings by Porter. In both samples, higher-level managers tended to
show higher satisfaction (less dissatisfaction) than lower-level man-
agers. Government and business managers both showed highest dissat-
isfaction in the autonomy and self-actualization areas, as Porter had
found with other samples; they also showed rough similarity in the
pattern of relative satisfaction among the other need areas, except
that government managers felt their security needs were less well-
satisfied than their esteem needs—a pattern which was reversed for
the business sample. A difference between the samples—lower
median age of the business managers at all management levels—
received only brief comment from the authors, apparently because
they could not determine whether it resulted from longer service
prior to promotion, or from joining the organization at a later age.

Rhinehart, et al interpreted their findings as a fairly clear
indication that the government managers were less satisfied than
the business managers; they also regarded their findings as an
extension to the Paine, et al (1966) findings. However, they also
had to acknowledge that, due to the nature of the questionnaire
instrument, the results might have been due to higher norms or levels
of expectation (the "should be" item) on the part of the government
managers. Although the authors did not make this elaboration, one could apply this suggestion of a difference in norms to some of the specific findings. As noted, government managers showed greater dissatisfaction of social needs. As mentioned also, one of the items used as operationalizations of social needs referred to the opportunity to help other people. One might suggest that government managers might be expected to show a higher service norm or service ethic (and thus a particularly high "should be" rating on this item) and therefore would tend to show greater dissatisfaction in this particular type of measurement. It should also be noted that a problem with Porter's method is that the "is now" and "should be" ratings may not be independent of each other, and thus may be unclear as indications of actual dissatisfaction. So, while the findings of these two studies of need dissatisfaction offer some interesting results, they are by no means conclusive, and are subject to conceptual and methodological criticisms. There are also some important and difficult questions about the implications of "satisfaction" findings of any kind, but before taking these up, we must review a finding by Buchanan, where a different satisfaction measure was used.

Buchanan's study. Buchanan (1974) also reported lower satisfaction on the part of a sample of Federal government managers, as compared to a sample of business managers, as indicated by their responses to a satisfaction measure which was different from the one used in the two studies mentioned above. To a sample of 152 managers in large Federal agencies and a sample of 127 business managers from Fortune 500 manufacturing firms, Buchanan administered two components of the
Job Description Index (JDI)--the components concerning satisfaction with work and with coworkers. The JDI will be more fully described in a later chapter, but suffice it for the moment to say that it is a widely-used questionnaire instrument on which the respondent makes responses of yes or no, concerning whether or not each of a list of adjectives describes his work or his job situation. There are five components to the scale: work, promotion, pay, coworkers, and supervision. (Examples of items concerning the work component are "fascinating" and "boring"). The pattern of yes and no responses indicates the level of satisfaction.

With this instrument, Buchanan found that the average response of the government managers was lower than the mean score for the business managers ($p < .001$), on both the work and coworker components. As elaborated further below, Buchanan's article and discussion were devoted primarily to his findings concerning the managers' feelings of commitment to their organizations. He hardly discusses his finding on job satisfaction, except that, in his introductory remarks, he cites findings of differences in job satisfaction as part of the research evidence which is relevant to organizational commitment. Although he is not very clear on this point, he apparently feels that lower work satisfaction is closely related to lower organizational commitment, because, presumably, a less-satisfied manager will feel lower commitment to the organization. He cites the Paine, et al and Rhinehart, et al studies as part of the relevant research, and feels that those studies join his own studies as indications of a general
problem in morale, commitment, and related responses on the part of Federal government employees.

The Kilpatrick, et al study. The three studies reviewed in the preceding paragraphs begin to paint a convincing picture of some sort of general morale or satisfaction problem among managers in the Federal service, but there are a number of complexities and shortcomings of the research which must be taken into account. One source of complication is a group of studies which predated those reviewed above, and were actually cited as support by Rhinehart, et al, but which show that the questions of satisfaction of Federal managers can be quite complicated. In the late 1950's and early 1960's, there was apparently a good deal of concern over the ability of the Federal government to attract and retain capable employees at high technical and managerial levels. This concern occasioned several major studies of work satisfaction among those groups. Kilpatrick, Cummings, and Jennings (1964) reported a major study of occupational values and the image of Federal government service, which was based on a large, systematic sample of private citizens and Federal employees. While their results were very complicated and the authors argued against single, global statements about them, one of the most significant conclusions of their study was that the image of the Federal service was not consistent with the occupational values of the more highly-educated, higher occupational groups in American society. Since it was from these groups that the Federal government would apparently be in greatest need of recruits, this finding boded ill for Federal manpower capabilities. Rhinehart, et al, cited this conclusion as
indication of a personnel problem in the Federal government and as justification for their research on need satisfaction among managers. A close look at the Kilpatrick, et al findings, however, shows that they may well have found indications of problems, but by no means did they find abysmally low satisfaction among managers in government. They asked their respondents to rate their present jobs on a scale of the degree to which the job was an ideal job, with a rating of ten indicating that the job was ideal. The average responses to this item by business executives and Federal executives (GS-12 and above, with primarily administrative duties) were almost identical—8.0 for the businessmen, 8.1 for the Federal executives. On average, then, the government executives rated their occupations very highly, on this particular satisfaction measure. This is, in fact, a limited measure of satisfaction, and in the complicated array of findings there were other indications of a high-level personnel problem. Natural scientists, social scientists, engineers, and college graduates as a group in Federal employment were lower in mean response to this idealness rating than their counterparts in private business firms. When these groups, as well as the executives, in business were asked about the desirability of having the same job in the Federal government, and the corresponding groups in government were asked about having the same job in a private business firm, the groups in business found such a change far less appealing than did the groups in government, including the executives. Thus, while the idealness measures indicated no great dearth of satisfaction in government, particularly among executives, there were other findings which
suggested greater willingness to leave, and might be taken as indications relevant to satisfaction and morale.

**Stanley's study.** Similarly, Rhinehart, et al cited Stanley's (1964) study of high-level civil servants as an indication of the problem with which they were concerned. They noted that Stanley reported that among eighty persons who had left Federal employment, 34% reported leaving for new opportunities and new work experiences, and 20% said they left because of dissatisfaction with programs, policies, colleagues, and various frustrations. Rhinehart, et al, saw these figures as an indication that over half of the high-level employees who left Federal employment left because of dissatisfaction with their jobs. This interpretation overstates Stanley's findings, in several senses: the first reason mentioned above might not really be an indication of dissatisfaction, since Stanley reported no figures on willingness to leave, and Stanley also found evidence that led him to conclude that, among his sample of high-level civil servants, "the great majority of the employees studied were well satisfied in general, interested in their work, and working hard at it." (p. 109)

**Some concluding comments on the work satisfaction studies.** These last two references illustrate an important point: while there are fairly convincing indications that Federal government managers, as compared to business managers, tend to show lower average responses on some types of work satisfaction scales, one must be cautious about concluding that there is a "problem" due to "low satisfaction" in government. The matter is complicated by problems of definition, measurement, and confounding variables, and we will return to these
problems as soon as we have reviewed some more findings by Buchanan concerning variables closely related to satisfaction. With regard to the three work satisfaction studies in themselves, however, it is important to note that in organization behavior and industrial psychology, it has been frequently mentioned recently that job satisfaction—in various operationalizations—has shown no consistent relationship to the performance or productivity of employees in organizations. Over a number of studies, it has tended to show a low positive correlation with employee turnover and absenteeism. (Lawler, 1973; Locke, 1976). Therefore one might regard findings of lower work satisfaction among government managers as suggestive of a problem with retention of managers, but, using past research on satisfaction as a guide, one could argue that lower satisfaction cannot be regarded as any more than a remote hint that government managers are lower in effort or performance. Nevertheless, the findings are of interest; they could be giving us indications that there are, among managers in government, feelings that efforts are not fruitful, that good performance is not rewarded, or that rewards are unsatisfactory, and such feelings might well reduce motivation and performance. The concept of work satisfaction will be considered more thoroughly in a later chapter, and this point demonstrated more carefully. For the moment, however, there are other interesting findings by Buchanan to consider.
Buchanan on Organizational Commitment and Job Involvement

The commitment study. As noted, Buchanan's (1974) study of satisfaction and commitment was focused almost entirely on commitment, and he argued the importance of this factor very strongly. Commitment, he said, is a critically important variable for all types of organizations, because it links the individual to organizational goals, promotes concern for the well-being of the organization, and minimizes the need for external control of the employee. He saw commitment as involving three main components: identification with the organization's mission, involvement or psychological immersion in organizational duties, and loyalty to the organization—an unwillingness to leave. He undertook to measure commitment in this sense, and to measure and relate to commitment a number of organizational experiences which he saw as probable influences on the level of commitment felt by the individual.

As a measure of commitment, Buchanan used an index formed by summing three scales. One scale was the Lodahl-Kejner involvement scale, which presents questions about the importance of one's job as part of one's life, willingness to devote extra effort to the job, and similar questions concerning the degree to which one is "involved" in the job. The second scale was an Organizational Identification Scale developed by D. T. Hall and others, which contains items concerning pride in working for the organization, accepting the organization's problems as one's own, and similar questions. The third scale was a loyalty scale developed by Buchanan himself, which asks about fondness for the organization, sense of loyalty to the organization,
willingness to transfer to another organization for more money, and similar questions. In average scores on the index formed from these three scales, the government managers were significantly lower than the sample of business managers (p < .001).

By way of interpreting and explaining the difference in commitment, Buchanan reported a regression of seven organizational experience variables—each measured by a short scale—on commitment. Each "experience" variable entered the regression with a significant t value, and on each, the government sample was significantly lower than the business sample. One of the experiences was "personal significance reinforcement," the degree to which the manager feels his work makes an important contribution to the organization. Buchanan argued that the feeling that one is making a real contribution should be related to commitment (as it was), and speculated that ratings of this experience were lower in government because the goals of government organizations are more diffuse and hard to measure, thus making it more difficult to assess agency effectiveness, and therefore more difficult for the individual manager to verify his contribution to the organization's mission. Also, he said, work groups in government tend to be more diverse and less cohesive, and less likely to agree on what a significant contribution is; therefore the group does not mitigate the effect of vague organizational goals.

Another experience variable which was related to commitment and was lower for government managers was "stability of expectations"—the consistency with which the organization fulfills expectations
of managers, particularly with regard to implementation of policies. Buchanan argued that scheduled disruptions due to elections and other political changes and influences reduces policy continuity in government organizations.

"First year job challenge" was also related to commitment. Buchanan felt it was lower in government organizations because the vague goals make it harder to devise jobs which clearly contribute to the organization's goal or mission. Also, many government organizations are overstaffed. So, he argued, it is more likely that a manager will regard his initial job as less challenging than will a counterpart in the private sector.

Three subscales concerned with "reference group experiences" also received lower ratings from the government sample, and indicated that government managers saw their groups of coworkers as less cohesive and as having less favorable attitudes toward the organization. This Buchanan attributed to greater diversity in race, in political or interest-group loyalties, and in other factors in government organizations. This interpretation is akin to the one he suggested for his finding of lower ratings by government managers on a final variable, "perceived commitment expectations." They were lower than the business managers in their ratings as to how much loyalty the organization expected from them. He saw this as the result, at least to a large extent, of the existence of important ties outside the organization (such as to interest groups) for many government managers.
Buchanan's speculative interpretations of his findings are worthy of consideration, given the lack of development in this area of research, and the discussion will return to some of them. Rather than tarry to consider them at this point, however, and to consider some apparent shortcomings of his research—including some problems with conceptual fuzziness—it is useful to make only a few brief comments and push on through another relevant study by Buchanan. Briefly stated, a problem with this last study by Buchanan is akin to the problem with the satisfaction studies already noted; lower commitment may suggest the possibility of higher turnover, but one should not necessarily expect lower organizational commitment to be an indication of lower performance or productivity on the part of the less-committed individual. Professionals, cosmopolitans, persons with a strong service orientation, or persons with a strong attachment to a particular interest, cause, or individual outside the organization, might all be types which could perform very well in an organization without necessarily feeling attached, loyal, affectionate, or faithful to the organization itself. Buchanan actually acknowledges the influence of such external loyalties in his interpretations discussed above. One might argue simplistically that public servants should in general place a higher value on public service, and therefore might tend to see the organization itself as only a secondary concern, not worthy of affection or loyalty in itself. It might even be harmful for government employees to feel great commitment or loyalty to their organizations as such, since accountability and service to external groups and entities are of major
importance in government organizations. It seems, then, that Buchanan is overstating the case, especially for government organizations, when he argues the critical importance of organizational commitment. While such a finding is interesting and may well be a cause for concern, it is still not clear that this difference in commitment implies a difference in individual motivation or performance. However, a more recent study reported by Buchanan (1975) provides a somewhat stronger hint of laxity in actual performance or productivity on the part of government managers.

The involvement and "structure salience" study. Buchanan (1975) introduced this more recent piece with an argument for the importance of empirical studies of public and private organizations. He noted the tendency of organizational sociologists and psychologists to regard any such differences as relatively useless, and he acknowledged the existence of a number of organizational taxonomies which are theoretically superior to the public-private distinction. Nevertheless, textbooks of public administration frequently make such distinctions in a nonempirical fashion, and assumptions about government-business differences underlie much of the public and academic debate about the proper allocation of functions among organizations and institutions in the United States. Therefore, he thought, there was strong justification for efforts to add to the small set of empirical studies which had begun to find differences between the two types of organizations.

One prominent "notion" concerning the differences, Buchanan said, was that there should be a "service ethic," a commitment to public
service, on the part of government employees, particularly at middle and upper hierarchical levels. There are, he noted, some rough empirical indications (to be reviewed later) that they do, in fact. Another important image of Federal agencies concerns the obsession with administrative rules, procedures, and constraints—"red tape"—that supposedly characterizes them. A number of reasons are, or might be, cited as causes of this alleged enmeshment in red tape: accountability requires safeguards and multiple checks; scarcity of empirical and substantive performance criteria causes congressional overseers to focus on procedural, rather than substantive, performance standards; rule-consciousness results from a displacement of goals, in the manner described by Merton and other sociologists; the relative absence of clear, precise goals and market tests reduces ability and motivation to specify and eliminate those administrative procedures which are unnecessary, and results in a proliferation of procedure and structure.

Buchanan sought to test the accuracy of these two supposed attributes of government organizations by comparing responses of 76 government middle managers (GS 9-13) in four Federal agencies to 69 business middle managers, from four northeastern manufacturing and service firms, on a scale of job involvement and a "structure salience" scale; the organizations were matched roughly by size. The job involvement scale was similar to the one he used as a component of his organizational commitment scale, as described above, but apparently differed in an important way, as elaborated below. Since the scale purportedly tapped the individual's psychological immersion in his
work, Buchanan considered it useful as a test of the notion about
a service ethic. High involvement or immersion in work on the part
of government managers, as compared to business managers, would in-
dicate a special dedication among public servants. Buchanan intended
the structure salience scale to be a measure of managers' perceptions
as to the conspicuousness and importance of formal bureaucratic rules
and routines in their organizations. It contained questions con-
cerning whether the supervisor placed greater stress on rules and
regulations than on doing an effective job, whether decisions had
to be checked with higher levels, whether rules and procedures stifled
new ideas, whether it was important to go through proper channels,
and other items of this nature.

The responses on these scales were in the direction opposite to
that which Buchanan expected. He found that the government managers,
on the average, were lower on both job involvement (p < .005) and
structure salience (p < .0005). In addition to comparing the public
to the private mean, he compared mean responses for organizations,
and found that each of the four government agency means was lower
than each of the private business organization means on the job
involvement scale, i.e., when ranked by average job involvement score,
the four public agencies were the four lowest. On salience of
structure scores, three government agencies were lowest, but a fourth
overlapped with organizations in the business sample, and was act-
ually higher than three of the business organizations. This overlap
indicated the variability among individual organizations which
probably exists, but, as Buchanan noted, the overlap actually moved
the overall measure in the direction of less difference, but the outcome nevertheless indicated lower structure salience responses for the government sample as a whole. Possibly because, as he mentioned, the participating organizations required that they remain anonymous, Buchanan offered no information as to the possible reasons for the divergence of the one government organization.

In suggesting interpretations for his findings, which he considered counterintuitive and surprising, Buchanan first turned his attention to the perceptions of lower structural salience on the part of the government managers. He suggested that structural complexity and procedural formality in the public sector, while certainly high, may not be so high relative to the private sector as often supposed; perhaps there has been an undue deemphasis on these tendencies in the private sector. Business organizations, he argued, have a greater capacity to exert control over their employees, because they have more ability to discharge employees and to ensure that advancement, security, and success are contingent on the performance and behavior they consider desirable. This difference might, he thought, explain the different perceptions of structure which his measures indicated, because mid-level bureaucrats have "abundant resources for resisting the structural constraints on their behavior, particularly in comparison with their industrial counterparts." (p. 437). The primary reason for such autonomy on the part of government managers, he said, was the tenure system and civil service "status" which prohibits dismissal without significant cause. A second reason is that many members of Federal agencies can cultivate
relationships with various constituent groups, such as lobby and interest groups and legislators, and can use them as sources of support and protection. A third source of autonomy is the broader, looser definition of jobs and goals in government agencies which make it more difficult to establish strict accountability, since the relationships of individual jobs and performances to the vague missions of the agencies is harder to specify. A final reason suggested by Buchanan is that public servants can avail themselves of extensive appeal routes and procedures through the Civil Service Commission if they feel unjustly used by rules or practices of the agency, and the existence of this possibility may cause a hesitancy about stressing authority or structure in any way that might cause an employee to make such an appeal. While there may be similarities on some of these points on the part of business organizations, Buchanan argues that the potential for successful resistance to organizational pressure is nevertheless greater in government organizations.

Concerning his results on job involvement measures, Buchanan cited other, unpublished research he had done, in which he had found three main determinants of job involvement. He used these factors to explain the difference he had found between the government and business samples: the cohesive work group, an important determinant, was less likely to be found in government organizations, because, at least for the time being, there tends to be greater representation of minorities and women in government, and because there tends to be greater likelihood of external loyalties and references in government organizations; another major determinant, the challenging job, was
less likely to be found in the public sector, he felt, because agencies
tend to be overstaffed and their missions are often conceived in
broad, unspecific terms, such that it is less likely that an individual
will feel that he is making an important contribution to organizational
goal achievement, and therefore more likely that he will experience
lower job involvement; a final determinant, disappointment resulting
from a discrepancy between personal career expectations and organiza­
tional reality, is more likely to affect government managers, he
supposed, because they probably enter with more idealistic notions
about public service but find their assignments trivial and disappoint­
ing in relation to their lofty aims.

Buchanan concluded with an acknowledgement that his interpreta­
tions were somewhat "speculative and overdrawn for emphasis," but
argued that his findings were important primarily because they were
counterintuitive, and indicated that a number of notions about gov­
ernment red tape, and a service ethic, seem oversimplified and in­
accurate. He further noted that, while some authors such as Ostrom
and Niskanen regard the market test as a positive influence on organ­
izations, his own findings suggest the need for a reassessment of that
idea--the market-oriented organizations he studied showed greater
salience or rules and structure, and this tendency may have dysfunc­
tional consequences; it may inhibit flexibility and innovativeness,
whereas the aforementioned authors would argue that the market test
should increase innovativeness.

As in his previous article, Buchanan might be criticized for
use of instruments, concepts, and explanations which are confused
and unclear. His notion of structure salience, for example, mixes together a number of factors, such as rules, procedures, and authority, in a way that makes it hard to see clearly what the concept means and what the instrument is actually measuring. Again, too, he engages in some interesting speculative explanations which could be debated at length, and which will be mentioned again. The most important question for the moment, however, is the same as the question raised by his previous study, concerning whether or not the dependent variable, in this case job involvement, provides a useful hint of lower individual motivation or performance in the public sector. An overview of the article might give high hopes of more useful findings in this regard, because one prominent author (Price, 1972) regards the Lodahl-Kejner job involvement scale as a scale of "motivation." Price (p. 137-139) says that since Lodahl and Kejner conceive of job involvement as the "degree to which a person's work performance affects his self-esteem," the concept should be closely related to Price's own conception of motivation, which he defines as the willingness to work. Price contends that if a person is involved in his work, and his performance affects his self-esteem, he should be willing to exert effort and work hard. So, one might hope that in measuring involvement, Buchanan is measuring responses closely akin to motivation, which might give us at least a hint as to whether there might be a difference in effort exerted in the two types of organizations; it might also give as good a measure as one can normally hope for of the attitudes toward exerting effort. This difference in independent variables could be regarded as an improvement over the use of
satisfaction, which is frequently unrelated to effort and performance, or the use of organizational identification, which may not be related to motivation, as argued above. However, such hopes are disappointed, because Buchanan apparently did not use the Lodahl-Kejner scale in its pure form. Although he attributes the development of the scale to them (p. 431), he gives example items from his job involvement scale which make it clear that he added items to the Lodahl-Kejner scale—half of the example items he mentions actually come from the Hall-Schneider-Nygren Organizational Identification scale. So, it seems that the job involvement measure is confounded with an organizational identification measure, and the shortcomings of such a measure, at least for present purposes, have already been noted.

The Porter and Lawler Study: Pay-Performance Contingencies

As part of a larger study, Porter and Lawler (1968) found that government managers were less likely than business managers to feel that their pay was based on their performance. While they did not tie this difference to a difference in effort or performance, the finding is clearly relevant here. Porter and Lawler designed their study as a test of a model of work effort, performance, and satisfaction, based on the expectancy theory of work motivation, which will be reviewed in the next chapter. They drew responses on a wide range of factors—need satisfaction, role perceptions, respondents' feelings as to how their pay was determined, importance of pay, self-rated effort and performance, and superiors' rankings of their respondents according to effort and performance. Of most interest for present purposes, however, are their findings of differences between
government and business managers in their impressions as to how their pay was determined.

They collected responses from 635 managers in seven organizations from different geographical areas in the United States. Privately-owned organizations in their sample were a chemical manufacturer, an aerospace firm, a canned food processor, and a public utility. There were also three state government organizations, an employment department, a conservation department, and a state liquor control organization. They argued that their sample could not be called a random sample of managers in the United States, but could be regarded as a representative sample, since the organizations were diverse in size, structure, and activity.

Among an array of other findings, they reported a comparison of responses concerning how the managers felt their pay was determined. The private industry sample gave higher ratings, to a statistically significant degree, of the importance of three factors in determining their pay—quality of job performance, productivity on the job, and effort expended on the job. That is, the business managers were higher than the government managers in average rating of the importance of these factors as determinants of their pay. In addition, the private industry manager was significantly higher in the degree to which, on average, he agreed with several statements concerning raises and pay: that past raises had meant that he was progressing in his work, that raises were a reward for good performance, and that pay was a form of recognition for a job well done.
For efforts to test some other hypotheses concerning satisfaction with pay, Porter and Lawler turned their attention to the data they had on the relationship between a manager's actual pay level and the performance measures used in the study—the individual's ratings of his own performance, and his superior's ratings of his performance. They found that there was a small positive relationship between actual pay and performance measures in their sample of business managers, and this allowed them to test a hypothesis they were interested in. However, there was no relationship between actual pay level and performance for government managers, so they had to be eliminated from the hypothesis test.

Porter and Lawler assumed that this lower connection between pay and performance in the government sample—as indicated by the findings in the preceding paragraphs—was due to the civil service systems by which all of the government organizations were covered:

One clue as to the type of pay policies that lead to pay raises being seen as recognition for good performance can be found in the large differences that appear in our study between the government and private samples. As would be expected, the civil service policies of the government organizations apparently contribute to pay raises being seen as much less related to performance in that sample than in the private sample. (p. 177)

It should be stressed that this was an assumption, unsupported by data collected. Also important is that one of Porter and Lawler's major conclusions was that pay is an important influence on higher effort and higher performance if the individual considers pay important, and if s/he also sees it as contingent on his effort and performance. However, they reported no differences in importance of pay.
to government managers, as compared to business managers. Nor did they report any differences between the two samples in the measures of effort and performance; their data were not really appropriate for making such comparisons anyway, and a failure to find differences does not necessarily indicate the absence of differences. What is apparent from the last three sentences is a certain inconclusiveness. Government managers may or may not be lower in effort or performance, and any such difference might or might not be related to the difference in the perceived relationship between performance and pay. It is possible that the government managers' level of effort and performance was not really affected by the lower performance-pay connection, since they might attach a low value to financial rewards, and other rewards may be more important influences. Nevertheless, as Porter and Lawler indicate, a low performance-pay connection is certainly not a good thing. It would be useful to have an extension of this study, involving a more elaborate set of rewards, and the design described in a later chapter will make such an effort.

Indications of Differences in Individual Characteristics

The possibility of an individual difference in the value attached to financial rewards raises the question of whether there are indications of differences in the characteristics of the individuals in public and private organizations. There is a handful of studies that give hints of such differences.

With regard to the importance attached to pay, there are some significant, but not entirely conclusive, indications. Lawler (1971), says that there is extensive evidence that employees of business
organizations attach more importance to pay than do employees of nonprofit organizations. Yet he references none of this research, except for his own unpublished dissertation, which reports findings that persons in industrial organizations attached more importance to pay than did members of government organizations. Rawls, Ulrich, and Nelson (1975) reported that business school students planning to enter nonprofit organizations scored lower on the Allport-Vernon-Lindzey "economic values" scale than did students planning to enter nonprofit organizations. This finding might be taken as an indirect indication of a difference in the valuation of financial rewards.

Other findings hint at other differences. Guyot (1960) found that a sample of government bureaucrats scored higher on "need for achievement" and lower on "need for affiliation" than did a sample of business managers. The finding of higher need for achievement was, he thought, an indication of inaccuracy in the prevalent stereotype of the government bureaucrat as lacking in drive. He saw his findings as an important indication that government bureaucrats are different, but also noted that a characteristic of the sample may have influenced the outcome. The government managers were closely associated with military operations, and had joined government service during a period when national events may have caused highly motivated or achievement oriented persons to government. Thus, the sample may not have been representative of government managers. The Rawls, et al study mentioned above also found differences on a number of personality inventories between the two samples they compared. Students planning nonprofit employment were higher on "dominance," "flexibility,"
Sikula (1973) reported a comparison that is relevant here, but was more concerned with individual values than with scores on personality tests. From groups representing twelve different occupational groups, six of which were 'managerial' groups, he gathered responses on a value survey developed by Milton Rokeach. That survey requires the respondent to rank eighteen 'instrumental' values, and then eighteen 'terminal' values, in order of their importance to the respondent. One of the managerial groups represented government executives, and was based on the responses of 54 H.E.W. employees above the GS-14 level. This group was similar to the other five managerial groups in their high (favorable) rankings of values relating to competence ('wise,' 'logical,' 'intellectual') and to initiative ('imagination,' 'courage,' 'sense of accomplishment').

Among the twelve occupational groups, the government executives were particularly high on values related to integrity ('honest,' 'responsible,' 'capable'). They gave particularly low (unfavorable) rankings to the value items 'a comfortable life,' 'happiness,' 'pleasure,' 'cheerful,' and 'loving.' They also were particularly high in their ratings of 'equality,' 'mature love,' 'self-respect,' and 'helpful.' Although Sikula does not do so, one might summarize these findings as portraying government executives as oriented toward integrity, altruistic service, a degree of asceticism, competence and initiative. However, a number of methodological and conceptual shortcomings of Sikula's approach and the Rokeach method, which it is
not useful to discuss here, make one cautious about attaching too much significance to Sikula's findings.

While these studies concerning personality differences and differences in general values are interesting, their relation to behavior, to motivation, and to the impact of incentives is even more remote than some of the findings reported earlier, so they will not figure importantly in the research design.

Interpretations of the Empirical Findings

The findings are more frustrating than conclusive, but they do provide limited suggestions of differences and of distinctive aspects of government organizations, especially in that they tend to be consistent with some of the nonempirical sources mentioned in Chapter I and in paragraphs to follow. They also provide some encouragement to the present effort, as evidence that scholars have attempted empirical comparisons and have regarded them as worthwhile. Nevertheless, there are major limitations and difficulties, the most important of which are the following:

Conceptual difficulties. It is hard to be precise in defining a number of the concepts involved, such as public and private, business and government, manager, motivation, satisfaction, involvement, effort, and performance. As noted, the lack of clarity of the interrelationships among the latter five concepts is also a source of difficulty. It is hard even to specify, much less define, the vast array of factors which are relevant to research on these more central concepts--"managerial level" is a ready example.
Sampling difficulties. In view of the conceptual problems, one might expect sampling problems. Indeed, with every study, there remains the question of whether the sample is really representative of government managers and business managers. The difficulties in clear definition of public and private, and the immense complexity and variability in the individual and organizational circumstances in the two sectors make the question of the representativeness of a sample virtually moot. Only Buchanan and Porter and Lawler made even tentative arguments concerning the representativeness of their samples. One major consideration in sampling that is hard to handle is the level of government--local, state, federal. Even if more were known about the impact of such differences in level on the dependent variables of interest here--and apparently little is known--the inclusion of a representative sample of all three levels in a single study is obviously extremely complicated.

Measurement difficulties and difficulty with significance of findings. Also accompanying the conceptual problems are difficulties concerning the operationalization of the concepts for quantitative measurement, and the interpretation of these measurements. Problems in precisely defining satisfaction, motivation, and other concepts are of course related to problems in devising measures of those concepts. In the studies reviewed, little attention was given to questions of validity and reliability of measures. Together with the failure of the dependent variables to touch directly on motivation, effort, and performance, this absence of clear indications of validity and reliability leaves major uncertainties as to whether or not the
the findings are meaningful. Another major uncertainty concerns whether a "statistically significant" difference is of some practical significance. Does an average difference of five points on a fifty-point satisfaction score really indicate an important difference that has practical consequences and calls for remedial action?

In sum, then, the few empirical studies which are available leave some tantalizing uncertainties. Nevertheless, taken together they might be interpreted as a fairly strong, if not entirely clear, indication of some form of incentive and motivation problem in many government organizations. From a number of different studies with different samples and different variables, we have indications of lower satisfaction, lower job involvement, lower perceived performance-pay relationships, and some distinct values and personality traits on the part of government managers. These findings in themselves might justify efforts to add to them a study aimed more directly at testing for differences in motivation and effort, and the impact of various incentives. Also encouraging to such an effort is the consonance of these empirical studies with the observations from a number of sources which base their conclusions on general experience rather than systematically-gathered empirical data. It is appropriate now to turn to some of these sources, not just to demonstrate that they roughly gibe with the empirical findings, but also because they suggest some sources of possible differences in motivation and incentive effects.
Among some of the indications of government incentive or performance problems mentioned in Chapter I, many admit to no elaboration. The evidence of public concern over government productivity and the productivity of government employees, and the matter-of-fact observations by academics about disincentive to productivity in government, which were mentioned in Chapter I, bear no further analysis. However, related issues in Chapter I are more useful to the effort to say how these incentive problems arise, as well as serving as some corroboration of their existence.

Those references which do bear some further analysis are discussions in which the author goes beyond offhand, brief statements about less incentive to productivity in government, or just less productivity, and actually suggests some reasons behind the assertion. One important group of references of this sort are those which consider the effects of civil service systems or government "merit" systems on motivation, incentives, and productivity. There is an immense literature pertaining to the merit system in government in the United States, and that system has a rich and complex history (see Mosher, 1968). However, a great deal of that material is concerned with issues, such as the rationale for the system (its preferability to a system of political patronage), which certainly are important but are only tangential to the present project. It is appropriate, for present purposes, to focus on a small part of that literature, in which a number of authors have argued that the merit system and
civil service systems in the United States are a source of dysfunctional incentives. One need not go very extensively into those references, because a handful of them will serve to demonstrate that credible sources have criticized civil service systems in the way mentioned above. Another reason for abbreviating the review is that these, and apparently virtually all other sources which could be gathered, offer no systematic empirical proof for their criticisms, and the need for such an effort is a basic justification for some of the procedures described below in the chapter concerning empirical design.

A good place to start is with some of the less-elaborate discussions of the problem, some of which have been mentioned in the review of empirical evidence. Remember that Porter and Lawler assumed that the government managers' perceptions of a lower connection between their performance and their pay was the result of the civil service systems which governed their organizations. Buchanan suggested that his finding of lower perceived "structure salience" on the part of government managers was due in large part to the tenure system and civil service "status." Control over subordinates was weaker, he thought, and the relation of advancement, security, and success to performance was weaker, due largely to civil service constraints on demotion, advancement decisions, and removal from the organization. Banfield (undated), in a discussion of the potential for corruption in government and business organizations, lists a number of attributes which, he feels, distinguish the two types of organizations. One item on the list concerns civil service regulations, which, according to Banfield, place greater constraints on hiring, firing,
promotion, and demotion than are present in business organizations. Elsewhere in the same piece, he says that one of the problems in controlling corruption in government organizations is the inflexibility of pay and promotion, which results in less incentive to avoid corruption. Thus, in several brief passages, we encounter assertions that civil service systems dilute the relationship between individual performance and such rewards as pay, promotion, demotion, and firing. While a number of additional criticisms have rained down on civil service and merit systems in recent years, and some of these will be noted, it is these latter complaints that will be the main focus of the following review, and which will figure in the ultimate empirical design.

While it is very difficult to find empirical substantiation of the complaints concerning pay, promotion, etc., it is easy to demonstrate that these are major concerns, because they are acknowledged by major figures. A convincing source is Macy (1970), a former Chairman of the U.S. Civil Service Commission, who is by no means a severe critic of the merit system. A few quotes from his book suggest the importance of the problems mentioned above:

Virtually every round-table discussion of problems facing public managers will quickly turn to the inability of the managers to discipline nonproductive employees or to dismiss those who have ceased to be productive or constitute chronic supervisory problems...Processes of discipline and dismissal are indeed difficult to traverse...(p. 20).

There is reason to believe that the granting of tenure and the commitment to longtime employment may be a reverse incentive. Once the protection offered by this benefit is obtained, risk and uncertainty are removed and the individual will slip into a comfortable routine where the status quo
is defended and where new displays of original or creative work are not required. One of the perpetual complaints from administrators about the civil service system is their seeming inability to remove, reassign, or demote veteran employees who are unable to meet the standards of performance. In virtually any discussion of managerial problems, the question of how to get rid of the person who has passed his peak or is deadwood ranks high on the agenda. It is not enough to delineate the procedures for taking adverse action against such an employee. Those processes are long and complicated, designed to give the employee the benefits of due process in an action that if carried to its conclusion will grievously stigmatize him...(p. 266).

Macy (265-271) also notes a constant pressure by many government employees and their representatives to deny any managerial discretion in promotion decisions, and implies that this pressure tends also to favor a seniority system which makes promotions almost automatic. Macy seems less concerned about the difficulty in tying pay to performance. He describes the Federal government's Incentive Awards Program, which provides rewards for suggestions and excellent performance, in tones that indicate his conviction that the program is effective. He adds that the profit motive does not differentiate business organizations from government organizations as much as is often supposed, since profit acts as an incentive only at higher levels in business organizations. Thus, he seems to downplay the importance of government-business differences in performance-pay contingency. Since this review is trying to demonstrate the existence of concern over that contingency, a quick response to Macy's deemphasis is in order--the Incentive Awards Program has been in operation since 1954, long before the expression of the concerns mentioned in the references cited here, and it obviously has not silenced the criticisms.
A much less sympathetic and diplomatic attack on civil service systems, especially that of New York City, is mounted by Savas and Ginsburg (1973). They charge that civil service systems are actually "meritless" systems, whose rules and regulations have become rigid and regressive. They blame these systems for the problem of low productivity of public employees and of malfunctioning government bureaucracy which "shows up all over the country." They list numerous shortcomings of the systems, such as excessive reliance on hiring and advancement examinations of doubtful validity, and the long delays in processing the results which cause the best applicants to be lost to other jobs. One major category in this list of weaknesses concerns problems with "promotion and motivation." Savas and Ginsburg say that promotions tend to be made according to a seniority system which protects insiders, excludes talented outsiders, and limits competition. They say that the worst feature of the system is that chances for promotion bear no relation to job performance. There are few ways a superior can reward or penalize a subordinate, because of these promotion constraints, and because of automatic salary increases for union employees, which are matched by comparability increases and cost-of-living increases for non-union employees. Moreover, the complicated administrative procedures governing such matters make it almost impossible for superiors to discharge a barely competent or even an incompetent employee.

Since the scope and variation of the merit system or civil service systems are an important question in this review, it is important
to note that Savas and Ginsburg feel that their criticisms are widely applicable:

Today, the so-called merit system--the name given to the elaborate web of civil service laws, rules, and regulations which embrace the merit principle--covers more than 95 per cent of all permanent federal (civilian) employees, all state and county employees paid by federal funds, most state employees, many county employees (particularly in the Northeastern states), most employees in more than three fourths of America's cities, and almost all full-time policemen and firemen. (p. 70).

Although the New York City system is the source of most of their examples, and they consider the Federal government system to be superior to that of New York, Savas and Ginsburg make it clear that they consider all "so-called merit systems" to be subject to the dysfunctions they cite.

Other discussions of the shortcomings of civil service systems in the U.S. could be cited, including some which are as harshly critical as Savas and Ginsburg (Shafritz, 1975; Wilmers and Reilly, 1973), and some which, like Macy, are more diplomatic (Beaumont, 1973; Balk, 1975, p. 21 and 43). However, it seems clear enough from the brief review that knowledgeable persons are concerned over the possibility that rigid, inflexible civil service procedures and requirements tend to reduce the connection between employees' performance and their pay, promotions, demotions, and firing. This weakens motivations and productivity, they think.

Some counterarguments should be noted briefly. As mentioned earlier in this chapter, tying rewards to performance is a problem in all organizations. Stahl (1971) notes that about the same percentage of persons are terminated annually in the Federal government...
as in private enterprise; perhaps removal is not so rigidly constrained in government. Vaughan (1975) in a Ralph Nader-type attack on the Federal Civil Service system, argues that superiors can and do find ways to get around civil service procedures, for the purpose of punishing subordinates—by isolation and denial of meaningful responsibility, for example. Actually, Vaughan portrayed these tactics as ways of punishing persons who divulged politically damaging information or who created bad publicity, rather than as punishments for poor performance. These counter-arguments might make one less confident of the outcome of an empirical test, and more doubtful as to the correct interpretation of the discussion. Actually, however, they underscore the need for empirical tests as a way of breaking the impasse among observers. They are also roughly consistent with the empirical indications of lower morale, involvement, and performance-pay contingency in government organizations.

There are many other factors which may contribute to this apparent incentive problem in government organizations, and the discussion of them can be very complex. While not all such factors can be covered in this project, at least one more of them should be mentioned, because it appears so often in the literature.
In the literature on public-private differences and the unique attributes of government organizations, no observation appears more frequently than the reference to vague, multiple, conflicting goals and performance criteria in government or public organizations, especially as compared to business organizations. In addition to its frequency, this observation is important because some see it as having a bearing on incentives and motivation. To characterize this as a single observation is to oversimplify the matter, not just because the observation, as stated above, is obviously complex, but also because the set of statements from various sources which are summarized into this "observation" vary in the terms they use and sometimes in their level of analysis. Some refer to vague and conflicting goals, others refer to "fuzzy" problems and difficult "trade-offs," others to the absence or inadequacy of productivity or effectiveness measures, still others to the absence of clear market indicators of performance. A number of references discuss interrelationships of some of these factors, such as the relation of the absence of market indicators to the vagueness of performance indicators. There is also variation in the organizational or governmental level which is apparently under consideration, with some referring to vague organizational goals, others to vague jobs and objectives for employees (more on this, below). Of course, a basic difficulty here is the complexity of the concept of "goal" itself (see Chapter II).
Another source of confusion in interpreting this observation is that there are reasons to believe that government or public organizations might not be unique in this matter of goal vagueness and goal complexity. The literature on organizational goals contains assertions that all organizations have vague, multiple, conflicting goals. Business managers must trade off between long and short term profit, between morale and efficiency, between public relations and efficiency, and so on. "Profit," the indicator often cited as a source of clarification for the business organizations, is not necessarily such a clear and reliable performance criterion as one might suppose (Drucker, 1976). Moreover, there are R and D, public relations, and other subunits whose contribution to profit is hard to evaluate, and whose performance is hard to assess.

In spite of these problems, the observation is made so frequently that it is clear that the authors tend to feel that there is a distinction in this matter, and they seem to be trying to get at the same idea. Rainey, Backoff, and Levine (1976) treated statements about vagueness of goals, conflict of goals, and multiplicity of goals each as a separate category, and cited some ten or twelve references in support of each, and more could be added (Cyert, 1975). As with the previous case of merit systems, however, it seems unnecessary to go through all the material, since a handful of sources make the main points, which are simply seconded by their mention in other references gathered by Rainey, Backoff, and Levine. This subset of the relevant sources will be fully adequate for such conceptual clarification as
can be achieved, preparatory to further clarification and operationalization in later chapters.

One way to try to clarify these observations is to look at the explanations for the existence of these goal characteristics which are given by some of the references. Perhaps the most prominent source to make the observation concerning vague organizational goals is Dahl and Lindblom (1953), whose list of differences was mentioned earlier in the chapter. Remember that they say that an agency (an organization more responsive to hierarchical control) is distinct from an enterprise (an organization more responsive to a price system) in that, among other things, an agency will tend to have more vaguely defined or multiple goals, among which cost-reduction does not receive very high priority. The other distinctions they listed actually are similar, or related to, this vagueness and multiplicity of goals—absence of objective tests of efficiency by product or service, insulation from automatic penalties and rewards of the price system, control more by superiors and other political actors than by the price system. This set of differences actually leads us to several of the major factors which, additional references would suggest, explain or influence the goal characteristics under consideration. First, the outputs and required functions of government organizations are less amenable to objective tests of efficiency because they usually consist of, or include, service functions, and outputs intended to meet various social needs not attended to by economic markets. The absence of productivity measures for government organizations, and the difficulty in devising them, have recently been noted
(Balk, 1976; Morris, et al, 1972). The outputs or functions are thus relatively idealized and unclear, and this leaves the question of the appropriate nature and level of outputs open to debate, since the resolution of that question is not so readily delegated to the market process. Here, we are obviously close to the concepts of packageability, marketability, excludability, etc., often used by economists, but those terms do not fully capture the problem. Even where government organizations produce fairly discrete and marketable outputs, there are still problems of interim types of output with "significant externalities" (Hinrich and Taylor, 1972), and cases where idealized criteria still tend to be represented in the goal-set. For example, it might be shown that certain post offices are excessively costly by efficiency criteria, but client groups might still argue for their retention on grounds that they have a desirable impact on community life. Yet, as mentioned earlier, the Post Office has a marketable output which draws a large portion of the organization's financial resources from private sources via user charges. This caused the Post Office to be regarded as an interim type in the definitional scheme discussed earlier. It is significant that even this organization, which has access to relatively clear performance and efficiency criteria and is therefore unusual among government organizations, still shows problems arising from the imposition of idealized goals on the organization. Hear James Reston's comment on the Postal Service charter, as a good example of what those who refer to vague, multiple conflicting goals of government organizations apparently have in mind:
The present charter is a contradiction in terms, and by general agreement is unworkable, either under political or independent control. It asks the Postal Service to provide all kinds of "public service" which it cannot afford, and at the same time expects it to be "self-supporting". Part of the present charter retains the old nostalgic motto of the old post offices. The service is to be a "messenger of sympathy and love; servant of parted friends; consoler of the lonely; bond of the scattered family; enlarger of the common life; carrier of news and knowledge; instrument of trade and industry; promoter of mutual acquaintance, of peace and good will among men and nations." All this, and deliver the mail three times a day in New York and keep the old rural post offices open, and break even! (p. 15)

One might add Drucker's (1973) comment that the Postal Service is not unusual in facing management problems due to the necessity to deal with public service goals. Actually, he says, the Postal Service is just more noticable because of the clarity and salience of its outputs, compared to other public service institutions. Even greater problems of control and efficiency in the pursuit of vague public service goals are probably present in other government organizations, but are less easily discernible.

Of course, one could elaborate similar instances of vague, multiple, idealized goals on the part of business organizations. However, the response would be that the distinction is a matter of probability and a matter of degree-government organizations are more likely to have more of this complexity in their goals and performance criteria. Another, closely-related source of explanation for the goal vagueness and complexity of government organizations is the unique criteria imposed on government organizations in the United States. Government and its organizations are expected to fulfill a number of ideals or values--openness, honesty, accountability, representativeness, fairness, and other criteria in addition to efficiency. (Caiden, 1971).

An example: Frank Sherwood noted in a talk to the Central Ohio
Chapter of The American Society for Public Administration that many of the complex personnel problems faced by public managers were due in part to longstanding expectations that the government should be a model employer. Efforts to bring some of these criteria to bear on business organizations (Nader, 1973) only underscore their relative absence or weakness as constraints or goals for those organizations.

These two explanations of goal vagueness and complexity are actually closely related to another explanation, the argument that government organizations are more subject to political influences of various sorts, and that they operate in an environment that is more "political" (Mainzer, 1973). Thus, the goal-set must include constraints (which Simon would allow us to call goals--see Chapter II) arising from the need to consider "public opinion," the response of the media, and the demands of various individuals or groups (political figures, client and interest groups with formal governmental authority or with political influence, other government agencies, etc.). Some of these constraints are vague in themselves, but their multiplicity will also contribute to lack of goal clarity, by making it harder to specify all the goal components to be taken into account, and to place a value on each. This explanation is related to the earlier ones, in that what cannot be resolved via automatic, clearly discernible criteria, such as market signals, is more open to debate, controversy, and political resolution (Burkhead and Miner, 1971).

In addition to this environmental political impact, there is also a more influential role for political adroitness within the organizations, according to some, since performance cannot be evaluated by reference
to reasonably valid quantitative criteria (Stockfisch, 1972). Some-what similar, in tying this political adroitness notion to the earlier issue of idealized goals, is Drucker's (1973) argument that the major difficulty in management of public service organizations—in goal attainment, and financial and managerial control—results from the absence of clear performance measures and the consequent opportunity to justify activities by appeal to criteria of social need and social desirability, which are hard to evaluate.

Still another explanatory factor is the set of complicated formal and legal constraints that bear more heavily on government organizations (Mainzer, 1973; Millett, 1966). Remember that Dahl and Lindblom actually define "agencies" as organizations more responsive to hierarchy than to a price system. With more external sources of formal authority there come more constraints—or goals—to fulfill. This explanation is also interrelated with earlier ones. Some of the "political" constraints have their influence by virtue of formal authority. A ready example is the influence of a congressional committee on the goals of a government organization. The hard-to-measure, idealized nature of goals, mentioned earlier, is also inter-related here. The sources of formal authority actually impose some of these criteria, such as accountability and representativeness. In addition, it may be that vagueness and multiplicity of goals actually elicits the imposition of multiple formal constraints. Schultze (1970) argues that where performance criteria are not easily specified and measured, and where control and accountability are required, control will be exercised by the elaboration of formal procedural regulations.
and checks. If desired outcomes were clear, one could simply check to see if they were achieved. If this is not the case, one must control by specifying desired procedures or by requiring more elaborate reporting of a more complicated set of performance indicators (or, at least, the closest thing to performance indicators which can be devised).

These arguments which one can gather from the literature suggest explanations of the particular nature of goals of government organizations which is asserted to exist, and they help to clarify what is meant by those assertions. They are helpful in trying to see what is meant by the frequently-encountered statements to the effect that the goals of government organizations tend to be multiple, conflicting, and vague, especially as compared to business organizations. However, they are very general arguments, seemingly pertaining to goals at the organizational level. Since the main theme of this project is the motivation of individuals within organizations, it is important to carry the discussion into an interesting subsidiary question: do these characteristics of organizational goals have implications for the behaviors and responses of organizational members?

Immediately, one might think that the answer to this latter question is obviously yes. If it is not clear what the organization is supposed to be accomplishing, because of vagueness, multiplicity, and conflict of its goals, then it will not be clear what its members should be doing. Buchanan (1974) seems to be making this connection in some of his arguments discussed earlier. He says, that, since organizational goals are diffuse, it is harder for individuals to
see what contribution they are making, so their commitment to the organization will wane. He also asserts a relationship of vague organizational goals to vague individual task goals, in his interpretation of his finding of lower structure salience on the part of government managers. He suggested that one reason for feelings of greater autonomy (lower structure salience) on the part of government managers is that their jobs and work goals are more loosely defined, since agency missions are more vague, and the relationships of individual jobs to those missions are more difficult to specify. Vague work goals make it harder to establish strict accountability, and this contributes to feelings of greater autonomy. Balk (1975, 1976) makes a similar argument, in discussing the difficulty of specifying clear task goals and individual productivity measures in government organizations. These arguments also bring to mind Blau's (1955) discussion of the difficulty of devising clear performance criteria for employment service placement counselors. These references raise questions which are relevant to incentives and motivation, because one can argue that vague individual goals and performance standards can create motivation and incentive problems. If it is not clear what one is expected to do, then it will be unclear as to how various rewards are to be achieved. It is harder to see how to achieve extrinsic rewards, such as pay, promotion, and praise from superiors. It could also be harder to see how intrinsic rewards, such as pride in the accomplishment of a worthwhile objective, can be achieved. Thus, willingness and tendency to work hard and work well, especially in directions desired by the organization, should be attenuated, so this problem clearly relates
to motivation. There are also obvious implications for incentive considerations, since incentives, in the sense of desired rewards, are affected. Actually, however, this line of reasoning is more directly concerned with incentives in the sense of information about gaining rewards— incentives mechanisms or means-end information. As indicated by the emphasis on such information in the discussion of incentive definitions in Chapter II, the informational component of incentive phenomena is of major interest in this project, and that interest motivates the emphasis on this goal vagueness notion in this dissertation.

Before closing this discussion, however, it is important to express some hesitations with regard to the argument in the preceding paragraph. Other literature makes that chain of reasoning, from organizational goal vagueness to individual goal vagueness to motivation, seem too simplistic. Thompson (1967, p. 10), among others, sees all organizations as engaged in a process of translating relatively vague high-level goals into more operational performance objectives for lower levels, with a view to allowing the "technical core" to operate according to mechanistic or systematic procedures in fulfillment of the narrowed objectives. This view might imply that even though an organization's goals may be diffuse, multiple and conflicting at higher levels, there may be a process of translation that assigns relatively clear performance criteria to lower levels, and the individuals at lower levels may feel that their work objectives are quite clear. For example, the overall goals of a government employment agency may be quite diffuse; high level managers might puzzle over
complex questions about the quality of services they are providing and how to measure and control them, and so on, but individual employment counselors may see their jobs as highly specific routines of processing applicants and forms. Some of the criteria which are seen as sources of complexity in the organizational goal set, such as concerns over accountability, might actually cause efforts to enforce regularity and consistency on lower levels, and thus to clarify work requirements for those levels.

Another consideration is the differentiation of organizations into subunits performing different tasks. In any large organization, there will be certain units—such as accounting or data processing units—which have clear, routine objectives and performance criteria.

It seems, then, that it may be too simple to say that vague organizational goals will cause ambiguity in performance criteria, as perceived by individuals. The impact of diffuse, hard-to-measure organizational goals may be more of a systemic, or control problem than a problem of individual goal ambiguity. It may be extremely difficult for decision-makers to evaluate the contribution of particular subunits, and those units may tend to persist, proliferate, grow, or operate dysfunctionally or wastefully as a result of this difficulty, but the individuals in those units may feel that what is expected of them is quite clear. The problem then might be a problem of the validity of individual performance objectives as representations of what is worthwhile, rather than the clarity of those objectives.
In spite of this long expression of scepticism, the possibility of an adverse impact on motivation as result of vague, multiple, or conflicting criteria is of major interest as a source of difficulty in all organizations, and perhaps as a problem of particular relevance in government organizations. Therefore the matter will be pursued further in later chapters.

Statement of General Propositions for Refinement and Testing

This chapter has covered major portions of the literature concerning unique aspects of government organizations, especially as compared to business organizations, which are relevant to incentives and motivation. First, some lower scale responses by government managers were taken as empirical indications of a possible problem with incentives and motivation in government organizations. Then two major areas of the relevant literature were considered as possible sources of such problems--literature concerning the deleterious effects of civil service procedures, and references concerning certain possible impacts of the nature of goals and performance criteria in government organizations. There are many other interesting possibilities, but this project will focus on these areas for analysis. The discussion will now turn to the literature on organization theory and organization behavior, with a view to further clarification of some of the ideas presented here, and in the effort to locate concepts and empirical instruments for use in refining and testing some of the assertions. As a guide to that undertaking, it is useful to
close this chapter with an effort to state some of the foregoing ideas as "general propositions" to be conceptually refined and empirically tested:

1. Several studies have found differences in responses by government and business managers on questionnaire instruments such as satisfaction scales, job involvement scales, and items concerning perceived performance-reward contingencies. These rough indications of differences are of sufficient importance to warrant replication with new samples and with extensions.

2. Rigid personnel procedures (civil service systems) which most government organizations must follow tend to weaken the connection (as perceived by the employee) between individual job performance and various rewards, such as pay, promotion, and job security. It is often asserted that this weakens motivation and therefore weakens performance in government organizations, as compared to business organizations.

3. Greater vagueness, multiplicity, and complexity of goals and performance criteria in government organizations (as compared to business organizations) create difficulties in defining objectives and desired outcomes. This leads to lower motivation in a way similar to that described above--the connection between performance and organizationally-mediated rewards is diluted, since it is hard to say what a good performance is, and thus hard to make incentives contingent on results.

Summary of Progress to This Point

It is useful, at this point, to review the progress of the dissertation, and point out the developments which are to follow. After stating reasons for a general interest in incentives and motivation in public policy and public organizations, the discussion then turned to problems in defining "incentive" and "motivation," and to the statement of definitions. While they have some important implications, these definitions could apply to a wide range of possible research
questions. For movement towards empirical research, a narrowing of focus was required. To this end, the present chapter has completed several steps: 1) Choice of a definition of "public" and "private" which will guide the empirical research. 2) Presentation of literature on several important topics pertaining to unique attributes of public organizations, or public-private differences, in matters of incentive and motivation. 3) Statement of three "general propositions" derived from the literature review.

The chapters to follow will reflect efforts to translate the general propositions into specific empirical hypotheses. Chapter IV will report the consideration given to literature concerning efforts to analyze organizations as systems of incentives; this approach is rejected as a basic framework for the present research. In Chapter V, the discussion will turn more directly to the translation of the general propositions into empirical hypotheses; concepts and scales from organizational research, which are appropriate for such translation, will be presented. Chapter VI will state the hypotheses systematically and present a research design for testing them; the design will involve comparisons of government middle managers to similar managers in business organizations, on their responses to questionnaire scales described in Chapter V. Chapters VII and VIII will report the results and discuss the interpretation of the research.
CHAPTER IV
INCENTIVE THEORIES OF ORGANIZATION

In refining the general propositions presented at the end of the last chapter, one possibility is to follow the stream of literature in which several major scholars have presented theories of organization which used incentive or a similar concept as a central concept. In the late 1930's, Chester Barnard suggested and "economy of incentives" approach to the understanding of organizations. Barnard's work influenced later efforts to analyze organizations under similar approaches, the most important of which were by James March and Herbert Simon, and by Peter Clark and James Q. Wilson. No general discussion of incentives in organizations could omit consideration of these efforts, and the potential usefulness to design of the present project must be considered. This chapter will review and critique these major works, and some of the research to which they gave impetus. However, the discussion will come to the conclusion that this literature does not provide concepts and measures which are as useful, for present purposes, as some from the field of organizational behavior. Those concepts and measures will be reviewed in the following chapter. For the present, however, we will proceed chronologically through a review of these incentive theory references, with implications for the present project discussed at the end of the chapter.
Chester Barnard became one of the major figures in the early development of organization theory by presenting observations based on his extensive practical experience in business, and a major part of those observations concerned incentives. In *The Functions of the Executive* (1938, p. 139-160) Barnard devoted a chapter to discussion of "the economy of incentives" in an organization. He argued that an essential element in the operation of an organization is the inducement of employees' efforts, via incentives. Hence, essential to any organization's survival is the attainment of resources adequate to cover the incentives it must pay out in inducing contributions of effort by members. Survival requires maintenance of an "equilibrium," a balance between what is paid out in inducements, and what is gained, as a result, in contributions from members to the attainment of resources (which provide for further pay-outs, and so on). This requirement has major implications for the functioning of various different types of organizations, in Barnard's view, but before discussing those implications, Barnard presented some definitions and distinctions, which are of major interest here.

In rather awkward exposition, he said that there are "objective and subjective aspects" of incentives. He was evidently referring to the distinction between the objective existence of an incentive and the subjective perception and valuation of it on the part of individuals. This latter phenomenon was of importance to Barnard because, he felt, in addition to the "method of incentives," the organization
can try the "method of persuasion" by which an effort is made to change "the state of mind" concerning an incentive (apparently, he meant the perceived valuation of it).

Barnard first turned his attention to the method of incentives. He gave no explicit definition of incentive, but he did draw a distinction between what he termed specific incentives, which can be "specifically offered to an individual," and general incentives, "which cannot be specifically offered." Without elaboration on this distinction, he turned to a discussion of subcategories and items under these two broad categories. His discussion provides occasional rough suggestions about his justification for devising categories, and about the relation of a category or an item to behavior in organizations. In general, however, his discussion does little to elucidate his choices and meaning, and it actually amounts to a listing of the things he regarded as major inducements in organizations. Yet that listing in itself is useful in trying to specify the set of important incentives in an organization, and should be reviewed. He discussed the following specific incentives (the phrasing, here and further below, is his):

a) Material inducements--money, things, physical conditions.

b) Personal, nonmaterialistic inducements--distinctions, prestige, personal power, dominating position.

c) Desirable physical conditions of work.

d) Ideal benefactions--satisfaction of ideals about non-material, future or altruistic relations (pride of workmanship, sense of adequacy, altruistic service for family or others, loyalty to organization in patriotism, aesthetic and religious feeling, satisfaction of hate and revenge).
General incentives included the following:

e) associational attractiveness—social compatibility, freedom from hostility due to differences in race, religion, education, etc.

f) customary working conditions and conformity to habitual practices and attitudes—avoidance of strange methods and conditions.

g) opportunity for the feeling of enlarged participation in the course of events—association with large, useful, effective organizations.

h) condition of communion—personal comfort in social relations, solidarity, comradeship.

Barnard added that this list is not exhaustive.

As for the method of persuasion, the organization has three major alternatives: coercion (ostracism, discharge, etc.), rationalization of opportunity (apparently, influencing behavior via religious or political doctrine), and inculcation of motives (via education, propaganda, religious instruction).

Barnard then turned to some rough suggestions as to the "outlines of a theory" of the economy of incentives. He briefly notes that industrial organizations tend to rely more on material inducements, must obtain resources adequate to cover those incentives, and must seek the appropriate balance of incentives and persuasion. Political organizations mainly provide ideal benefactions, community satisfactions, and prestige, while religious organizations provide ideal benefactions and "communion of kindred spirits." Both these latter types tend to rely more on persuasion and obtainment of resources via contributions.
So obvious are many weaknesses of Barnard's discussion and his typology that an extensive critique is unwarranted. Clearly there are major difficulties with vagueness and ambiguity in his language. There are obvious problems of nonexclusiveness and nonexhaustiveness in his categories: there seems no clear reason why ostracism (which includes discharge) is a method of persuasion and not an incentive; there seems no clear differentiation between "condition of communion" and "associational attractiveness;" and so on through numerous other examples. Also a major weakness is Barnard's broad, undifferentiated treatment of "participation" as the outcome of incentive transactions. Much will be made later in this dissertation of the variety of outcomes which must be considered.

Barnard is mainly of historical interest, as an influence on Herbert Simon and on James Q. Wilson, and of interest as a source of reminders and suggestions to be kept in mind in designing research on incentives. In spite of the confusing language, his list of incentives and incentive types serves as a checklist to be consulted in efforts to specify important incentives in organizations; it is the sort of list that one might expect of a practicing manager trying to mention the important incentives in his organization. In addition, some of the occasional observations focus on recurrent problems in consideration of incentives, which are echoed in literature--reviewed later--which appeared decades after his work. Examples are his comment that different men are moved by different incentives, that incentive preferences change over time, and that at higher levels in organizations, prestige and similar incentives can be more influential than
money. Also, Barnard's distinction between specific and general incentives raises the problem of dealing with relatively diffuse influences on motivation, which will arise again in later chapters, in discussions of intrinsic motivation and similar phenomena. In general, however, the main contribution of Barnard is not these few suggestions arising out of his analysis, but rather the general emphasis on the analysis of incentives in organizations, as a major strategy for understanding behavior in organizations, and the influence of that emphasis on Simon and on Wilson.

March and Simon: The "Inducements-Contributions" Theory

Herbert Simon elaborated Barnard's suggestions about organizational equilibrium and inducements, in works of his own and with co-authors (Simon, 1945; Simon, Smithburg, and Thompson, 1950; March and Simon, 1958). Although these works never present a list of incentives as Barnard did, they do give occasional examples and make rough suggestions as to types and classifications which are relevant to the problem at hand. Moreover, March and Simon's "inducements-contributions" theory of organizational equilibrium encountered some difficulties and met with some criticisms which should be reviewed here, due to their implications for the study of incentives in organizations.

In Administrative Behavior (1945, pp. 16-18, 110-122), Simon cited Barnard's idea of organizational equilibrium as basis for his own conceptualization of an organization as an aggregate of participants, willing to accept the organization's influence because their personal motives and goals are fulfilled by membership in the
organization. These participants, he said, usually represent three types, based on the type of "motivation" (he also called this "type of incentive") which prevailed among them. These types of incentive or motivation were: 1) personal rewards derived directly from accomplishment of the organizational objective, 2) personal inducements offered by the organization and closely related to its size and growth, and 3) personal rewards derived from inducements offered by the organization but unrelated to its size and growth (p. 111). Simon suggested that the types of participant which corresponded to these types of incentives were, respectively: 1) Customer groups, such as the customers of a business organization, or legislatures and citizens for a government organization. Apparently, he meant that when the business organization fulfills its objective (such as automobile-manufacturing) it automatically provides inducements to customers (automobile-buyers) to "participate" by buying. Likewise, legislators and citizens of an agency "participate" and contribute because of inducements provided when the agency fulfills the objective assigned it (such as provision of a social service). 2) Elites or controlling groups, such as "entrepreneurs" in business firms, who would value increases in prestige and power derived from growth. 3) Employees, who place their time and effort at the disposal of the organization in exchange for incentives, such as wages, which are not derived directly from the size or growth of the organizations.

Some of Simon's examples of incentives for participation are of interest here, since one objective is to compile such examples. In addition to "prestige and power" incentives under the second
category listed above, he noted a number of incentives for employee participation (category 3 above): salary or wage, status and prestige, relations with working group, promotion opportunities (which, he noted, overlap with economic and prestige incentives). Elsewhere, he noted that the personal goals which gave rise to participation should be considered very broadly, and in addition to goals corresponding to incentives noted above, could include such personal goals as world peace and aid to the starving; presumably opportunity for service of these goals could serve as an incentive.

Simon, like Barnard, proposed an "equilibrium" notion. The quality and kind of incentives must be sufficient to induce the quality and kind of contributions which would, in turn, make available the inducements, and so on. Failure to achieve such an equilibrium would result in failure to survive. Also like that of Barnard, this treatment of the inducements-contributions approach was tenuous and underdeveloped. Simon made further brief suggestions as to possible categorizations, and rough suggestions as to the implications of the types described above, but these suggestions were elusive and disorderly. The materials described above make evident the problems with empirical import—how was one to measure inducements and contributions, when their definition was treated so elusively? There were evident overlaps, or at least problems in differentiation, among the categories listed above (note that "prestige" is mentioned under categories 2 and 3), thus raising doubts as to the empirical usefulness, and hence the fruitfulness, of the conceptualization.
The existence of such problems was apparently not lost on Simon; later works included efforts to address them. Simon, Smithburg, and Thompson (1950) made a more explicit statement of the central postulates of a theory of organizational equilibrium, but the most careful elaboration of the approach, by then referred to as "inducements-contributions" theory, is presented in March and Simon (1958, Chap. 4). In that book, the authors repeat the list of central postulates presented in the earlier works; the list consists of a somewhat more orderly, but no more informative, statement about inducements, contributions, participants and survival than has been mentioned above.

The effort by March and Simon involved two main emphases: an attempt to more clearly explicate inducements-contributions theory through definition and through specification of measurements, and the presentation of a model of the factors affecting the willingness of an employee to participate in an organization. The former effort was of limited success, while the latter effort suggested that only one particular sense of participation is clearly covered by the model. In the former case—the explication of the theory—March and Simon begin by admitting that the theory "verges on the tautological."

What is needed, they say, are independent empirical measures of participant behavior and of the "inducements-contributions balance." In the effort to clarify these matters, they say that inducements are "payments" to the individual participant, and contributions are payments to the organizations; these payments can be measured in units independent of their utility to participants, they argue (without providing examples). A set of such inducements and contributions can
be specified for each individual, the "utility value" of each component of these sets could be specified, and an "inducements-contributions utility balance" could then be estimated. This utility balance could be estimated directly by a measure of individual satisfaction, they suggest, or it could be inferred through observations of changes in inducements and contributions. The authors further argue that any organization has five major classes of participants: employees, investors, suppliers, distributors and consumers. Focusing on employees, they consider several criteria for use as indicators of employee participation—quantity of an individual's production, absenteeism, and turnover—and for reasons which are not made very clear, they choose turnover as the primary criterion of participation. This choice leads them into presentation of a model of the factors influencing turnover, which is discussed in the following paragraph. For the moment, however, one must consider whether March and Simon were successful in their explication of the inducements-contributions approach. Although the approach is apparently recognized as one of the major statements in the organization theory literature, it seems to have inspired little empirical research. Apparently, a major reason for this lack of fruitfulness is that March and Simon's efforts at definition and specification are not particularly successful. Although the measures of utilities and utility balances may be feasible under some circumstances, some have argued that they may be virtually impossible under most. Perrow (1967, p. 153) has argued that the measures of inducements and contributions would be extremely difficult except at the low organizational levels with which March and Simon were primarily concerned,
where relatively simple, routine activities are involved. Where complex nonroutine activities are involved, Perrow says that "little is gained by this model except the unenlightening assertion that if the person stays in the organization and produces, there must be some kind of an inducement at least to match his contribution" (p. 153). In light of the material on worker motivation reviewed in later chapters, one might go further than Perrow and express skepticism about the feasibility of such measurements even in relatively routine activities.

As for the aforementioned model of the factors affecting participation, it also raises questions about the usefulness of the inducements-contributions approach, and about the nature of contribution or participation in particular. March and Simon are often cited for their observation that an individual has three main alternatives concerning his relationship with an organization: 1) to leave the organization, 2) to stay in and produce at the level specified by the organization, or 3) to stay in and be a low producer. Yet, as noted above, they choose "turnover" as the criterion of participation, thus focusing on the first of the three alternatives, in the model of participation which they present. In presenting the model, they say that the inducements-contributions balance determines the propensity of the individual to leave the organization. The balance, and thus the propensity to leave, is a function of two major components: the perceived desirability of leaving the organization and the perceived ease of movement from the organization. Then they present two diagrams or models of factors influencing these two components. For now, two major
aspects of this treatment of inducements-contributions are noteworthy:

1) March and Simon apply the inducements-contributions approach to participation in the sense of joining and staying with the organization, and leave unclear its application to participation in other senses. They discuss the motivation to produce in the chapter preceding the chapter in which they introduce the inducements-contributions notion. They note that the decision of workers to produce and the decision to participate are based on different considerations. As noted, they choose turnover as the criterion of participation. Yet, as one of their reasons for choosing the turnover criterion, they say that the motivation to produce has already been considered in the previous chapter. So, there remains some question as to what senses of contribution and participation are covered by the inducements-contributions model, but March and Simon imply that the primary emphasis and usefulness of the model concerns joining and staying with the organization.

2) The actual relationship of the inducements-contributions notion to the model of turnover (propensity to leave) remains vague. While the turnover model itself may be a good one, this vagueness makes debatable the usefulness and meaning of the general inducements-contributions conceptualization. A perusal of the factors in the turnover model should convince anyone that the factors in the model have not been derived or "mapped down" from the broader inducements-contributions model. It is awkward and difficult to construe most of the factors as "payments" exchanged between organization and individual, or even to construe some of them as inducements, except in the very broad sense of any influence acting on an
organizational member. As noted, March and Simon introduce the turnover model by saying that the inducements-contributions utility balance is "a function of" the major factors in the turnover model; they do not say the factors actually represent inducements and contributions. Although, as noted above, it is not entirely clear that they intend the inducements-contributions model to apply to the motivation to produce, the same comments apply to their discussion on that variable (which is to be mentioned in later chapters of this dissertation).

In sum, then, March and Simon focus the inducements-contributions conceptualization on one limited sense of participation in the organization. For reasons not discussed, they choose the word "inducement" over Barnard's term "incentive" but they do not make clear the meanings or implications of the term inducement. While their statement is of major importance in organization theory, their treatment of a term very similar to incentive does not clarify its meaning or its value.

James Q. Wilson: An "Incentive Systems" Theory and Typology

James Q. Wilson's work has more clearly reflected the influence of Barnard, in that he has retained the term "incentive," and has attempted typologies of incentives and a related typology of organizations. His (and Peter B. Clark's) version of the incentives approach has inspired some empirical research and critical reaction--especially within the field of political science--which makes the approach appear more fruitful than that of March and Simon. Again, however, the approach has been focused primarily on joining and
remaining with an organization, with relative inattention to production of performance within organizations. Also, development of this version of the incentives approach has focused on particular kinds of organizations—political organizations and voluntary organizations, primarily, with inattention to other types.

Although it was later slightly modified (Wilson, 1973), the Wilson version of the incentives approach was first presented in a journal article coauthored by Clark (Clark and Wilson, 1961). There, the authors cite Barnard as an influence on their basic hypothesis: that the principal variable affecting organizational behavior is the incentive system of an organization. They present a typology of the major types of incentives in organizations, and a typology of organizations which is based on these incentive types, and discuss the implications of these typologies for the functioning of organizations. Their "theory" envisages an organizational executive seeking to maintain the organization by obtaining and offering incentives for "contributors," and by altering the incentive system in response to changes in contributors' motives and in environmental circumstances. Thus, these incentives and maintenance efforts are directly related to the tactical flexibility of organizations, to conflict in organizations, to organizational change, and to competition with other organizations.

Although they do not explicitly define incentives and incentive systems, they continuously use "reward" interchangeably with incentive, and indicate that incentives are events or things which satisfy motives of individual contributors. They discuss three major categories or types of incentives, which, they say, make it possible to distinguish
one incentive system from another: **Material** incentives are tangible rewards that have a monetary value or can be easily translated into one. Examples are wages and salaries, and the tangible benefits offered by a taxpayers' association. **Solidary** incentives are intangible rewards derived from "the act of associating and include such rewards as socializing, congeniality, the sense of group membership and identification, the status resulting from membership, fun and conviviality, the maintenance of social distinctions, and so on" (p. 134). **Purposive** incentives are also intangible, but derive from the stated ends of the organization rather than from the act of associating. Examples are demand for enactment of certain laws or certain practices (which do not tangibly benefit members), such as elimination of corruption or inefficiency in public service, community beautification, etc. In a later presentation of the same typology, Wilson (1973) left the categories as they had been, except that he divided solidary incentives into **specific solidary** incentives which can be given to individuals (honors, offices, deferences), and **collective solidary** incentives, such as fun, conviviality, collective prestige or exclusiveness, which are enjoyed by all members if enjoyed at all, like collective goods.

Clark and Wilson stress that organizations rely on many different incentives; a business firm will offer pleasant working conditions, pride in the organization, and other incentives besides financial ones. However, they argue that many organizations can be classified according to the type of incentive on which they **principally** rely, and hypotheses can be stated about the internal and external behavior of these types of organizations. The major types of organizations
correspond to the major categories of incentives: Utilitarian organizations rely mainly upon material incentives, and include business and trade associations, most business firms and trade unions, taxpayer groups and political party groups. In utilitarian organizations, the major emphasis is on attainment of material resources that will provide for material incentives to members, and obtaining such resources is the overriding concern of the executive. Although ritualistic statements of goals may be made, the substantive goals of this type of organization are of little importance as incentives, and receive relatively little attention. This provides the organization with relatively high flexibility in its choice of activities and tactics. Conflicts within the organization will focus mainly on the distribution of material resources, but here again, primacy of material incentives affords flexibility—conflicts can usually be bargained out, without fragmentation or dissolution of the organization.

Solidary organizations rely mainly on solidary incentives, and include service-oriented voluntary associations, colleges and universities, social clubs and similar organizations. The executive must attain and provide such solidary incentives as prestige, publicity, and good fellowship, by way of such activities as recruitment of high status or sociable members, making speeches, giving awards, commencing and publicizing worthy projects, and so on. Although they are not of central importance as incentives, substantive goals will receive more attention than in utilitarian organizations; goals must be non-controversial and socially acceptable, because of the importance of organizational prestige. As a result, goals will usually be stated
ambiguously, and altered in response to contributor wishes. Yet, flexibility will be lower than in utilitarian organizations, because of pressure for prestige and image, frequent disallowance of secret action and frequent rotation of officers, and the need to match activities to members' life styles and statuses. Conflicts, which will usually focus on the distribution of personal prestige and status, cannot be as easily resolved by use of material incentives.

*Purposive* organizations rely primarily on their stated goals or purposes as incentives; the worth or dignity of the goals justify members' efforts. Examples are reform groups and social-protest groups. In such organizations, the executive must create and state organizational goals in such a way as to maintain contributions of effort. Yet, since goals are major sources of unity, they can also be sources of cleavage, and major conflicts revolve around failure to achieve goals. Goals are usually stated unspecifically ("honest government") and thus cannot be reduced to concrete proposals without alienating some members. In some extremist organizations, on the other hand, goals are specific, but sacrosanct. Thus, purposive organizations usually face constraints on their operational flexibility, and often, as a replacement for actual accomplishments, offer rhetoric about moral victories, service functions, and other things which might enhance a sense of accomplishment.

Clark and Wilson see these incentive systems and organizational types as essential to the understanding of a number of organizational processes. *Organizational change*, as they see it, is largely the result of efforts by the executive to modify the incentive system in
response to changes in environmental conditions, which create changes in the motives of contributors. **Power** within an organization is determined by the extent to which, in the view of the executive, an individual contributes to the organization's survival, which is in turn determined by the individual's possession of resources which can be translated into incentives. A wealthy contributor might wield great power in a voluntary utilitarian organization such as a taxpayers' association, while in a solidary organization the most powerful member may be the most popular or the most prestigious. **Competition** with other organizations will be affected by an organization's striving for an autonomous, stable claim on resources; these efforts will also lead organizations to displace their goals and modify their characters in the quest and competition for resources. Organizations can also be expected to respond to long-term shifts in the distributions of motives in a society, such as general shifts in the importance of money or material benefits. As motives change, organizational incentive systems will tend to reflect the change. Thus, in consideration of these and other major organizational processes and characteristics, Clark and Wilson present the type of incentive system as the basic variable.

Although the Clark and Wilson piece has been cited frequently, and has invoked critical comment and inspired empirical research, it has definitely not swept aside other models and approaches, to become the predominant one in organization theory. A count of references and articles would almost certainly show that structural studies (such as Hall's bureaucracy studies and the Aston studies) and related "contingency" approaches to organizations have been dominant in
organization theory recently. Yet recent works (Wilson, 1973) indicate that Wilson has clearly not abandoned the approach, and at least one author (Georgiou, 1973) has argued that the incentive systems conceptualization should be the predominant one in organization theory.

Georgiou (1973) argues that there is no generally-accepted conceptualization of organizations, but that the most prominent efforts at conceptualization—the rational model, natural systems model, Etzioni's notion of "real" goals, Perrow's idea of "operative" goals, Blau and Scott's cui bono taxonomy—adhere to a goal paradigm. Under this paradigm, organizational analysis is based on the assumed existence and importance of goals or purposes which the organization as a whole is aimed at achieving. The impossibility of determining and verifying the goals of an organization, says Georgiou, always constrains the usefulness of these approaches. More useful, he says, is an approach like that of Barnard or of Clark and Wilson, which regards the organization as a means to satisfaction of the motives of individual participants, and thus subordinates organizational goal or purpose to the demands of contributors. The organization should be viewed, he feels, as a marketplace where there are complex exchanges of a variety of incentives by individuals pursuing a variety of goals. This would provide a more realistic scheme for developing generalizations and guiding research, since change, conflict, goal displacement, and succession can be better explained as outcomes of the strivings for incentives and exchanges of incentives by individuals and groups. Georgiou describes the typology and arguments of Clark and Wilson as an example of the "explanatory power" of the incentive systems
conceptualization, but expresses reservations about their analysis. He says that Clark and Wilson do not follow up the implications of the focus on incentives, and become preoccupied with the organization's strivings for "survival," with consequent neglect of the striving of individuals for incentives. He is also sharply critical of their "apotheosis of the executive," their placement of the executive in a central, almost omniscient role. Actually, he says, the executive may not be so interested in the perpetuation of the organization as Clark and Wilson assume; he is in it for the incentives, too, and may have lower commitment to its perpetuation than other members. Also, important exchanges often bypass the executive; individuals and sub-units may make significant exchanges of incentives without the approval of, or even the knowledge of, the executive.

After taking Clark and Wilson to task, Georgiou turns to his thoughts on the incentives approach as a counterparadigm to the goals paradigm. Yet he shows that his approach is not well-developed, either, and he can offer only a few thoughts: The organization should be regarded as an arbitrary focus, as one of many social relationships in which incentives are exchanged. The individual is the basic strategic factor, and understanding can only be based on ascertaining the rewards which individuals pursue in the organization; while there are difficulties due to the multitude of types and the presence of mixed types of incentives in an organization, the most promising approach is through analysis of categories of organizational members seeking the same type of reward. The power of a member depends on his capacity to contribute incentives to others in the organization. Power depends
on the replaceability of the individual, that is, whether there is an alternate source of the incentive, and on the dispensability of the incentive—how much others value it. It seems, then, that while Georgiou's arguments may be encouraging to one interested in research on incentives, he leaves a number of problems unresolved. His failure to give a clear definition of incentive is significant, since it may well be that incentives are in many cases as difficult to specify and verify as are organizational goals. Although he notes this difficulty, he argues the importance of analyzing types who seek the same type of reward; yet he can only suggest attention to professionals in organizations as a beginning, and leaves the remaining multitude of difficulties unattended. In fairness to Georgiou, his avowed purpose was to make some rough suggestions concerning the incentives approach as "counter-paradigm," and indeed that is all that he has done.

In addition to the criticisms of Clark and Wilson by Georgiou, there are some still more important ones offered by Mitnick (1975). He notes that the Clark and Wilson typology is not reasonably inclusive of possible incentives. It does not account for power as a goal or incentive, for example, nor for enjoyment of work for its own sake, which, among other effects, often is a factor in making autonomy a major incentive in pure research laboratories. Mitnick further notes that the Clark and Wilson typology compresses certain dimensions of incentive phenomena; for example, distinct behaviors can result from action on behalf of another—as an agent or fiduciary—as compared to action in pursuit of one's own goals. Mitnick also cites Georgiou's complaint about the centrality of the executive in the Clark and
Wilson analysis, and then turns to the presentation of his own typology of goals.

Also noteworthy in the evaluation of Clark and Wilson's efforts are a number of empirical studies which show their influence. These studies are aimed at testing hypotheses derived largely from Wilson's *The Amateur Democrat* (1966), in which Wilson applied the incentives approach to the analysis of participation in political activity. Apparently there have been a number of such studies, but prominent examples are those by Conway and Feigert (1968) and by Hofstetter (1971, 1973). They pursue hypotheses based on Wilson's argument that "amateur" political participants tend to be attracted to political activity by purposive incentives, while "professional" participants tend to be attracted by material and solidary (social) incentives. Conway and Feigert compare the motivations of party precinct leaders in different communities and obtain some findings which accord with Wilson's amateur-professional argument, but some which do not. Of major concern for now, however, is that they focused on joining and staying with the political activity; they did not directly test the Clark and Wilson typology; and, for tests of the effects of incentives, they used questionnaire items concerning the motives or reasons for political participation. Hofstetter also focuses on participation, and on motives as indicators of incentives. In a first study (1971), he obtained results congruent with the amateur-professional argument, that is, that the incentives (motives) influencing the two types were roughly as expected. In a second study (1973), however, a series of path analyses indicated that incentives (motives) explained little of
the variance in group membership (i.e., participation in professional
or amateur groups), except when other variables were left out of the
analysis. Other variables, such as "social integration" with the local
community (years in community, voluntary membership, home ownership,
knowing many people) and "ideology" (liberal, middle-of-the-road, con-
servative) were much more closely related to group membership.

Among a number of methodological criticisms of these studies which
could be made, the major concern for now is with their use of "motives"
or "reasons" instead of incentives. As Mitnick (1973) notes, this
usage raises some complicated questions as to whether this is the right
way to study the effects of incentives. Some of the questions one
asks about reasons or motives are very similar to what one would ask
in a questionnaire on incentives. However, questions about motives
may tap diffuse internal states, without providing information about
the actual external conditions which attract and direct those impulses.
Conway and Feigert, for example, had respondents choose the item re-
representing their most important reason for becoming active in politics,
and included such reasons as friendship with a candidate, attraction
to politics as a way of life, effort to influence policies, and
"civic duty," among others. The information that many people are
motivated by civic duty, etc., can give us only indirect and often
unclear information about the conditions which attract and direct
their participation choices.

Hofstetter, too, asks his respondents about their reasons, but
makes a more sophisticated effort to test the Clark and Wilson typology,
and to compare incentives (as represented by reasons) against other
explanatory variables. Yet Hofstetter's findings may result from his giving short shrift to incentives. One could argue that his questions about reasons for participation (p. 274) are a confused and limited representation of the Clark and Wilson typology. (In fairness, it should be noted that difficulty in operationalization may be mainly the fault of the typology itself). For example, only three items refer to material incentives: items about enjoying politics as a way of life, getting a chance to be more active later, and making business contacts. This seems a narrow representation of the range of possible material incentives. It is also debatable as to whether they are actually appropriately categorized as material incentives. Moreover, when Hofstetter attributes greater explanatory power to ideology and social integration, he is overlooking the possibility that these variables might also be closely related to motives, and their effects might be explainable in terms of incentives. So, this set of empirical studies indicates a certain fruitfulness of the Clark and Wilson effort, but also suggests difficulties in applying their typology. The studies are of limited usefulness in research on incentives for performance in organizations; they focus on joining and remaining, and they raise confusing difficulties by studying motives instead of incentives.

Before concluding discussion of this stream of literature, it is appropriate to mention Wilson's (1966, 1973) most recent applications of the incentives approach. In these efforts he shows no inclination to abandon his incentives approach, even though in the latest work he comments that he expects little in the way of a highly predictive theory to emerge from incentive analysis (p. 26). Nor does he substantially
modify the approach, except for the differentiation within solidary incentives already noted, and an attempt at an explicit definition of incentive and incentive system (Appendix A). In the latest effort (1973), he concerns himself primarily with attraction and retention of participants in voluntary organizations. He does devote attention to internal organizational processes, but his comments are discursive, and specific to voluntary associations. Wilson (1973) does occasionally indicate his feeling that incentive analysis is useful for the study of the motivation and performance of individuals in their ongoing activities within the organization, but provides only a few scattered suggestions as to how it is useful.

In the other, less substantial work (1966), Wilson provides some very general thoughts on the relationship between complexity of incentive systems and organizational innovation. The greater the diversity of incentives, he says, the greater the probability that innovations will be conceived and proposed, but the lower the probability that they will be adopted. This and other thoughts are certainly relevant to one aspect of performance—innovativeness, and their implications for the present research will be taken up later.

In general, the Wilson version of the incentives approach is the most fully-developed and fruitful version, but it still is subject to criticisms for conceptual shortcomings and difficulties in application, as noted already. It has been applied primarily to the consideration of attraction and retention of organizational members, and thus its implications for ongoing motivation and performance are undeveloped.
Relevance of the Incentive Theories for this Dissertation: The Approaches Rejected for Present Purposes

The importance to this dissertation of the incentive theories of organization can be summarized in a few comments:

1. It is encouraging that a number of major social scientists have considered the incentives approach attractive as a useful and realistic approach to the behavior of organizations. As noted in several places in this dissertation, some scholars argue for rejection of the notion of "incentives."

2. Not so encouraging, however, is the continued lack of development of the conceptualization. Conceptual problems persist, and efforts at empirical substantiation have been infrequent. The few empirical efforts have not been highly successful. The incentives approach, as represented in the several works described here, remains just that—more of a broadly-stated approach, a way of looking at organizations, than a well-developed theory. This stream of literature could not be ignored in any consideration of incentives in organizations, but it does not provide a theory or model which can be borrowed for the purposes of this dissertation.

3. To the extent that development has proceeded, it has focused on the tendency to join and stay with an organization. Although highly relevant, this dependent variable is not the main concern of the present dissertation; motivation and performance in ongoing behavior within the organization is the major concern. As noted by several authors, such as March and Simon, different variables influence these
different independent variables.

4. In spite of its indirect or unclear relationship to internal performance, the idea that incentives are important to explaining attraction and retention contributes a basic assumption underlying some of the hypotheses stated later: if persons are indeed attracted to organizations by incentives they perceive to be available through participation, we should expect different valuations of incentives by individuals in different types of organizations. This assumption is far more complicated than it may sound; major questions must be considered later: How different, and in what way, must the organizations be? How are attraction and retention related to performance? Important considerations, for example, concern whether an incentive is contingent on performance, or merely on attendance; relevant here is Mitnick's (1973) reminder about Clark and Wilson's distinction between a principal incentive—a sine qua non of participation—and an operative incentive, which may be more influential over ongoing behavior.

In conclusion, then, it can be reiterated that this stream of literature has tended to emphasize incentives for joining and staying with an organization, which are often regarded as distinct from incentives for performance or productivity within the organization. Also, it has not been developed into well-established empirical concepts and instruments. Mainly for these reasons, it is less useful for present purposes than the concepts and associated measures which are discussed in the next chapter.
CHAPTER V
CONCEPTS AND MEASURES CHOSEN FROM ORGANIZATIONAL RESEARCH FOR USE IN THE EMPIRICAL DESIGN

Since the incentive theories of organization moved in the direction of incentives for joining and staying, and never fully developed generalizations concerning the effect of incentives on motivation and performance within organizations, it is appropriate to look elsewhere for materials. Students of human behavior in organizations—from industrial psychology and sociology, business management, and closely-related areas, have long been concerned with the factors which influence motivation and performance in organizations, and have developed an extensive literature. That literature is so extensive, in fact, that thorough consideration of it is not feasible here. Consequently, this chapter will draw from that literature at a number of points which are important to further consideration and refinement of the "general propositions" selected in Chapter III (see Figure 2).

The discussion will begin with a review of the expectancy theory of work motivation. That theory is currently the predominant theory of work motivation and work effort, although it is quite controversial and the search for alternatives is underway. Some variant of that theory seems quite appropriate for inquiry into the different expectations about various rewards which, as discussed in Chapter III, have been asserted to exist. The discussion of that theory will set the basis for some of the empirical research to be proposed later. It will also lead us directly
Figure 2: "General Propositions" to be Translated into Empirical Hypotheses.

1. Several studies have found differences in responses by government and business managers on questionnaire instruments such as satisfaction scales, job involvement scales, and items concerning perceived performance-reward contingencies. These rough indications of differences are of sufficient importance to warrant replication with new samples and with extensions.

2. Rigid personnel procedures (civil service systems) which most government organizations must follow tend to weaken the connection (as perceived by the employee) between individual job performance and various rewards, such as pay, promotion, and job security. It is often asserted that this weakens motivation and therefore weakens performance in government organizations, as compared to business organizations.

3. Greater vagueness, multiplicity, and complexity of goals and performance criteria in government organizations (as compared to business organizations) create difficulties in defining objectives and desired outcomes. This leads to lower motivation in a way similar to that described above—the connection between performance and organizationally-mediated rewards is diluted, since it is hard to say what a good performance is, and thus hard to make incentives contingent on results.
into consideration of some important variables, such as motivation, satisfaction, and job involvement. It will also guide us to a discussion of the rewards valued by members of organizations, and of various factors which might be considered a part of the informational component of the incentive phenomenon in organizations—task variables, role variables, organizational formalization, and organizational goals. Finally we will discuss organizational personnel procedures. It will be evident that expectancy theory provides a useful central focus for all these matters, which, in turn, are all useful in refining the propositions listed at the end of Chapter III, and designing empirical tests of them.

The Expectancy Theory of Work Motivation

There are quite a few theories of work motivation and work effort to choose from, but a description of those theories, with a careful comparison and contrast of them as basis for a choice among them, is beyond the scope of the present project. However, it can be briefly noted that those theories which Campbell, Dunette, Lawler, and Weick (1970, chap. 15) refer to as "content" theories of motivation are not acceptable for present purposes. This group, which includes Maslow's need hierarchy, McClelland and Atkinson's theory concerning need for achievement, and Herzberg's two-factor theory, aim mainly to specify the variables to be studied, particularly the important needs or rewards, with relative inattention to the process by which these factors affect motivation. Some, such as Herzberg's theory, have been very strongly criticized lately. While these theories are important, this project must concern itself with the process by which various rewards
operate, not just with the question of which motives or rewards are important. The second of the two categories mentioned by Campbell, et al., the "process" theories of motivation, are obviously better suited to this purpose. This category includes expectancy theory, stimulus-response theory (which, in an updated version, would probably include operant or Skinnerian theory), and equity theory. Operant theory is currently receiving a good deal of attention, but it is still fair to argue that it is undeveloped. Equity theory is only a partial theory, dealing with the effects on motivation of perceived inequity in rewards received. Expectancy theory, although it is controversial and has been subjected to a number of criticisms for its shortcomings, is at this writing frequently cited as the predominant theory of work effort, the one considered most satisfactory by the most researchers (Campbell and Pritchard, 1976; Connally, 1976). Another attractive characteristic of this theory for the present project is its emphasis on the individual's perceptions about the probability of receiving a reward. As noted in Chapter III, many of the observations about incentive problems in government organizations concern the relative weakness of the connection between performance and various rewards, such as pay, promotion, and chances of being fired. Those authors seemed at times to be using an implicit expectancy theory, and thus it seems particularly suitable to use that theory to pursue the differences of interest here. Expectancy theory will serve as a central focus for the review in this chapter, as well as in the research design proposed below, so the review can best begin with a look at expectancy theory.
Basic formulations of an expectancy or a "subjective expected utility" theory apparently can be traced back as far as Descartes and Jeremy Bentham (Campbell and Pritchard, 1976, p. 66). However, the first prominent application of the theory to work behavior was made by Vroom (1964). Put very simply, expectancy theory holds that when an individual is making a choice or decision, s/he sums up the values of all the outcomes which will result from the decision or action, each outcome weighted by the probability of its occurrence, and chooses that action which has the highest sum; that is, people will do the thing which they see as most likely to result in the most good and the least bad.

In applying the theory to work motivation, Vroom gave a more formal statement of this basic generalization, as follows: the force acting on an individual to work at a particular level of effort (or to choose to engage in a particular activity) is a function of the algebraic sum of the products of 1) the perceived desirabilities of the outcomes associated with working at that level ("valences"), and 2) the estimates of the probabilities that the outcomes will follow from working at that level ("expectancies"). (Behling, et al, 1973, p. 1). Vroom expressed the proposition in the following equation:

\[ F_i = f_i \left( \sum_{j=1}^{n} (E_{ij} V_j) \right) \]

Where:

- \( F_i \) = the motivation to perform act \( i \). (The force acting on the person to perform the act).
- \( E_{ij} \) = the strength of the expectancy that act \( i \) will be followed by outcome \( j \).
- \( V_j \) = the valence of outcome \( j \).
The acts performed are those with strongest positive and weakest negative force.

Vroom also presented a formula for the 'valence' or desirability of an outcome. That formula was based on a proposition that, to simplify a little, went as follows: the valence of an outcome is a function of the sum of the products of the outcome's perceived instrumentality for the attainment of other outcomes, times the valences of those other outcomes. Presumably, a simple example of this phenomenon would be the value that a certain financial reward would take on by virtue of the perceived likelihood that it could be used for attainment of other valued outcomes. The formula was given as follows:

\[ V_j = f \sum_{K=1}^{n} (V_k I_{jk}) \]

Where:  
- \( V_j \) = the valence of outcome j.  
- \( I_{jk} \) = the instrumentality of outcome j for the attainment of outcome K.  
- \( V_k \) = the valence of outcome K.  
- \( n \) = the number of outcomes.

The distinction between expectancies and instrumentalities, in Vroom's treatment, was that an expectancy is a belief about a connection between an action and an outcome, and an instrumentality is a belief about the connection between the attainment of one outcome and the attainment of other outcomes.

Another formula presented by Vroom should be noted, because it makes a point that is very important here. He saw an individual's performance as a function of ability, as well as motivation:

\[ P = f(F \times A) \]

Where:  
- \( F \) = motivation  
- \( A \) = ability
This simple observation, made frequently in the literature in this area, is an important consideration in the present project. It will be noted again below that, in comparing the levels of motivation of government and business employees, we are not necessarily comparing their levels of performance. Ability and other factors join with motivation in determining performance.

Vroom's formulas might be criticized as examples of the pretentious and premature mathematization for which social science has been ridiculed at times. The effort was valuable, however, because it represented a move toward conceptual clarity in a field which, according to one prominent observer, had been marked by "systematic unintelligibility" in the widely-varying use of concepts (Vroom, 1964, p. 5). The publication of Vroom's formulation was followed by a handful of studies which gave rise to great optimism over the usefulness of the theory for predicting motivation and performance (Heneman and Schwab, 1972). The optimism was short-lived, however, and in recent years a number of studies have reported unsuccessful attempts to apply the theory empirically, and extensive discussions of the shortcomings of the theory have appeared.

**Modification of the Theory**

Weaknesses of the theory were apparent to a number of researchers who were its proponents and who wanted to use it. They made efforts to bolster the theory, which Behling, et al (1973) characterize as efforts at extension and refinement of the theory, and ultimately at retrenchment--the presentation of formulations based on more relaxed assumptions.
Efforts at extension have involved attempts to add variables to the model. Porter and Lawler (1968), for example, added feedback loops, and suggested "role perceptions" as an influential variable. Lawler (1971) added to the model suggestions about effects of self-esteem, previous experiences, perceived equity of rewards, degree of internal (as opposed to external) control perceived by the individual, and the nature of the problem-solving approach.

Refinements have mainly involved elaborations of some of the core concepts of the model. House, for example, stressed the distinction between intrinsic, or internally-mediated, outcomes—such as enjoyment of the work itself—and extrinsic outcomes, which are mediated externally; an example would be pay given by the organization. Others have separated the expectancy component into two components. Campbell, Dunnette, Lawler, and Weick (1970, pp. 346-8), draw a distinction between "expectancy I" and "expectancy II". Expectancy I refers to the employee's perceptions of the probability of accomplishing task goals by expending effort. Expectancy II is the person's perception concerning the probability that achievement of specified task goals will be followed by an outcome or outcomes—i.e., by rewards or punishments. Of particular interest for the present project is their argument that expectancy I should be particularly salient at higher organization levels—management levels—where tasks are more complex. Lawler (1971) makes a similar distinction between a person's belief about the probability that a certain level of effort will enable him to perform at a certain level ("E\rightarrow P"), and his subjective probability that that level of performance will lead to an outcome ("P\rightarrow O").
The refinements and extensions have not been successful in resolving a number of shortcomings of the theory, however, and Behling, et al note efforts at "retrenchment." These have primarily involved relaxation of basic assumptions of the Vroom formulation. In particular, they tend to relax the requirement that components of the model be multiplied together, as suggested in Vroom's formulation. Some recent treatments, such as that of Campbell, et al, simply argue that the components are positively related to motivation, but the relationships among the components are not yet clear.

Reviews and Criticisms of Expectancy Theory

The "retrenchments" in themselves represent the inability of researchers to come to terms with some basic problems with expectancy theory, so it is appropriate to go more deeply into some of these difficulties, since a formulation of the theory will serve as basis for the research proposed below. There have been a number of efforts to compile research and thinking on expectancy theory, and to critique the theory and its various formulations. (Wahba and House, 1974; Heneman and Schwab, 1972; Lawler, 1971, 1973; Mitchell and Biglan, 1971; Mitchell, 1974; Campbell, et al, 1970; Behling, et al, 1973; Campbell and Pritchard, 1976; Connolly, 1976). The main complaints about the theory concern its validity and accuracy as a model of human behavior—particularly cognitive information-processing behavior, the conceptual clarity of basic concepts, the operationalization and measurement of the concepts, and the inadequacy of the theory's performance under empirical tests. Since these issues figure importantly in the discussion
of the justification for using a variant of expectancy theory in this
dissertation, some further attention to them is necessary.

Behling, et al (1973), in particular, have questioned the adequacy of
expectancy theory formulations as representations of human cognitive
processes. They argue that expectancy theory, particularly as formu­
lated by Vroom, actually involves a set of postulates concerning the pro­
cessing of information by individuals: the $E(V)$'s must be comparable;
they must be transitive, such that preferences among them are logically
consistent; $E$'s and $V$'s must be independent of each other; employees
must work to optimize $E(V)$; they must distinguish between as many lev­
els of work effort as of $E(V)$; and so on through several other postu­
lates. Wahba and House (1974) present a similar list of the "rationality
assumptions" which underlie the theory. Both sets of authors indicate
that it is doubtful that the theory can meet all of these basic postu­
lates or assumptions. For example, one can cite a number of instances
in which expectancies and valences may not be independent. Certainly,
the probability that an outcome will be achieved can influence the val­
uation of that outcome. For examples, one can look to the fable about
the fox deciding that unavailable grapes must be sour, or to McClelland
and Atkinson's theorizing about achievement motivation, which holds
that persons with high need for achievement will be most motivated
when chances of achieving an outcome are 50-50. A number of the
reviews under consideration here also cite evidence from studies
by decision theorists that, in processing information and making
decisions, humans do not necessarily proceed rationally and do
not necessarily optimize. Starke and Behling (1975) have actually
undertaken some empirical tests which indicate the failure of the model to meet two of its underlying postulates.

The main point of these discussions is not a matter of whether one or the other of a set of assumptions hold, but of the validity of the model as a representation of human behavior. As Behling, et al point out, the theory, as stated by Vroom and several others, requires that human beings behave as if possessed of a cognitive information-processing system capable of storing, manipulating, and retrieving large amounts of information in highly systematic, rational, discreet, and immediate fashion. They go on to cite findings by students of human decision-making which indicate that this is not an accurate picture of human behavior.

A closely-related matter which receives much attention in these reviews and critiques concerns the appropriateness of multiplying together the expectancies and valences, as required under the original formulations of the theory. If the E's and V's are not independent—and that possibility is suggested above—then they cannot logically be multiplied together. Moreover, a number of the reviews refer to work by Schmidt which indicates that, as normally operationalized, expectancies and valences do not represent ratio scales of measurement, and therefore should not be multiplied together. Accordingly, as indicated above, many recent modifications have relaxed the requirement to multiply some of the components of the model together. However, the question is still debatable, apparently. Hackman and Porter (1968) once argued that multiplication of E's and V's is obviously inappropriate on
purely mathematical grounds, but that the product of these two components gives a numerical score which represents gross differences in motivation. It is thus defensible by "practical validity criteria," as opposed to "fundamental measurement criteria" (Mitchell, 1974, p. 1066). Connolly (1976, p. 44-5), very recently has voiced some apparent support for this argument, by arguing that Schmidt's findings may exaggerate the problems due to nonratio scales; the resulting errors might not be so sizeable, and the procedure may be acceptable given the general imprecision of research in this area.

This general line of argument might be extended to the broader issue of all the basic assumptions or postulates. The rigorous criticisms make clear the theory's inadequacy to meet formal criteria; the question of the usefulness of theory as a rough approximation, and as focus for further refinements, is more difficult to decide.

Another major point of controversy is the conceptual clarity of the theory's central concepts. Wahba and House (1974), for example, point out some ambiguity and inconsistency in the basic terms. Concerning the expectancy concept, they note that formulations of the theory fail to distinguish between conditions of uncertainty and conditions of risk; the theory assumes additivity of E's, but there is empirical research which suggests that individuals may assign probabilities to events which total to more than one; there may be a need to distinguish between various forms of expectancy; there are problems with how to handle the expectancy of intrinsic outcomes.

Concerning the concepts of valence and instrumentality, Wahba and House note some further problems. Instrumentality is often
regarded as a determinant of valence--Vroom presented it this way--but they note that Vroom was ambiguous in his treatment of the concept of instrumentality. He treated it both as if it were to refer to the belief that one outcome would lead to attainment of another, and to the belief that one would lead to attainment or avoidance of another. They cited a number of important implications of this ambiguity, including the failure of most researchers to consider negative instrumentalities. They also note, as do Campbell and Pritchard, that the theory assumes valences to be additive, yet how can one add the valuations of highly dissimilar rewards, such as financial rewards and intrinsic rewards such as pride in achievement? Campbell and Pritchard (1976) also note (p. 92) that the model assumes linear, monotonic functions of the core concepts, but it is clear that valences, for example, may change with the level of the reward--money may become unimportant at very high levels of wealth.

Other concepts involve still more difficulties. Several of the reviews note that it is often hard to distinguish between an "outcome" and an action, and that it is not entirely clear what is meant by "outcome" and whether it has validity as a psychological construct (Connolly, 1976; Campbell and Pritchard, 1976). There are also some problems with the dependent variables often used with the theory; as will be discussed further below, there are problems in trying to conceptualize "effort," "motivation," and other of the dependent variables used.

As one might expect from the long list of conceptual problems, there are also difficulties with operationalization and measurement
of the theory's concepts. There is considerable variation in the way they are operationalized, or might be operationalized (Mitchell, 1974). For example, Connolly points out that two prominent, contemporary reviews of tests of the theory actually came to opposite conclusions as to which operationalization of "expectancy" had been most frequently used, expectancy as perceived probability that an outcome would follow an act, or expectancy as perceived correlation between act and outcome. Connolly goes on to discuss the difficulty of obtaining measures of this perceived connection between act and outcome. Similarly, large variations and problems in measuring valence are frequently noted. Campbell and Pritchard (p. 87) note that the measurement of utility (a concept apparently synonymous with valence) is one of the most difficult problems in social science. Connolly (p. 40) notes that most empirical tests have omitted valences of negative outcomes and have measured valence via ratings of how "important" individuals consider a certain outcome. The latter tendency has resulted in discussion of whether it is more appropriate to ask about "importance" or about "attractiveness," "desirability," or some word which might be more suitable as operationalization of Vroom's original conceptualization (Connolly, p. 40). This consideration, of course, begs the more important question of whether it is valid or meaningful to try to measure valuation of diverse "outcomes" or rewards via numerical rating scales. The omissions of negative outcomes actually raises another fundamental empirical problem, the question of how "outcomes" are to be stated and how they are to be generated (i.e., by testimony of the subject, by induction or deduction by the investigator, etc.),
and how many of a potentially innumerable set of outcomes should be included. Mitchell (1974) felt that these questions make the generation of a list of outcomes "an unsolvable dilemma" (p. 1063), but Connolly (p. 39) is somewhat more optimistic. Concerning all of the basic concepts of the model, it has been noted in several of the reviews that the measures of valence, expectancy, and instrumentality used in operationalizations of the theory are of fairly low reliability, and that we need to know much more about measurement of these concepts and the validity and reliability of such measures. (Campbell and Pritchard, 1976, p. 92).

Just as one might have expected problems in operationalization, in view of conceptual ambiguities, one might expect problems with empirical tests also, in view of the problems in operationalization. Empirical tests of the theory have provided mixed results, but a major problem is in deciding whether this reflects the theory's lack of validity, or whether the problems in methodology and operationalization account for many of the failures—maybe they were just doing improper tests of the theory (Connolly, 1976, p. 37). Most tests of the theory have produced results showing some empirical support for predictions made under the theory (Mitchell, 1974; House and Wahba, 1974). However, the results have often been at a low level of significance, and this has been particularly true for tests in industrial settings, as opposed to laboratory applications of the theory to relatively simple phenomena, such as verbal learning (Mitchell, 1974). Moreover, multiplication of the components of the model does not seem to improve prediction a great
deal; "expectancy" usually accounts for most of the variance accounted for, with little improvement as a result of multiplying expectancy by valence (Campbell and Pritchard, p. 91). One also encounters various complaints about the way empirical tests have been designed. Mitchell (1974) notes that Vroom's original theory should be tested by within-subjects designs, while most tests have involved between-subjects designs. Similarly, Campbell and Pritchard point out that the theory would seem to call for tests focusing on changes over time, but most tests are static.

In sum, then, the reviews and critiques indicate fundamental conceptual limitations of the theory, difficulties in testing it, and limited success in the empirical tests. Since the theory will be the source of important components of the research described below, it is important to consider very recent developments in discussion of the theory, and ways of contending with the problems.

Recent Developments and a Resolution for Present Purposes

In spite of the complications described above, developments which are very recent at the time of this writing indicate that expectancy theory is not being completely rejected by researchers. Although some of the reviews mentioned above seem very pessimistic about the continued use of expectancy theory (Behling, et al), the most recent of those reviews express support for continued attention to the theory. Connolly (1976), while quite aware of the problems with the theory, nevertheless expresses greater optimism about resolving some of the theory's limitations--such as the difficulty of generating outcome lists--than others whose critiques appeared
earlier. Also critical of the theory, Campbell and Pritchard seem disinclined to discard it; rather, they recommend concentration on advancing the research on components of the theory, such as outcomes and expectancies.

Empirical tests or uses still appear quite frequently. Some are very unsuccessful, and lead to condemnation of the theory (Reinharth and Wahba, 1976). Others still show statistically significant, although not overwhelming, results (Shapira, 1976; Muchinsky, 1977). Some mention interesting possibilities, such as the suggestion that there are "boundaries" for the theory--conditions under which it is most applicable. Kopelman and Thompson (1976), for example, found improved expectancy-theory predictions when they took into account the effects of such "boundary conditions" as the passage of time, the level of rewards (better predictions for low-pay employees), the difficulty of the task, individual ability, and organizational reward practices (the clarity of the organization's tendency to tie rewards to performance). This latter idea about the influence of organizational reward practices is particularly relevant to the research to be described later, since, as noted in the last chapter, government organizations are said to be peculiar in their tendency to fail to tie certain rewards to performance. The discussion will return to this suggestion, then. The suggestion is also interesting in the effort to interpret results of tests of the theory; it may be that expectancy theory--a theory which posits a relatively clear, systematic consideration of reward values and reward probabilities--is most applicable in situations where performance criteria are relatively clear, and the means of achieving rewards are relatively clear.
The argument is analogous to Thompson's (1967, p. 134) idea about the applicability of a systematic work or decision-making process under conditions of certainty of desired outcomes and clarity of beliefs about cause-effect relationships. That is, where it is clear as to what is wanted and it is clear how to get it, one can adopt systematic procedures; greater uncertainty or dissensus reduces the applicability of such procedures. A roughly similar phenomena might be the case with expectancy theory. Such a systematic cognitive process may occur where things are relatively clear, simple and certain as to what is to be done, how it is to be done, and what rewards are attainable thereby. This seems to be what is happening when Mitchell (1974) observes that expectancy theory is more successful when applied to verbal learning experiments in the laboratory than when applied to industrial settings. This idea is somewhat troubling, since the present project will focus on managerial levels, where the sort of clarity mentioned above is less likely to be the case than at lower organizational levels.

It seems then, that very recent developments in the literature on expectancy theory leave the theory in about the status indicated by the review of critiques of the theory. Tests and uses of the theory still appear frequently, with mixed results, but with frequent, although limited, success. Some researchers express pessimism and call for alternatives while others seem optimistic, or at least dogged, and suggest new interpretations or considerations. The theory is still considered predominant, but not entirely satisfactory, especially without modifications of early formulations.
This project requires a decision as to whether some variant of expectancy theory should be used, and which one. As noted earlier, the use of expectancy theory in pursuit of some public-private comparisons is very inviting, but one feels some trepidation in using a theory which is under heavy attack. For a resolution for present purposes, this dissertation will draw on recent work by Robert House and others.

House and Dessler (1974) were apparently first to utilize expectancy-type questions as dependent variables, on the argument that such items have been found to be related to motivation and effort in many studies, and therefore it is useful to pursue research on the factors which influence such expectancies. Even if one cannot show high correlation between such items and various criterion variables such as motivation, effort, and performance, it seems reasonable to assume the importance of an individual's beliefs about the relationship of his performance to his pay, his job security, his promotional opportunities, and so on, and study the influences on such beliefs. House and Dessler concern themselves mainly with the influence of particular leader characteristics and behaviors on responses to such expectancy items. They developed two scales, along lines described above—an Expectancy I scale, with items concerning beliefs about the relation between effort and performance, and Expectancy II items, concerning the perceived relation between performance and various rewards. An example of the former type of item is agreement or disagreement with the statement, "trying as hard as I can leads to high quality output." These "E-I" items ask about the relation of effort, in several phrasings, to quality and quantity of output, and to completing production requirements on time. An example of the latter,
"E-II" items is a question calling for response to the statement, "producing a high quality output increases my chances for promotion." These items ask about the relations between quantity, quality, and timeliness of output, on the one hand, to various rewards—promotion, higher pay, job security, and recognition from the company—on the other. House and Dessler substantiated these two scales as separate scales by presenting the results of a factor analysis which showed the items loading on two separate factors, corresponding to the two different scales. In their study, they found some significant relations between leader behaviors and the E-I and E-II items, with task structure as a moderating variable.

More recently, Schriesheim (1976) has used similar scales in the study of the effects of leader behavior on expectancies. He used longer scales with a larger number of rewards, including both intrinsic and extrinsic rewards. Similarly, Sims, Szilagyi, and McKemey (1976) used expanded, adapted versions of the House and Dessler scales, to test the effects of various potential "antecedents" of such expectancies. In a regression analysis, they found significant relationships between the expectancy I scales and various measures of organizational practices and individual characteristics (locus of control). They found significant relationships between expectancy II and various organizational practices, and a particularly strong relationship between E-II and "positive reward behavior" by the immediate supervisor. (They do not mention it, but it seems possible that this strong relationship is due to near-tautology between positive reward behavior and E-II).
Also relevant to this consideration of use of expectancy scales as dependent variables is a study by Lawler and Hall (1970) which is not actually in this same stream of research. As a scale of "intrinsic motivation," they used items which were highly similar to the E-II, intrinsic reward items used by Schriesheim and by Sims, et al. Lawler and Hall (1970) found some significant results in tests using this intrinsic motivation scale as a criterion variable.

In sum, there has been some limited success in the use of expectancies as dependent variables, and several reputable scholars have made such efforts. The approach, and the assumptions involved, sidestep the issue of what to do about multiplying expectancies by valences, and thus avoid that difficulty. Nevertheless, it seems reasonable to assume the importance of responses to expectancy-type questions. For that reason, in addition to the aforementioned attractiveness of the expectancy items for investigation of public-private differences, "E-I" and "E-II" scales will serve as a central component of the research design described below. As discussed shortly below, however, the question of valences or valuations of rewards cannot be easily pushed aside, and must be carefully considered. Also, it is important to consider other variables besides the expectancy scales, which might be related to such responses, and might also be used as dependent variables--motivation, performance, satisfaction, and job involvement, for example.

Motivation and Job Involvement

One can regard the expectancy scales as dependent variables in themselves, and focus on factors influencing them. One might also
regard the expectancy scales as independent or predictor variables, predicting or relating to such variables as performance and motivation. Ideally, these are exactly the variables or outcomes which should be of major interest in this dissertation. Ultimately the question of performance of employees and organizations is an essential one; it would be immensely valuable to have an indication of the accuracy of assertions, mentioned in earlier chapter, about the lower efficiency and effectiveness of government organizations, and the related questions of how hard and how well their employees work. Unfortunately, however, it is obviously extremely difficult, if not impossible, to devise comparable performance measures for widely differing organizations. In fact, major distinctions in the nature of objectives and performance criteria were mentioned in Chapter IV as one alleged source of important differences between public and private organizations. An "apples and oranges" problem arises, because it is clearly so hard to compare the performance of entities working toward different objectives. This should be especially true in the present case, where the objectives and performance criteria of the government organizations are said to be particularly vague, multiple, and value-laden, thus making performance particularly hard to measure. Moreover, it is often acknowledged that valid performance measurement is difficult in any organizational setting, even in relatively simplified industrial situations (Campbell and Pritchard, 1976, p.120). One would expect even greater difficulties at managerial levels--which are the levels to be sampled in this project, for reasons indicated later--where definition of excellence in performance is
even harder to accomplish. Thus, it seems that comparing the performances of government and business organizations, and the employees in them, is definitely an intractable problem for now, and may well be impossible.

One way out of this impasse would be to compare performances of government and business organizations involved in exactly the same enterprise, as Savas has done for garbage collection services. However, such studies can be undertaken only for the relatively small subset of activities and organizational forms which are similar. Even then, the research results are not necessarily conclusive, since important variables, such as age of the organization and associated effects (political entrenchment, for example) are usually not controlled (A. Pritchard, 1976). More important, however, is the narrow scope and generalizability of such studies. Even a finding of differences puts one in the position of trying to generalize from one form of activity to another, if one is concerned with general comparisons--i.e., since private sector garbage collection services are more cost-efficient than government garbage services, other government activities must be relatively inefficient also, and so on. These comparisons of the few points where there are similar or identical activities simply do not allow us to draw conclusions about the full range of possible similarities and differences.

With comparisons of individual and organizational performance apparently impossible for the time being, the alternative is to turn to measures which one might assume to be closely related, such as motivation, as defined in previous chapters. Since motivation
refers to the willingness to work hard—to exert effort—findings on motivation levels would be the most desirable alternative to findings on performance, since motivation to perform is certainly an important component of performance. It might be even more useful here, since our concern is with the effects of incentives; as noted above, Vroom reminds us that other variables, such as ability, join motivation in determining performance. It might be more appropriate to focus on motivation, then, since incentives will affect motivation more than ability (although there will probably be interrelations among the three variables). Thus, motivation is an appropriate dependent variable.

Appropriateness is only one consideration, however. There are major difficulties in conceptualizing motivation, and particularly in measuring it. Campbell and Pritchard (1976, p. 76) stress the conceptual difficulties by noting that "many people experience severe stomachaches over the meaning attributed to the term motivation." They point out that the term is often used synonymously with deprivation level, effort expended, general activity level, or degree of satisfaction. They argue "motivation" is mainly useful as a term identifying a set of relationships between variables, and a body of theory. It should be viewed, they say, as a label for the determinants of 1) choice to initiate effort at a task, 2) choice to expend a certain amount of effort, and 3) the choice to persist in the effort. Thus, they see the term as a broad one, referring to quite a range of phenomena, and this certainly complicates the question of measurement.
There have, however, been a few efforts to devise measures of a variable labeled motivation (to work). Landy and Guion (1970), for example, developed scales for measurement of an employee's work motivation, based on responses by his peers in the organization to questions designed as operationalizations of various components of motivation: team attitude, task concentration, independence/self-starter, organizational identification, job curiosity, persistence, and professional identification. After some early optimism (1970), they used these scales in an effort to test the relationship of work motivation to measures of the "meaning" of work—the extent to which the employee's work was meaningful to him/her in various ways (Guion and Landy, 1972). This effort was of limited success, and apparently the authors have not pursued the further development of the scale. Even if they had, the requirements of the present research project—the necessity to include a large number of subjects in business and government organizations—render the use of peer rating techniques infeasible, especially in view of the difficulty in gaining access to the organizations.

Although their scale is not usable for present purposes, Landy and Guion (1970, p. 93) do offer some discussion that is relevant to the difficult problem, in this dissertation, of defining and measuring motivation. They note "severe and unsolved measurement problems," because most of the frequently used measures, such as work output or other work consequences, are contaminated by ability, opportunity, training, and other variables. These sources
of variance are not the same as the "approach" (as opposed to avoidance) response, or enthusiasm for work, which they see as the essence of work motivation (apparently, that is—they do not define the term formally).

Another effort at a motivation scale is reported by Patchen (1965). He defined motivation as "general devotion of energy to tasks" (p. 26n), and developed a number of questionnaire items aimed at tapping this construct. The items deal with how often time seems to drag on the job, degree of involvement in the job, frequency of extra work, and how hard the respondent feels he works, as compared to others doing the same type of work (see Appendix C, items 7, 8, 9, p. 343). (As mentioned again in Chapter VI, the job involvement item was dropped, due to inclusion of an entire job involvement scale). Patchen noted the all-too-frequent tendency to give inadequate attention to systematic validation and reliability-testing (at least up until that time), and undertook a relatively elaborate process of this type himself, using samples of employees from several divisions of TVA, from an electronics company, and from an appliance company. He reported very high test-retest reliabilities for two of the items (the other two were not asked twice). He also presented evidence of validity, in the form of correlations with other job-related scale responses (such as a perceived opportunities for achievement index, and many others), as well as correlations with supervisory ratings and with a number of objective performance indicators. Of course, the scale was not overwhelmingly successful by these measures, but
showed impressive reliability and validity, by the standards of this type of research. He concluded (p. 29) that the scales had fairly good ability to distinguish among individuals and groups where there was considerable variation in scores, but were less able to detect fine differences in groups where motivation was fairly homogeneous.

Price (1972) chose the Patchen scale for inclusion in his measurement handbook, noting that it seemed close enough to his own concept of motivation as "willingness to work."

The scale has been used recently in at least one test of expectancy theory (Reinhart and Wahba, 1975). In spite of this writer's trepidation over the validity and reliability of self-report data of this sort, the instrument was also chosen for use in this project, as the best available index of this nature, which at the same time fit the constraints on access to the sample. An important question arises immediately, then: is there any reason to hope that its validation with the samples mentioned above might hold for the present sample ("middle managers" in government and business--see Chapter VI)? One might at least hope so; some of the best results for the scale were for salesmen who were reportedly well-educated, and had supervisory responsibility over other salesmen, and for engineering personnel, who were educated professionals with autonomous, challenging work. Thus it seems that the scale was successful in application to individuals with non-routine tasks and considerable responsibility, and therefore is not applicable only to low-level, routine tasks (in fact it was less successful there, in its correlation with supervisor ratings). This lessens hesitations over whether it is appropriate for application to managers.
Comparing the Patchen scale with the set of subscales used by Guion (above), one notes that the Patchen scale taps a limited number of dimensions of this large, illusive concept we are chasing. Inclusion of more of the possible individual dispositions one might want to include under "motivation" will enhance the usefulness of the findings, so it is appropriate to include the use of Patchen's scale of "interest in work innovation." (See Appendix C, items 10, 11, 12, p. 343-344). Certainly, the sustained effort to find new and improved ways of doing the work is acceptable as a component of the concept of "work motivation," especially when we are considering managerial-level employees, who should play a role of leadership. Patchen's items were validated and tested for reliability by procedures similar to those described for the motivation scale. The items in the Appendix—those used in the research—represent a short form of the scale; Patchen himself developed this short form.

In conclusion, then, the research below uses the two Patchen scales, and thus a couple of operationalizations of motivation are used as dependent variables in the research. It should be remembered that, generally throughout this dissertation, "motivation" is used primarily in the broad generic sense discussed by Campbell and Pritchard (above). However, these operationalizations are used to try to tap motivation in the sense of a psychological disposition to devote effort and innovativeness to the job. It might also be noted that other variables and items to be used in the research are also quite relevant to motivation in the broad sense mentioned above. As noted earlier, the expectancy theory items have been used as operationalizations of various types of motivation, and have been assumed to be
valuable as dependent variables, due to their tendency to be successful as predictors of motivation and effort. Other variables are also relevant, and it is appropriate to turn to them now.

**Job Involvement**

Price (1972) also chose a scale of "job involvement" developed by Lodahl and Kejner (1965) as one of the measures of motivation he suggests in his *Handbook of Organizational Measurement*. He notes that they define job involvement as the degree to which a person's work performance affects his self-esteem, and that this differs from his own definition of motivation as the willingness to work. Nevertheless, he sees the job involvement scale as close enough to his concept to be considered a scale of motivation. This is convenient for the present project, since we have some justification for using the scale as an operationalization of another dimension of motivation, while the use of it is also of interest as a replication of Buchanan's finding, discussed in Chapter III. While the discussion there mentioned shortcomings of Buchanan's study, and indicated the problem in accepting involvement in the sense suggested by Buchanan, it is still useful to try to design the preliminary research in this undeveloped area in a way that will contribute, as much as possible, to cumulation of knowledge. Replication in itself has some value, then. More importantly, however, we can improve interpretation of the finding by inclusion of a number of variables in addition to this scale that Buchanan used, to increase the potential for findings that will permit a more subtle and accurate interpretation of a difference in involvement, if one is found.
So, we are using involvement as another dimension of motivation, and while a thoroughgoing conceptual exploration of each variable used in this project is not feasible, it is important to review at least some of the conceptualization of job involvement. In fact, there have been a number of different uses and measures of job involvement. Saleh and Hosek (1976) review the range of uses by various researchers, and conclude that job involvement has been used in four main senses: 1) as the degree to which work is a central life interest to a person ("the most important things that happen to me involve my work"); 2) as the degree of active participation in the job—participation in decisions, feelings of active, important involvement, etc.; 3) as the degree to which the job is important to an employee's self-esteem. (As noted above, Lodahl and Kejner define job involvement in this sense, although we will see in a moment that they may not have operationalized it thus.) 4) as the degree to which the person sees his performance as consistent with his self-concept—the degree to which his performance matches his feelings about his own abilities.

Saleh and Hosek factor analyzed a number of items from several scales of job involvement, including Lodahl and Kejner's, to see if the items would load on factors equivalent to the four senses described above. The "short form" of the Lodahl-Kejner scale is used in the research reported below (See Appendix C, p. 342, questions 1-6), and in Saleh and Hosek's analysis, items from that scale loaded mostly on the first and third factors described
above—on the central-life interest and the importance to self-esteem factors. Four of the six items loaded on the central-life interest factor, so although Lodahl and Kejner define involvement in terms of impact on self-esteem, it seems their operationalization may not match their definition.

An earlier factor-analytic approach is also helpful here. Lawler and Hall (1970) concluded, from a factor analysis, that job involvement (as measured by the Lodahl-Kejner short form used in this dissertation) is distinct from intrinsic motivation and from satisfaction with intrinsic aspects of the job. They also found that job involvement showed a low, but significant correlation with a number of job characteristics—opportunity to be creative, influence in the department, opportunity to use abilities and appropriateness of the job to those abilities; it also showed a significant, although low, correlation to self-rated effort, but no correlation with self-ratings of performance. In spite of these relationships, Lawler and Hall noted that Lodahl and Kejner (1965) had originally concluded that job involvement was more a function of the person than the job—that it is an individual characteristic that a person takes from job to job. Lawler and Hall would augment this interpretation, to allow for the effects of job characteristics—individual characteristics are important, but they will also interact with such job characteristics as control over the job situation and opportunity to be creative.

While these considerations of determinants of job involvement are of interest, in that they help with conceptualization and interpretation, a comparison of the job involvement of managers in
different settings—such as government vs. business—can be of interest in itself. Even if the research is unable to clearly relate job involvement to various possible determinants of it, it is still useful to include items concerned with job involvement—in the senses of work as a central life interest and work performance as an influence on self-esteem—as another dimension of motivation.

**Job Satisfaction**

An extensive venture into the vast literature on job satisfaction is not feasible here—Locke (1976) said there had been over 3,350 references at the time of his writing—but an inquiry into motivation and incentives in organizations should give attention to job satisfaction. Satisfaction, under most operationalizations, is not the same as motivation, effort, productivity, or performance, and may even be inversely related to those variables in some instances (Hopkins, Rawson, and Smith, 1976; Katzell and Yankelovitch, 1975; Locke, 1976). However, it can still reflect on incentives, and have an impact on organizational effectiveness; a degree of dissatisfaction in an organization or a set of organizations can be regarded as a sign of trouble. Low satisfaction can be related to turnover, absenteeism, grievances, and other bad things (Locke, 1976). Moreover, broadly speaking, satisfaction can be regarded as a matter of the impact of "incentives," and therefore quite relevant here. While it has been stressed, in previous discussion, that the main emphasis of this dissertation is on trying to get at the contingencies of incentives in the organization—their relationship to performance. Such contingency is not necessarily a determinant
of satisfaction (a person might be satisfied because s/he is well rewarded, regardless of performance), but there are still major reasons for attention to "satisfaction" here. A measure of satisfaction will provide a contribution to the stream of findings of lower job satisfaction in government, as compared to business organizations (see Chapter III). It will permit extension of those findings, too, since the measure can be related to other variables in the present project, instead of being used in relative isolation.

If the variable is to be used, then, how is it to be defined and measured? As for definition, Smith, Kendall, and Hulin (1969, p. 6), whose measure will be used, say that job satisfaction refers to "...the feelings a worker has about his job..." Locke (1976, p. 1300) defines it as "...a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences." These general definitions leave much vagueness, of course, and it is clear that one's "satisfaction" or "feelings" or "emotional states" can take quite a number of forms, can have a variety of determinants, and can be measured in an assortment of ways (Locke, 1976; Robinson, et al, 1969; Wanous and Lawler, 1972). Two of these methods of measurement have already been described in Chapter IV--the "discrepancy" method used by Porter, and the Job Description Index. Other methods include: general or content-free measures, which simply try to tap the general degree of liking, interest, enthusiasm, etc. (Hopkins, et al, 1976. See, for example, the Brayfield and Rothe scale in Price, 1972); various additional ways of measuring satisfaction with
Various facets of the job, as do the Porter method and the JDJ; and "action tendency" scales, which are concerned with how the respondent feels like acting (Locke, 1976).

Various ways of measuring satisfaction can show various relationships to other variables (Wanous and Lawler, 1972) and the different measurements imply different conceptualizations of satisfaction (Locke, 1976). In spite of this, however, and in spite of the deluge of research on job satisfaction in the last decades, there has been relatively little consideration of this variable that can be characterized as "conceptual" or "theoretical" (Locke, 1969, 1976; Price, 1972; Hopkins, et al, 1976). Apparently, the greater part of the research has looked at relationships of satisfaction to other variables, without much attention to conceptualization or theory. This state of affairs is underscored when Price (1972, p. 163) compliments Porter and Lawler (1968) for using the variable as part of an explicit theory, because they treat it as a reaction to receipt of rewards from successful performance--actually a rather simplistic notion.

The pursuit of a particular theory of job satisfaction, even if there were a well-developed theory, is not the main concern in this project, although collection of data on this variable will provide for testing of relationships with other variables. For example, it is possible that the expectancy items, although usually viewed as determinants of motivation and effort, may show relationships to satisfaction (Schreisheim, 1976). The main reason for
including measures of job satisfaction is that an extension of the previous findings of lower satisfaction in a particular type of organization--government organizations as compared to business organizations--will be an important contribution to the literature, and an important and interesting indication of a problem relevant to incentives in the public sector. To that end, then, the Job Description Index, the "JDI" (Smith, et al, 1969) will be used as a measure of satisfaction. It has been called the best-developed measure of work satisfaction (Vroom, 1964; Locke, 1976) and it permits measurement of satisfaction with facets or components of the work situation (pay, promotion, work, coworkers, and supervision), as opposed to general or global measures of affective responses to the job. It is also very widely used.

The best way to get an idea of what the JDI involves is simply to peruse the items on the scales (see Appendix C, p. 344-346, items 13-17). Locke has criticized the instrument, and all instruments which include ratings of objective aspects of a job (such as "hot," "on your feet," etc.), because this method assumes the relationship of these items to satisfaction. Locke thinks of a satisfaction as resulting from an employee's perception that his work "values" are, or can be, fulfilled through the job, and argues that if you do not consider the individual's values, you may go quite wrong in assuming that a certain characteristic is good or bad. For example, some persons may like a characteristic that sounds unpleasant. An iron worker for a construction company may take pride and satisfaction in the fact that his work involves being hot and being on his feet. Some problems of this nature will be elaborated in the
discussion of the results to be reported later, and it is clear that
the JDI is not without its problems. However, it is selected for
the reasons noted above.

Summary Concerning the Motivation and Satisfaction Variables

It is useful to sum up briefly here, on the variables discussed
thus far, by noting that the selection and discussion of variables
has been proceeding on the basis of a simple conceptual model that
is building as follows:

\[ r_1 > r_2 \]

\[ r_3 \text{ relatively low} \]

Of course, a major interest is in comparing government and business
organizations on measures of these variables. However, one would
expect positive relationships of the expectancy questions to the
four other variables, and the expectancy variables are viewed as
probable determinants of the others. This is obviously a highly
generalized and simplified framework, since innovativeness and
involvement, for example, might be related only to certain types
of expectancies, and so on. Because of the nature of the measure-
ments, one would expect satisfaction to show a positive relation-
ship to the expectancy items—the feeling that rewards are conti-
gent on performance should be positively related to satisfaction,
although it is clear that one can be satisfied, in a certain sense, as a result of receiving rewards not actually contingent on performance. Because of this latter consideration, one would expect a lower correlation of the expectancy items to satisfaction, as compared to their correlation to the other three, and a positive, but low correlation between satisfaction and the other three. Obviously, this rough approach will require further refinement as the discussion proceeds.

**Rewards or Valued Outcomes**

With the preceding variables chosen for use in the study of motivation and the effects of incentives, it is important to consider which particular rewards might influence these variables, and which reward or "outcome" items are to be used with the Expectancy II questions (those which ask about the relationship of performance to various rewards or outcomes). This is necessarily a major question in a study of incentives; under one usage of "incentive," such rewards could themselves be called incentives. However, as Chapter III and the preceding discussion of expectancy theory have pointed out in some detail, the choice of the most important rewards in an organization is a very complicated matter. In Chapter III, for instance, it was mentioned that Behling and Shapiro have argued that almost anything might act as an incentive to certain persons. It was mentioned in the discussion of expectancy theory (Connolly) that the generation of an adequate outcome list is an extremely difficult challenge for users of that theory, and that Campbell
and Pritchard feel that the measurement of utility is one of the most difficult problems in social science. To follow Connolly's suggestions, and rely on factor analysis or other ways of generating the list from observation of the subjects to be studied, would require more time, access, and resources than are available for the present project--indeed, major studies can be and have been devoted to this question in itself. It was necessary, then, that a list be generated for this study by reference to available literature, rather than inductively from studies of the sample.

Before describing the choice process, it should be mentioned that, besides the need to include reward items in the expectancy questions, data on rewards is to be gathered separately also. It was indicated in the discussion of expectancy theory that a recent approach, the one to be adopted here, is simply to ask about the relation of rewards to performance, on the assumption that various rewards or outcomes (money, promotion, etc.) are important, and to drop the procedure of multiplying through by the "valence" of the outcomes. While that assumption and procedure will be adopted here, it is also very useful, in spite of the difficulties in measurement, to gather some data on the valuation of various rewards by the respondents. Such data can serve as a supplement to the expectancy data, even if one refuses to go through the dubious procedure of multiplying through, as described earlier. For example, one can test independently for a difference in the importance attached to higher pay by different groups of subjects, and use the results in the interpretation of any finding of a difference in the
expectancy that higher pay is related to performance. Government managers might see less of a connection between their performance and their pay, but they might also see higher pay as less important to them than business managers. While such independent tests certainly lack theoretical precision, they are preferable to a process of simply assuming that the rewards are important to all respondents. A second major value of data on the valuation of rewards is that comparisons of business and government managers on such responses might produce useful and interesting findings. Buchanan, as we have seen, questions whether a service ethic really exists among public servants. The data on valuation of rewards can provide rudimentary exploratory findings on hypotheses relevant to this assertion, as well as to other hypotheses.

Turning to the actual choice of the reward items (see Appendix C; p. 332, items 1-14), several reward or outcome items definitely should be included in an effort to devise tests of public-private differences. Chapter III cited extensive concern with the weak relationship between performance and pay, promotion, and job security in most public sector organizations. Implicitly and often explicitly, this relationship is regarded as weak relative to the relationship in the private sector. Obviously, it is important to include those items here. Moreover, when House and Dessler (1973) originally devised their Expectancy I (E1) and Expectancy II (EII) items, these were three of the four outcome items that they used. They are included as items 2, 3, and 4 on page 332 of Appendix C.
The fourth of House and Dessler's items was "recognition" from the company, and a variant of that item is included (#1).

In extensions of the House and Dessler procedure, Sims, et al (1976) and Schreisheim (1976) added items referring to friendly relations with coworkers, friendly relations with the supervisor, recognition from the supervisor and influence with him, and greater respect from coworkers. Social relationships have long been recognized as an important influence on work and motivation, so item 5 was added to the reward items. It mixes reference to respect and friendliness, and such a mixing of factors is undesirable but necessary due to requirements for brevity. Although it does not appear in the expectancy items used in this research, the reward items on page 332 of Appendix C include an item referring to the supervisor (#14).

The preceding reward items would be classified as "extrinsic" rewards--those mediated by sources external to the individual. Also of obvious influence are "intrinsic" rewards or outcomes--those mediated internally, by the individual himself. (Staw, 1976). Sims, et al and Schreisheim extended the House and Dessler scales to include such rewards, and it is appropriate to include some. From those sources and elsewhere (Porter and Lawler, 1968), items 6 and 7 where chosen, as items quite frequently used in research, and considered of substantial importance. Item 8 is from Schreisheim, and is less frequently encountered. It is reference to deriving a good feeling about oneself as a result of the work
one does, and seems somewhat vague. However, it is included here as a very general reference to the impact of work on self-esteem and self-concept, and therefore as a useful indicator of intrinsic motivation.

Item 9, a reference to "engaging in meaningful public service" is used here because of the particular interest in motivation in government organizations, in the service ethic, and in public-private distinctions. It is worded as it is because Hall, et al (1974), in a study of organizational identification in the Forest Service, found this item to be significantly correlated with identification. It was one of the only items located in the search for items dealing with a service motivation on the part of government employees, and was included, even though the wording is of debatable appropriateness, because the use of it by Hall, et al gives some indication of its usefulness. It seems of obvious importance to include such an item in a study of incentives in government organizations. One would expect higher responses on such an item by government employees as compared to business employees. The failure to find such a difference would be quite interesting, however, and one might hesitate at stressing the obviousness of such a difference too forcefully--many business organizations and their employees stress their role of public service. It is useful to make a beginning at inquiry into the existence of such values, which might lead to more precise investigation of such inclinations in the two types of organizations.
The preceding nine items are all included in the Expectancy II questions used in this research. The remaining items are useful for exploration into possible differences between government and business managers. Items 10 and 11 concern financial and altruistic motivation, and items 12 and 13 refer to the drive for influence and for status and prestige. While they mix factors, they might provide useful indications concerning motivation and incentives. For example, the relatively limited potential for very high financial reward in the public sector, as well as the nature of many types of government work, may attract to government service persons more interested in exerting an important influence on their organizations, and being involved in decisions of relatively large importance (Banfield, 1976). On the other hand, if individuals are attracted to government service by the promise of high job security (Kilpatrick, et al, 1964), or are quite cautious in their behavior in the organization (Downs, 1967), one might expect relatively low ratings on such items. Such data might also be useful in the effort to differentiate among different types within government (Downs, 1967).

While it would take considerable space and time to elaborate the process, the choice of these items was also influenced by a search covering a number of the studies of values, needs, work values and work rewards (Kilpatrick, et al, 1964; Robinson, et al, 1969, p. 223-249; Rosenberg, 1957; Mott, 1972, p. 109; Porter and Lawler, 1968; Rokeach, 1973; Sikula, 1973; see also Appendix B. For example, Kilpatrick, et al report a study of the self-reported work
values of a broad sample of Americans, which they compiled into categories by a content analysis. Many of their categories correspond to those used in the present research, and the list in Appendix C represents some of the most important of their categories, as indicated by the frequency which which a particular value was mentioned by their respondents.

While the reward items were chosen as described, an effort was made to consider the relationship of such items to more systematic typologies of incentives, goals, and rewards. One of the most carefully developed of such typologies is that of Mitnick (1975), which was generated in view of the limitations of other typologies of incentives (Clark and Wilson, 1961; Wilson, 1973). Mitnick posits a set of goals— which can be regarded as types of incentives—and a set of dimensions of incentives. The goals include: 1) Material goals, such as more money or better physical working conditions, which pertain to material gains to a person, group, etc. 2) Two types of social goals (goals which are based on the relation of self to a social object, such as another person or a group). The first includes integrating social goals, involving love, loyalty, friendship, and other goals pertaining to enhancement of solidary relations with a social object. The second includes disintegrating social goals, such as power or influence over others, competitive achievement, social status, prestige, and fealty. Such goals involve the disintegration of solidary relations with a social object, and the accentuation of distinctions with social objects. 3) Reflexive or self-actualizing goals which focus on the self alone, on one's
own capabilities and fundamental characteristics. These include
goals pertaining to such matters as self-esteem, development of
skills and abilities, control over events, autonomy or independence,
and others. 4) Pathological goals, which are abnormal or uncommon,
such as self-denial or self-destruction. 5) Associated goals,
pertaining to the manner in which other goals are achieved--security
and adventure in particular. Security involves a low probability
of losses in various goals, and adventure involves preferences for
conditions of risk, where probability of loss is not low.

Given such a typology, it is interesting to consider how the
reward items in the present project might serve as representations
of these categories, and therefore have the potential for contribu-
tion to conceptual development. It seems that items 2 and 10 from
page 332 of Appendix C, which refer to financial rewards, can re-
present material goals or incentives. Items 5, 9, and 11, concerning
relations with coworkers, public service, and helping others, are
representations of social-integrating goals, although the service
and altruistic goals tend in the direction of reflexive goals
(Mitnick notes that his categories are not necessarily mutually
exclusive). Items 13 and 1, concerning recognition, and status
and prestige, could be classified as social-disintegrating goals
or incentives. Items 6, 7, 8, and 12 refer to reflexive goals,
involving self-development and self-concept, control over events,
etc. Item 4--job security--clearly refers to a security goal. Items
3 and 14, concerning promotion and a capable superior, are more
difficult to fit into the typology, since they can represent a number
of the types. In sum, it seems that the data will afford some representations of the categories developed by Mitnick, although the fit is not perfect. At a minimum, it can be argued that the reward items included here are a set which is sufficiently broad and inclusive to represent the greater part of the range of important rewards, and could well be fitted to a systematic typology.

**Other Variables Relevant to Motivation and Incentives**

So far, this chapter has prepared for tests of public-private differences in valuation of rewards, in responses on expectancy scales, and in responses on several "motivation" scales and a satisfaction instrument. Tests of interrelationships among these variables can also be undertaken. However, it will also be useful and interesting to inquire into the possible effects of several additional factors on these variables—the possible influences on expectancies, in particular. The factors of interest include role variables, task attributes, and various organizational characteristics, such as formalization, practices concerning various rewards (pay, promotion, firing), and clarity of organizational goals. These variables are important here for at least two reasons: 1) the definition of incentive presented earlier includes an emphasis on the "informational component" of the concept of incentive—information about access to rewards, and about the availability of rewards. The variables mentioned above represent various sources of information relevant to obtaining incentives; 2) the variables themselves will
allow for refinement and tests of some of the ideas introduced in Chapter III, concerning "vagueness" of goals and performance measures in government organizations and concerning the impacts of civil service personnel procedures. The discussion of these variables will begin with the important question of role definition in organizations.

Role Ambiguity and Role Conflict

The nature of the "role" which is defined for an individual in an organization has been a major issue in organization behavior research since Kahn, et al (1961) published studies on the impact of role conflict and role ambiguity on the "stress" experienced by employees. Since then, the most widely and successfully applied operationalizations of role conflict and role ambiguity have been those developed by House and others (Rizzo, House, and Lirtzman, 1970; House and Rizzo, 1972). In their usage, role ambiguity refers to the lack of the necessary information available to a given organizational position. They define it operationally in terms of the predictability of the outcome or responses to one's behavior, and the clarity of behavioral requirements. In Appendix C, p. 334-335, it can be seen from the role ambiguity items (#15, 16, 19, 22, 23, 26), that they concern certainty about objectives, responsibilities, amount of authority, and time allocation.

Role conflict refers to congruency-incongruency or compatibility-incompatibility of role requirements (Rizzo, et al, 1970, p. 155). Such conflict can arise in a number of ways, according to Rizzo, et al and Kahn, et al. The role might conflict with the individual's values and standards, or with his time, resources and capabilities.
Conflict might exist between two or more roles the same person is expected to play. There might be conflict among organizational demands or expectations, or conflict generated by a "role sender"—a person influencing the focal person's role—or by incongruency between role senders. A number of these sorts of conflict are represented in the role conflict items in the scale for that variable (Appendix C, p. 334-335, #14, 17, 18, 20, 21, 24, 25, 27).

Recently there has been much research activity involving these two variables, and a number of issues are under scrutiny, with some apparently conflicting findings being reported. The two role variables consistently show relationships to job satisfaction and some similar measures, such as "job related tension" (Miles and Petty, 1975; Miles, 1976; Szilagyi, et al, 1976; Schuler, 1975, 1977), but are not so consistently related to measures of job performance (Schuler, 1977, p. 164). The research and writing suggests that these relations to satisfaction tend to appear at various organizational levels and in various types of roles, even though certain roles would obviously be expected to show higher levels of these two role attributes. However, differences in the magnitude of the relationships are affected by a number of factors, apparently. There are indications that, at higher occupational levels, role ambiguity is more closely related to satisfaction (that is, it is associated with lower satisfaction), while role conflict shows a stronger relation to satisfaction at lower levels (Hamner and Tosi, 1973). However, Miles (1976) reports data that type of role and organizational level do not significantly moderate the relation of the role variable to satisfaction.
The role variables also show relations to a number of other organizational factors, such as participation in decision-making (Schuler, 1977), leader behaviors (House and Dessler, 1973), and formalization (House and Rizzo, 1972; Rogers and Molnar, 1976). Individual characteristics, such as need for clarity and perceived locus of control (i.e., does the individual see events as under his/her control, or controlled externally?), figure importantly, too, in research on the impact of role conflict and role ambiguity (Miles and Petty, 1975; Organ and Greene, 1974; Szilagyi, et al, 1976).

The intentions for use of the two role variables in the present project diverge somewhat from this stream of research, however. The role ambiguity items are particularly useful for tests of the ideas discussed in Chapter III about greater vagueness of performance objectives in government organizations, and the similar arguments, like those of Buchanan, about loosely-defined jobs and responsibilities. Perusal of the scale items--especially those on clarity of responsibilities, clarity of expectations, and clarity of job objectives--should make evident the usefulness of the scale for this purpose. The role conflict items are useful in a similar way, but are of particular interest for application in organizations operating in a "political" environment, and allegedly characterized by multiplicity of objectives, and by multiple, fragmented sources of authority (Golembiewski, 1969; Buchanan, 1974). Public-private comparison of scale responses on these two role variables will not necessarily reflect directly on the vagueness and multiplicity of objectives and performance measures in government organizations. However, they
will serve as indications as to whether there is an individual-level impact of such factors. Do persons in government organizations feel that their job goals, responsibilities, etc., are ambiguous and conflicting, and do such reactions show a relationship to the variables discussed in preceding sections? Clarity and consistency of role information, one could argue, provide information on how to perform and therefore on how to gain rewards of various kinds. In accord with this rough argument, one might expect the role variables to be related to responses on the expectancy items, and this relationship will be tested, as described below. This relationship of role variables to expectancies is quite complicated and debatable, and the role variables apparently have not been regarded as determinants of expectancies (House and Dessler, 1973), but the relationship will be tested, on the basis of the rationale set forth above.

**Organizational Goals**

While the role variables are relevant to the characteristics of objectives and responsibilities at the level of individual jobs, there remains the question of allegedly greater vagueness and multiplicity of organizational-level goals in government organizations. The problems even in interpreting such a suggestion were noted in Chapter III, and actually measuring such a difference seems even more complicated. It is hard to determine an organization's goals (Gross, 1976; Steers, 1975), much less measure various attributes of them. While inquiry into the definition and measurement of various dimensions of organizational goals, such as complexity (Laporte, 1975), is an interesting question for future research, it cannot be
adequately pursued here. In an approach similar to that taken with the role variables, the research described below will focus on the individual's perceptions as to the clarity of the organization's goals, and the relation of such perceptions to the other variables discussed here. Thus, items 28 and 29 on page 335 of App. C are aimed at getting an indication as to whether government managers feel that the goals of their organizations are clear and precise, as compared to such perceptions on the part of business managers; also important are the relations of such feelings to other variables here.

This approach is justifiable, for present purposes, due to the focus of this project on several phenomena in addition to organizational goals, and the consequent limits on time and resources available for elaborate attention to this particular issue; limits on access to the sample are also a factor. Of most importance, however, is severe difficulty in dealing with organizational effectiveness, which arises in part from the problems in determining and measuring organizational goals (Steers, 1976). Yet it is inappropriate to fail to acknowledge important empirical work on organizational goals, such as that of Kochan, Huber, and Cummings (1975) and Hage and Aiken (1969). However, these efforts use lists of substantive goals, and do not pursue measurements of goal characteristics, such as complexity.

Although they do not refer to organizational "goals," the effort by Becker and Neuhauser (1975) to measure "visibility of consequences" for an organization is quite relevant here, and must be acknowledged. We are concerned with the impact of goal clarity
on motivation and effectiveness, by way of its influence on performance control and performance assessment. Visible consequences would connote clarity of goals, in that it would indicate clarity, in one major sense, as to what the organization is trying to achieve and how well it is achieving it. However, it is interesting that in operationalizing the concept for hospitals, Becker and Neuhauser had administrators rank their hospitals on a number of performance factors, such as occupancy rate and average length of stay, against other hospitals of similar size in the same geographic area; administrators also rated the quality of patient care against that provided by other hospitals in the area. Visibility of consequences was determined by comparing these rankings by administrators to actual rankings on these matters. (The quality of care ranking was apparently compared to the rank when all ratings from all hospitals were compiled.) For insurance companies studied, however, the visibility of consequences measure was based on the information high level executives had concerning various quantitative indicators for departments within their company--profitability, variable costs of the departments and the relation of the costs to achievement of goals for those departments. This difference in operationalization for the two types of organization is quite significant. It implies that relatively clear performance indicators are available internally for the business organization, but not for hospitals; for hospitals, one must turn to external comparisons. One cannot so readily relate various internal quantitative indicators to organizational performance in hospitals, apparently. Note also that hospitals, although not
necessarily government organizations, tend to be similar on several dimensions. They are often nonprofit and are public service organizations, with more diffuse and value-laden objectives (quality of care). This indicates the point about goals for government organizations which was discussed in Chapter III. More importantly, however, the Becker and Neuhauser study suggests the difficulty of devising objective characterizations of the goals and performance objectives of government organizations. One would have even greater difficulty with applying this technique to them than in applying it to hospitals, since government agencies are usually monopolistic within a locality, and comparisons to "similar" organizations would be harder to devise for a number of reasons. In view of such difficulties with the techniques devised by other scholars, then, the present project pursues the more limited objective of trying to get an indication as to whether managers in government organizations, as compared to business organizations, tend to perceive the goals of their organizations as unclear, and whether such perceptions show relations to other variables.

This consideration of visible consequences and clarity and consistency of goals leads us into a closely-related issue, the nature of the technology applied by an organization and its components. Attributes of the tasks in which individuals engage are an important determinant of the clarity of task outcomes and performance measures, and therefore of goals and objectives. Such factors are obviously an important consideration under the informational component of the incentive concept, and it is appropriate to turn now to consideration of them.
Task Attributes--Task Analyzability and Task Variability

The impact of "technology" on organizational structure has received much attention in recent research, and in several instances this research has focused on characteristics of tasks performed by individuals or subunits within an organization. Other studies have focused more directly on the nature of tasks which individuals perform—the degree to which the task performed by a group or an individual is "structured" Fiedler (1967). While this project cannot cover all of the variables of potential relevance for the study of incentives, failure to give consideration to the nature of the task performed would be a major omission, for a number of reasons. For one thing, the nature of the task might interact with responses on expectancy items. A more highly structured task should give clearer indications as to performance requirements, and lead to higher expectancies concerning extrinsic outcomes. These expectancies may or may not be lower for those performing less structured tasks, but one might expect higher expectancies concerning intrinsic outcomes for such tasks, since they are frequently performed by professionals, who should be more concerned with intrinsic rewards; unstructured tasks might also afford more intrinsic rewards, by allowing for greater flexibility, judgement, and creativity in their performance. In addition, although the role ambiguity-low satisfaction relationship tends to hold across roles and levels, certainly different roles are subject to different degrees of ambiguity and conflict. One determinant of responses on the role variables may
be the nature of the task performed, and it is therefore useful to have data on task characteristics to improve interpretation of the role variable data. More generally, data on task characteristics is useful for indications as to whether the alleged public-private differences in performance objectives and measures (Balk, 1975) are attributable simply to differences in the range of tasks involved in government work. Contingency theorists, such as Kast and Rosenzweig (1973), would argue that objectives should be vague and judgemental wherever nonroutine, variable technologies or tasks are applied. Can the assertions about greater vagueness of objectives and performance measures in the public sector be attributed to a difference in the sorts of tasks performed there—more nonroutine, highly variable, unstructured tasks, etc.? This research cannot clearly answer that question, because a proper resolution would require a wide-ranging study of tasks or technologies applied in the two sectors, or at least a systematic sampling of them, which will clearly not be forthcoming here. However, the data can provide some suggestions as to the likelihood of such a finding, and the feasibility of pursuing such research.

With this much justification for their inclusion set forth, we must turn immediately to clarification of some of the concepts mentioned in the preceding paragraphs, and to means of inquiry into them. Concerning technology as an influence on organizational structure, there is considerable lack of agreement, and variety of approach, in conceptualization. Under one prominent definition of technology, the term refers to actions individuals
perform on some object, with or without the aid of tools or mechanical devices, to transform the object in some way (Perrow, 1967; quoted in Backoff and Rainey, 1977). Definitions also refer to the application of knowledge via techniques with defined sets of decision and action rules, toward the fulfillment of practical purposes. A number of different types of technologies have been discussed in the literature—types based on the nature of the object or raw material transformed (human beings, physical objects, etc.), the nature of the output or product, and the nature of the transformation process (Backoff and Rainey, 1977). Among the various approaches, perhaps the most prominent issue concerns the degree to which the technology applied by an organization is routine or nonroutine. A routine technology involves processes which are relatively simple, uniform, repetitive, predictable, and easily understood. A nonroutine technology involves processes which are relatively variable—involving many exceptions—and for which there is relatively low understanding (low predictability and difficult to analyze). (Backoff and Rainey, 1977). In general, a number of scholars and a number of studies have tended to consider routinization of technology to have a similar relationship to structure; routine technologies allow greater programming of procedures and are therefore associated with more structured organizational arrangements, such as greater formalization of rules and procedures, clearer authority and responsibility structures, etc. Nonroutine technologies require greater flexibility and informality in procedure and authority structure, and tend to be associated with more loosely
structured organizations and organizational components. (For example, Perrow, 1967; Hage and Aiken, 1969).

Some of this work has focused more directly on characteristics of tasks performed by units and individuals, with less emphasis on characterizing the technology of the organization as a whole. Some of this literature is actually a part of this stream of organizational technology literature (Van de Ven and Delbecq, 1974; Lynch, 1974). Some is more directly a part of the literature on leadership behavior and effectiveness (Fiedler, 1967; House and Dessler, 1973). The conceptualizations are largely similar, however. It is this literature that is of most concern here, because the available sample includes a relatively small number of organizations, and focuses on the individual as unit of analysis, and the design utilizes mailed questionnaires and involves limited access to the sample. Therefore a measure relying on self-report, while less than ideal, had to be selected, as a way of getting some indication of the nature of the task performed by the individual.

To this end, several techniques for measuring characteristics of the task performed by an individual were reviewed. Mott (1972) reports use of a measure of "task structure" which was originally developed by Fiedler (1967), whose work was, in turn, adopted from a technique devised by M. E. Shaw. Fiedler (1967, p. 28) defined task structure in terms of clarity of goals, multiplicity of paths to goals, verifiability of decisions, and specificity of solutions. These characteristics are quite interesting, in view of some of the questions raised in Chapter III, but unfortunately the measurement
technique is not suitable for use here. It requires that supervisory personnel within the organization become acquainted with the dimensions, and then rank jobs in the organization along the dimensions.

Lynch (1974) devised scales intended as operationalizations of Perrow's technology construct. However, many of her items are specific to library work, and would require substantial rewriting. Many of them are quite similar to those used here, but drawn from another source. One of her major scales is a scale concerning overall routineness of the task, which is confounded with satisfaction (and asks about whether the task is boring, monotonous, etc.).

House and Dessler (1973) report use of a scale of task structure which also contains many items similar to the ones ultimately used here, but they mention lack of success in use of the scale. These scales were not useful for present purposes.

The measures of task characteristics which were ultimately chosen and which are reported in the research below were developed by Van de Ven and Delbecq. They originally devised measures of task difficulty and task variability as part of a model for explaining structural variations among work units in organizations (Van de Ven and Delbecq, 1974). By task difficulty, they meant the analyzability of the work itself and the extent to which there is a known procedure for performing it. Task variability, in their usage, referred to the number of exceptional cases encountered in the work, which require different methods or procedures for doing it (p. 183). These concepts are closely akin to the concept of routinization.
mentioned earlier, and their operationalizations are similar to task structure and task routineness items mentioned in preceding paragraphs. Van de Ven and Delbecq have had some success in using these concepts as basis for classification of task-unit "structural modes" (Van de Ven and Delbecq, 1974) and "coordination modes" (Van de Ven, Delbecq, and Koenig, 1976). In the former study, for example, they found that the level of task difficulty and task variability was associated with whether a unit was structured according to a "systematized" mode, a "service" mode, or a "group" mode. These modes were differentiated mainly in the degree to which they involved programmed procedure, discretion on the part of members, and flexibility of structure, with the higher degrees of these characteristics occurring where difficulty and variability were highest.

More recently, Van de Ven, Dowell, and Ferry (1977) have reported further work on the scales, and their inclusion in an "Organization Assessment Instrument" which those authors have developed. They report indications of reliability and validity of the scales in detecting variations in the design of work units, and indications of the ability of the task measures to differentiate between different kinds of work units.

These instruments, then, appear to be the best-developed scales for use in the present research. Use here, however, will be somewhat different from that of the authors. They aggregated scale scores for an entire work unit, and undertook to validate the scales in various ways. In the present project, the scales will simply be
used as self-report measures of task difficulty (items 76, 77, 80, 81 on p. 341-342 of App. C) and task variability (74, 75, 78, 79 on these pages). While this divergence from the authors' technique is uncomfortable, it is also unavoidable under the circumstances. Moreover, it is extremely valuable to have information—even though debatable in some ways—which will provide suggestive evidence on the range of tasks in public and private organizations, and on the relationship of task characteristics to the role variables and to expectancy item responses. Now, having considered means of inquiry into the provision of information and direction by the work itself, it is useful to turn to the question of whether formal rules and procedural guidelines of the organization make an important contribution to our so-called information component.

**Formalization**

A number of organization researchers have found it useful and necessary to try to devise methods for measuring the existence and salience of formal rules and procedural guidelines in organizations, and often have referred to such matters by use of the construct, "formalization." Hage and Aiken (1969) define formalization in terms of the importance of rules in an organization, rules which provide behavioral and procedural guidelines and thus preclude constant decision-making and instruction-giving. In another prominent definition, Inkson, Pugh, and Hickson (1970) define the construct in terms of the degree to which rules, procedures, instructions, and communications are actually written. This latter type of definition is actually different from the preceding one in an
important way; Price (1972) defines the construct as "the degree to which the norms of a social system are explicit" (p. 107), and he argues that such norms can be explicit without being written down. This distinction is evident in the operationalizations of the Hage and Aiken and the Inkson, et al definitions. The Hage and Aiken measure (see Appendix C pp. 333-334, items 1-13) is concerned mainly with individual perceptions, and asks about such matters as individual autonomy, in addition to more objective questions, such as the presence of a rule manual and the existence of complete job descriptions. The Inkson, et al measure is more directly concerned with the presence of printed materials, and consists of questions about the existence of organization charts, instruction booklets, etc., and the procedure involves the effort to actually observe or obtain such things for the organization under scrutiny. As is evident from the parenthetical reference to Appendix C above, this dissertation will use the Hage and Aiken measure, largely due to the characteristics of the present project which have been mentioned quite often in preceding sections. In addition, the Hage and Aiken scale is preferable to this writer in that it gets at perceived formalization, rather than simply seeking to detect the existence of the trappings of formalization--the written materials. It should be noted, however, that conceptual consideration of the construct "formalization" is quite complicated. Blau (1970) has said that there are at least four different kinds of formalization, and that they can have different impacts and relationships. Formalization of personnel procedures, for example, can result in greater flexibility in other types of procedures, under some circumstances.
The measure of formalization is included here as a means of inquiry into whether formal organizational guidelines and procedures are an important source of information to organizational members--i.e., do responses on the formalization scale show a relationship to expectancy responses and to responses on the role variable measures? One might expect them to; formalization measures have shown relationships to role ambiguity measures in previous research (House and Rizzo, 1972; Rogers and Molnar, 1976), and have shown weak, but significant relations to expectancy items (Sims, et al, 1976). In addition, responses on formalization can provide suggestive information concerning the accuracy of some of the suggestions made by Buchanan (1975; see Chapter III).

Flexibility of Personnel Procedures

So far, this review has made preparations for empirical work with instruments aimed at directly measuring motivation and satisfaction, perceived reward contingencies, and sources of information which might have an effect on the clarification of those contingencies. However, we have still not attended to one of the major issues raised in Chapter III, the impact of personnel rules and procedures on motivation and on perceived reward contingencies--i.e., is there a public-private difference due to the civil service system? This question raises some particular challenges, because it seems that there has been little research specific to this issue of the impact and nature of personnel procedures. Perhaps it is considered an atheoretical, applied matter, or perhaps it is considered a question too narrow for those concerned with organizational structure, and
too indirect to be of interest to those concerned with organizational behavior. So, there are instruments which are concerned with reward practices in general, with motivational or reward climate (Taylor and Bowers, 1972, p. 71), and with "control system responsiveness" (Kopelman, 1976), but these instruments do not tie perceptions concerning rewards to the organization's formal practices. Outside of the literature on organizations, one might look to evaluation work done by such agencies as the civil service system. Some such work apparently occurs (U.S.C.S.C., undated), but results are not readily accessible, and in fact are quite difficult to attain.

In pursuit of this issue, then, of whether there is an apparent impact of formal personnel rules and procedures on perceived contingencies of rewards and on motivation, a questionnaire instrument was required, which had to meet several criteria: 1) It had to be concerned with the impact of formal personnel rules and procedures on the administration of the rewards which are influenced, allegedly, by the civil service systems of various governments. 2) It had to ask questions in terms general enough for application in business, as well as government organizations--no references to the "merit system" then, or to specifics of government procedures. The questions must concern the general phenomena of interest. 3) It had to relate the procedures to rewards for "managers," since a major question is whether the personnel procedures have an influence on reward contingencies (expectancies) as perceived by managers, and on responses on the motivation scales (either directly, or indirectly via an effect on expectancies).
To meet these needs, a set of questions was developed (#30 through #40, pp. 336-337, Appendix C) as the preliminary version of a scale of the "flexibility of personnel procedures." The scale is labeled as it is because the main criticism of civil service personnel systems is that they create a rigidity or inflexibility in the administration of pay, promotion and demotion, and removal (firing). This inflexibility arises in several senses: 1) relative difficulty on the part of organizational superiors in use of pay, promotion-demotion, or removal as rewards for good performance or punishments for poor performance (items 31, 32, 35, 39, 40--note that some items are reversed); 2) general protections against pay loss, firing, and demotion, regardless of the disposition of the superior (items #30, 34, 38); 3) a general inflexibility in the administration of the rewards of concern here, in that they are relatively automatic, or are otherwise divorced from considerations of performance (#33, 36, 37). The items were prepared from a longer list, on the basis of judgements and comments by faculty members and graduate students. Responses on these items can be used for public-private comparisons of perceptions concerning organizational personnel procedures. Such a difference, if substantiated empirically, would contribute to the public administration literature empirical evidence for an assertion frequently made (although one hears the opposite assertion also) but never tested, apparently. The findings can also contribute to the organization behavior literature, by providing for tests of the relation of perceptions regarding personnel procedures to responses on expectancy items and on motivation and satisfaction scales.
Summary

To sum up briefly, one can note that this chapter presents a review of material from organizational behavior/theory literature, aimed at devising tests for the propositions derived in Chapter III. Expectancy theory, satisfaction, and motivation-type scales have been selected for efforts to test public-private differences on these items. We are now also prepared for investigation of various sources of information--role information, organizational goal perceptions, task characteristics, and organizational formalization—which are important variables in themselves, but are also of interest as potential influences on expectancies. These measures will provide useful evidence for weighing the accuracy of general proposition II at the end of Chapter III. Finally, we are prepared for measurements of the flexibility of rules and procedures governing pay, promotion, demotion, and removal. Responses on this scale should be related to responses on the expectancy scales, and will allow for tests of general proposition III at the end of Chapter III.

Before turning to more specific hypotheses and the research design, it is useful to place these variables in an illustration, to indicate that they have been chosen according to a rough conceptual framework, which is illustrated in Figure 3. Of course, public-private comparisons on many of these measures are the main concern of the present project.

Now, the discussion must turn immediately to further refinement and specification, in describing the specific hypotheses to be tested, and means for testing them.
Figure 3: Variables to Be Used in Research Design, and Hypothesized Interrelationships.*

Organizational Goal Clarity: Pr> Pu
Task Variables (Difficulty, Variability)
Formalization: Pr> Pu
Role Variables (Conflict, Ambiguity): Pu> Pr

Satisfaction (Pr> Pu)
Involvement
Motivation
Interest in Innovation (Pr> Pu)
Flexibility of Personnel Procedures (Pr> Pu)

(Reward Preferences)

 EI (Pr> Pu) + EII (Pr> Pu)

Pr > Pu = Private (Business) Scores Hypothesized to Be Higher than Public (Government) Scores.
Pu > Pr = Public Scores Hypothesized to Be Higher than Private Scores.

* Hypotheses will be stated and elaborated in Chapter VI.

Note: All variables will be measured by managers; responses on questionnaire items. Hence all variables should be considered "perceived."
CHAPTER VI
RESEARCH DESIGN AND HYPOTHESES

Having stated general propositions to be refined for testing (Chapter III), and having chosen concepts and measures for use in their refinement, the discussion can turn to the statement of specific hypotheses and methods for carrying out the tests. This chapter will first attend to some complex considerations concerning the appropriate sampling procedure for this research, and concerning the unit of analysis for the research ("middle managers in government and business organizations). Then the general propositions stated at the end of Chapter III will be restated, along with specific hypotheses under each, which utilize the concepts and measures reviewed in Chapter V. The major part of the rationale for these hypotheses has been stated in previous chapters, and need be reiterated only briefly, if at all. Once the hypotheses have been stated, the discussion will turn, in Chapter VII, to the results of the tests of these hypotheses. Before we get to the hypotheses, however, the complex question of obtaining an appropriate sample must be considered.

**Sampling Considerations and Procedure**

Much of the earlier discussion centered on propositions about public and private organizations, but, as elaborated below, this project will take the "middle manager" as unit of analysis. In either case, there is a difficult question as to how one goes about selecting
a sample of such entities which is adequately representative for
generalization to the larger population of organizations or managers.
Such considerations are frequently passed over in reports of organ­
izational research, probably because they are so difficult to resolve.
McKelvey (1975) provides a demonstration of the difficulties in out­
lining the requirements for a sample of organizations adequate as
basis for a good taxonomy of organizations. Without reviewing McKelvey,
one can easily imagine the extensive information which would be neces­
sary to establish that a sample of business or government organizations,
or the managers therein, is representative of the population of organ­
izations or managers, even in a geographical subdivision of the U.S.
In spite of the difficulties, however, the nature of this project re­
quires attention to this question, at least to the extent of setting
forth the considerations and circumstances surrounding the selection
of the sample, even if this question of representativeness cannot be
neatly resolved.

Public and Private Organizations, and Sampling Difficulties

The problems in clearly defining and differentiating public and
private organizations were discussed in Chapter III. There it was
mentioned that for this project, it would be assumed that such dif­
ferences, if they exist, would show up most clearly in comparisons
of business organizations to government agencies. Ideally, then,
one would follow such an assumption with a delineation of the import­
ant characteristics of the two types of organizations, and provide
for a sample which would be representative of those attributes.
However, two major constraints impede access to that ideal. First,
it is difficult to obtain information on the range of organizations along various attributes. Even for the Columbus, Ohio area, for example, one can readily obtain only approximate figures on organizational size (number of personnel) through the Chamber of Commerce (Columbus C. of C., 1977). In addition these figures are available only for those organizations which are members of the Chamber. The second constraint, of major significance here, is that it is simply very difficult for a project under limited resources to obtain a large sample of organizations, particularly a sample which has been preselected for inclusion in a systematic sample. A preliminary effort was made to select a sample, using Chamber of Commerce information and information from the budget of the State of Ohio, which would be matched on size (number of personnel) and other variables discussed below. However, in contacting these organizations, two out of the first three—a large manufacturer of automobile parts and a large food manufacturing and food service organization, declined to participate. Experienced faculty members suggested that further contacts of this nature would probably encounter a similarly high refusal rate. Consequently, this procedure was dropped, in favor of contacts with organizations in which faculty members had a promising contact with an individual who could provide access. Thus, this project pursued the less desirable alternative of studying a sample of opportunity, with as much attention as possible to the attributes of the sample, as described below. Another major implication of this problem is that it demonstrates part of the rationale for adopting the manager as unit of analysis. With access to organizations so difficult, it was not feasible to
attain an adequately large sample for statistical tests using the organization as unit of analysis, but it was feasible to attain an adequately large sample of managers. (Further rationale for this choice is set forth below).

The Sample of Organizations

Even though the organization is not the unit of analysis for statistical tests, it certainly represents a cluster of variables which can have major impacts on the responses of managers. Therefore, it is still necessary to consider the nature of the organizations which participated. They might be described briefly as follows:

Organization 1 (number of personnel = approx. 7844): A state government agency responsible for administration of the planning, construction, and maintenance of major physical facilities in the state. Major functional subunits are concerned with finance, design (of the facilities), administrative affairs, operations, construction, R and D, and a number of major geographical district offices. Thus, members of the organization engage in diverse functions, but the main activities of the organization involve fairly technical functions, requiring the services of engineers and similar specialists.

Organization 2 (approx. 2549): A state government agency which performs a number of functions related to preservation and use of the state's natural resources--recreational facilities, mineral resources, water (dams) and watercraft, reclamation and land-use, and similar activities. These functions involve the services of numerous professionals and specialists, such as
foresters, geologists, and other types of scientists and engineers.

Organization 3 (approx. 1269): A state agency which provides an array of services to other agencies, including administration of the personnel system, computer services, and office services (records, printing, communications, accounting, etc.), and maintenance and construction of state government buildings and facilities.

Organization 4 (approx. 3981): A state agency responsible for a number of services related to employment, including unemployment compensation and job-finding for the unemployed. The agency operates many local offices throughout the state, and one of its major activities (besides employment services, unemployment compensation, and local offices), is concerned with research and the maintenance of statistics.

Organization 5 (approx. 3960): A Federal government installation in the Columbus area, which performs logistics and supply functions for the Defense Department. Divided into a number of diverse "directorates" or subdivisions, it is functionally diverse organization, but for the most part its activities revolve around warehousing, shipping, inventory, etc. Like most organizations in the Federal government, it operates an incentive awards program, which provides for performance and suggestion bonuses.

Organization 6 (approx. 3500): the headquarters of a national insurance company. Almost all of its employees in the Columbus area are located in its headquarters building.

Organization 7 (approx. 1675): a manufacturing organization which operates iron and steel foundries. It is geographically dispersed in the Columbus area, in that employees are located in several plants or in a headquarters building.
Organization 8 (approx. 17,000): a manufacturer of glassware products headquartered in a town near Columbus. Its operations are national and international in scope, and it is one of the Fortune 500. Its organizational or geographic arrangements are much like those of organization 7, in that it operates a headquarters and a number of plants and outlets.

Organization 9 (approx. 2658): a manufacturer of control systems and regulator devices (such as thermostats), which operates several plants or installations in the Columbus area, and is headquartered there.

Size, Technology, and Geographical/Physical Arrangements

Thus, the set of organizations from which the samples of managers were drawn includes organizations which are not precisely matched on size, but which are not highly diverse on that variable, either. All could be called large organizations, in that they exceed 1000 employees. Most come very close to being in the same size category.

Technology is a more difficult variable to assess. While there have been some classifications of business organizations on the basis of relatively discrete and objective criteria (Woodward, 1965), most of the prominent treatments of technology as an organizational construct have been based on employee responses concerning various characteristics of their work, such as routineness. Apparently, there have been no prominent efforts to devise typologies of government organizations, per se, on the basis of any major variable or set of variables, although of course government
organizations have been included in major taxonomic efforts and in some of the research on technology mentioned above. There have apparently been no efforts to devise objective indicators of "technology" for government organizations. Thus, it is quite difficult to deal with the question of whether the government and business organizations listed above are matched, or vary markedly, in the nature of their technologies.

One way of trying to deal with this difficulty has been mentioned in the discussion of technology in Chapter V. As noted there, responses on the Van de Ven, et al, scales of task difficulty and task variability will be drawn from all respondents. These responses can be compared to see if there is an appreciable difference between the set of government organizations and the set of business organizations. Of course, these will be self-reports of the individuals' perceptions of the nature of their tasks, and thus their validity as objective indications will open to some debate. Obviously, variation in related factors could create such a difference, or could result in an invalid sameness on these responses. For example, one of the two types of organizations might attract managers with a different level of cognitive complexity or locus of control than the other type. Such a difference might cause that set of managers to overstate or understate the difficulty and variability of their tasks. Nevertheless, these responses are regarded as the best available indications of the extent to which the two samples vary or conform in the technical nature of the tasks which they perform.
Other than this task difficulty-task variability measure, the only way to consider the question of technology is to deal with it generally and impressionistically. In this mode, one might argue that the sample is clearly not biased by the inclusion of only highly variable, nonroutine technologies in the government sample, such as one might expect in government hospitals, mental institutions, or people-processing agencies. Both samples include organizations which perform fairly "technical" functions, involving the work of specialists, technicians, engineers, and scientists. All of the organizations are sufficiently large and diverse to involve the participation of managers in diverse functions and activities, and the sample managers from each organization represented such diversity. The business sample includes a "service" organization, and the government sample includes at least one organization (#4) which has a large component of people-processing or human service activity. Within the government sample, the inclusion of the Federal installation might be regarded as extending the generalizability of the results, but mainly as an indication as to whether findings for this sample seem to be due to characteristics or circumstance peculiar to the state government agencies, which all represent the same state government.

Geographical Arrangements. Two of the government organizations (#2 and #5) and one of the business organizations (#6) operate mainly in one physical installation or building. The other business and government organizations operate a headquarter and geographically dispersed offices or installations. The headquarters for the
the government agencies tend to be larger, relative to the total operations, with the business organizations more dispersed into plants or outlets. Thus, while there is variation along this characteristic, both sides of the group of organizations (government and business) represent a roughly similar grouping, in terms of their geographical dispersion; none of the organizations seems so broken up that it involves major variations in the attributes of its units, i.e., none seems to be a confederation of less formal, more personal groups.

While the severe sampling and definitional difficulties have been discussed at length above and in Chapter III above, this group of government and business organizations is a reasonable compromise between the problem of obtaining a representative sample—which might involve more human service and nonroutine technologies in the government sample—and the problem of not weighting or biasing the sample by inclusion on one side of the sample of organizations which differ markedly from those on the other side in size, technology, and other important variables. Having selected this group as the source of the sample of managers, the discussion can now focus on major considerations in drawing that sample.

The Sample of Managers

The "manager" was chosen as the unit of analysis for several reasons. There was available an adequately large sample. The public-private distinctions with regard to reward practices and reward contingencies which are hypothesized below might be expected to show up more clearly at the managerial level, since in private
businesses, especially manufacturing firms, union membership may create circumstances for lower-level employees which are similar to those for lower-level employees under civil service systems. In addition, the level of organizational responsibility and authority is relevant to the questions of clarity of roles, goals, and performance objectives and criteria discussed elsewhere in this dissertation.

From Thompson (1967) and elsewhere, we might derive the argument that as one goes farther down the hierarchy in an organization, roles, objectives, requirements, procedures, etc., will tend to become more clear, routine, and systematic, as the organization tries to make it so that the "technical core" can operate under conditions of rationality. Thus, one would expect a filtering out of uncertainty, vagueness, variation, etc., as one goes down the hierarchy, and this tendency might wash out differences in clarity of objectives and roles at lower levels of government and business organizations. At higher levels--managerial levels--one might expect less of this filtering to have occurred; in fact, this is where much of the reduction in vagueness and uncertainty is supposed to take place. At these levels, then, one might expect any inherent difference in the clarity of the organization's goals and performance criteria to show up in the perceptions of employees, if it shows up at all. Still another reason for choosing the managerial level, especially the middle management level, is that persons in these roles are extremely important to the functioning of organizations, as argued by a number of authors. At the time of this writing, the Wall
Street Journal was running a series of articles on "middle managers." The articles were introduced with statements to the effect that middle managers were an extremely important component of industry, but usually received little attention. The "middle manager" is chosen here because higher managerial levels in government organizations are usually filled by political appointees, who may be quite distinct from business managers of the same level, but who are usually not covered by the civil service system, the effects of which are of major interest here. At the lower levels of management, the problem of the entrance of first-level foremen into the sample arises. These employees may be covered by unions, and may be involved in highly routinized jobs, so exclusion of the lowest levels of management is based on the same rationale as presented for the exclusion of rank and file workers.

With the choice of the "middle manager" as unit of analysis made, the problem then is to specify how middle managers are to be identified. This raises one of the major drawbacks to the choice of this unit of analysis; there are available useful treatments of managerial motivation, effectiveness, and compensation (Campbell, Dunette, Lawler, and Weick, 1970; Tosi, et al, 1972), but explicit definitions of the term "manager" are rare. Buchanan (1975) notes major conceptual difficulties in defining "manager," and these problems are aggravated by the less frequent use of that designation in government organizations than in business organizations.
Definition and selection of "middle managers." For this project, a "middle manager" is an employee with supervisory authority over at least one other employee who also has supervisory authority. The "middle manager" must also be below the level of Vice President of a business firm, and below the level of assistant director or deputy director in a government agency. This definition does not resolve the problem of high-level staff and advisory roles, or persons with large responsibilities and important roles who have only one level of subordinates below them. Such persons were included in the sample; in working with the organizational representatives to choose the samples from the various organizations, the researcher explained that such persons would be appropriate for inclusion in the sample, if their roles and responsibilities were at least equivalent to those of other members of the organization who were at the second level of supervision. A number of such cases were discussed with the organizational representatives, and ultimately included. For example, a person who had no subordinates, but reported to the president and vice presidents of a business firm on matters of "administrative planning," and who had more than one advanced degree and a high salary level, was included. Heads of legal staffs, and of offices or bureaus performing highly technical functions, who had only one level of subordinates below them, but were equivalent in salary, education, and distance down from the top man to heads of other units with more hierarchical levels below them, were included. In sum, line and staff officers below the second level from the top, and at or
above the second level from the bottom, or of equivalent authority and responsibility in the subjective judgement of the researcher and the organizational representative, were included in the sample. The ultimate samples were thus roughly equivalent to the "upper-middle" and "lower-middle" levels of management, as treated by Rhinehart, et al in their study (see Figure 4), and to some extent goes into what they considered the lower level of management.

**FIGURE 4**

Categorization of Managers by Rhinehart, et al

Comparison of the Four Management Levels in the Business and Industry and Department of Medicine and Surgery Data.

<table>
<thead>
<tr>
<th>Management levels</th>
<th>Business and industry</th>
<th>Department of medicine and surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>Presidents</td>
<td>Directors</td>
</tr>
<tr>
<td></td>
<td>Vice-presidents</td>
<td>Assistant directors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chiefs</td>
</tr>
<tr>
<td>Upper-middle</td>
<td>Division managers</td>
<td>Assistant chiefs of divisions and services</td>
</tr>
<tr>
<td></td>
<td>Plant managers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department managers</td>
<td></td>
</tr>
<tr>
<td>Lower-middle</td>
<td>Approximate level of department and sub-department managers</td>
<td>All between lower- and upper-middle, primarily section chiefs</td>
</tr>
<tr>
<td>Lower</td>
<td>First-or second-level supervisors</td>
<td>Unit chiefs</td>
</tr>
</tbody>
</table>
Efforts to measure the comparability of the two samples via "background information." Selection of a sample of middle managers is beset by the same difficult tradeoff between comparability and representativeness that was encountered in the selection of organizations. One would need extensive information about the characteristics of the population of government and business managers to determine the requirements for a representative sample. In the absence of such information, if one presses for a comparable sample, one may be forcing out systematic differences which actually exist between the two populations (in age, education, etc.). For the present project, it was considered most appropriate to attempt to obtain a roughly comparable sample via the sampling procedures described above, and to check the comparability of the sample after the collection of the data by collecting background information on the respondents. The sorts of information gathered are indicated by items 1 through 16 on pages 330-331 of Appendix C. There it can be seen that the following information was gathered:

1. Length of employment in present organization.
2. Length of employment at present position.
3. During career, length of employment in government, business and other private organizations.
5. Educational level.
6. Sex
7. Age
8. Race
9. Before-tax annual income from present job.
10. Number of immediate subordinates
11. Number of total subordinates
12. General name applied to organizational unit
14. Line or staff
15. Number of levels of authority between respondent and top person.
16. Number of immediate and total subordinates under respondent's superior.

These items were aimed at attaining as much personal information about the respondent, and as much information about his/her organizational position and status, as feasible within constraints on space and time for the questionnaire, the requirements for confidentiality by the organization, and the requirements for anonymity to avoid social desirability effects. In preliminary interviews in every organization, organizational representatives indicated that the instrument would have to be anonymous, and several organizational representatives indicated that extensive inquiry into the exact position and role of the respondent would be unacceptable. For this reason, items were often less specific and direct than desirable, but this was usually as much necessary for the avoidance of social desirability effects as for conformity to organizational desires. For example, items 12 and 13 were more vague and general than desirable, for characterization of the sample, but this was apparently a good thing, because two respondents out of the sample commented that the information was adequate to result in their identification (although they made no objection, and their responses indicated a lack of inhibition in responding). Closer questioning may have resulted in much greater social desirability effects.

The results on these items, along with response rates and data, will be presented in the following chapter, with the results of the study. As noted there, responses on these items indicate that the
two samples were roughly comparable on these items, and showed no major differences on them.

**Questionnaire Distribution and Procedure**

Questionnaires were distributed by mail, with stamped, return-addressed envelopes. The organizational representatives in each organization distributed a memorandum in advance of the questionnaire, and a brief cover letter, making reference to that memorandum and signed by this writer, accompanied each questionnaire. There was variation in these organizational memora nda. There was also minor variation in the manner of distribution of the questionnaires. In Organizations 4, 5, 6 and 7 (all the business organizations) questionnaires were distributed through the organization's in-house mail system; they were distributed in the same manila envelopes as in other organizations. As elaborated in Chapter VII, there are indications that these variations had no impact on the outcome of the study, and no major impact on the response tendencies of respondents. Numbers of questionnaires sent and returned and return rates, are reported in Chapter VII.

A major exception to this procedure occurred in Organization 5, where organizational representatives preferred that the questionnaires be distributed to an assembled group of managers, on-site. In administering questionnaires to this group, a brief statement was made by the researcher; it was mainly a restatement of the questionnaire instructions. While this constitutes a major variation in the procedure for distribution of the questionnaire, it apparently did not have a major impact on responses and results (see Chapter VII).
Hypotheses and Testing Procedures

With the sampling procedure attended to, we can now review the general propositions to be refined, and the specific hypotheses and procedures for testing them.

General Proposition 1. The first of these general propositions concerned the usefulness of replicating and extending previous comparisons of government and business managers on responses to scales of job involvement, satisfaction, and performance-reward contingencies. The associated hypotheses are the following:

1.A. Government managers, as compared to business managers, will show lower mean responses on a scale of job satisfaction (the J.D.I.).

This hypothesis simply replicates previous findings of lower job satisfaction among government managers, which were reviewed earlier. Since the JDI actually consists of five separate scales, this hypothesis must be tested for each individual scale.

1.B. Government managers will show a lower mean response on the set of motivation scales. They will show lower mean responses on:
1.B.1. The Patchen motivation scale.
1.B.2. The Patchen interest in innovation scale.
1.B.3. The Lodahl-Kejner job involvement scale.

The rationale for these hypotheses is given in Chapters III and V. They are aimed at extending previous research on public-private differences by the use of previously unused variables, self-reports on several scales intended as components of motivation to work. Lower mean responses by government managers will indicate that they feel, and are willing to report, less willingness to work hard and to work innovatively, and less of a tendency to regard their work as a central life interest and an important influence
on their self-esteem.

1.C. Government managers will show different mean responses on scales of effort-performance and performance-reward expectancies; they will show:

1.C.1. lower mean responses on effort-performance expectancies (EI).

1.C.2. lower mean responses on performance-reward expectancies (EII), for both extrinsic and intrinsic rewards.

1.C.3. higher mean responses on performance-reward expectancies concerning the reward, "meaningful public service."

As discussed earlier, these hypotheses are aimed at extending previous research by measuring a broader range of performance-reward expectancies than that of Porter and Lawler (1968, see Chapter III). As suggested in 1.C.2., the extrinsic and intrinsic reward items will be considered as separate scales, an EII-extrinsic scale, and an EII-intrinsic scale, if such a bifurcation of the items can be justified via reliability tests (the results of which will be reported in the next chapter). Clearly, the EII items can be regarded as consisting of a number of subscales—one for each reward item, one each for quality, quantity, and timeliness of performance—and a number of hypotheses might be stated concerning each subscale. For the purpose of stating a priori hypotheses, however, the scales will be regarded as described above. The one exception to this procedure is indicated in hypothesis 1.C.3., concerning the items referring to "meaningful public service." Because this item seems so heavily biased in favor of higher responses by government managers, it will be considered separately from the others. It is included here because it is useful for testing and extending Buchanan's (1974) finding and conclusions concerning the absence of a service ethic among government managers (see Chapter III).
The effort-performance expectancy items (E1) mentioned in 1.C.1. are of interest because lower responses by government managers might reflect the impact of a number of the attributes of government organizations—vagueness of objectives, etc.—which have been asserted to exist, as well as the impact of the frustrating "bureaucracy" and "red tape" which apparently exists in stereotype, and is also mentioned in academic discussion. As noted earlier in this dissertation, these items are also considered an important, separate component of expectancy phenomena by a number of researchers. As with other expectancy items, they must be established as a scale via reliability tests.

The preceding hypotheses will be tested by use of a t-test for significant differences between the means of the government and the business samples. With the relatively large samples reported below, the robust t-test will allow for less concern over the normality of the distributions (Hays, 1963). With the high degrees of freedom, one can expect relative ease in detecting a statistically significant difference, so judgement will be required as to whether the difference is significant in a practical and meaningful sense. Relatively high levels of significance should be required, at least at the \( p < 0.01 \) level, for serious consideration. While the statement of the hypotheses in directional terms (lower than, higher than) would indicate the use of one-tailed or directional tests (Hays, 1963), the undeveloped nature of this area of research gives little reason for confidence in the hypotheses. Therefore
two-directional tests will be performed, in accordance with the exploratory nature of this effort. Such tests are actually less powerful in testing directional hypotheses, will give lower levels of significance if the results are in the direction hypothesized, and will not make it easier to show a significant results for the hypotheses stated above.

At a time when elaborate statistical methods are frequently reported in the literature, a simple T-test might seem rather elementary and unsophisticated. However, there can be an eloquence in simplicity, and a highly significant finding on a direct, simple hypothesis might well be as informative as many an elaborate path analysis with minimal path coefficients and a tenuous claim to having met underlying assumptions. Yet, the data may provide information beyond what can be learned from simple comparisons of group means for business and government differences. Chapter VII, then, will report efforts to make additional tests, where original T-tests indicate significant differences, as a means of inquiring into the strength of those differences.

An implication of most of the assertions in the first general proposition, concerning lower satisfaction, involvement, and performance-reward contingencies, is that these lower responses on the part of government managers may be related to lower motivation and lower effort. It is important, then, to pursue this question by testing the following hypotheses:
1.D. The expectancy items will be positively related to the three motivation scales:

1.D.1. A regression of each of the three motivation variables (motivation, involvement, and interest in innovation) on the EI, the EI-intrinsic and the EI-extrinsic items will show the expectancy variables to be positively related to the motivation variables.

1.D.2. The EI-intrinsic items will be more positively related to involvement than will the other expectancy items.

Thus, through an individual regression analysis on each of the motivation variables, the relation of the expectancy items to that variable will be tested. 1.D.2. will test the suggestion that involvement is more closely related to intrinsic expectancies than to other types of expectancy.

Reward Preference ("Valence") Data. An effort will be made to explore for differences in reward preferences by nonparametric tests and crosstabulations on that data. However, no formal hypotheses will be stated concerning such differences. Findings of large differences on particular items may aid in interpretation of results.

General Proposition 2. The second general proposition from Chapter III concerned the effect of more rigid or inflexible personnel procedures in government organizations, and the consequent impact on employee perceptions of performance-reward contingencies (or "expectancies"). Of course, it will be necessary to substantiate the "flexibility of personnel procedures" scale, described in Chapter V, as a coherent scale. Given success in that effort, the following hypotheses can be tested:
2.A. Government managers, as compared to business managers, will show lower mean responses on the "flexibility of personnel procedures" scale. (t-test)

2.B. Responses on the "flexibility of personnel procedures" scale will be positively correlated with responses on the EII-extrinsic scale. They will be even more positively correlated with a subscale consisting of those expectancy items referring to pay, promotion, and job security. (Correlation coefficient)

General Proposition 3. The third proposition referred to the greater vagueness, multiplicity, and complexity of goals and performance criteria in government organizations as compared to business organizations, the consequent difficulty in defining and measuring desired outcomes, and, in turn, the dilution of the perceived connection between employee performance and rewards. While this is a rather vague and general assertion, it is so frequently made that it is important to pursue it via a number of exploratory hypotheses. These concern differences in managers' perceptions, as measured on a number of scales mentioned in Chapter III as part of what is here being referred to as the "informational component" of the incentive phenomena. A first effort will involve an array of tests for differences between public and private managers on their perceptions of various of their organizations, their roles, and their work:

3.A. Government managers, as compared to business managers, will show lower mean responses on the scale of "perceived organizational goal clarity." (t-test)

The rationale for this hypothesis is discussed in Chapter III.

3.B. Government managers will show lower mean responses on the Hage and Aiken scales of formalization. (t-test)
Hage and Aiken's measure of formalization actually consisted of five subscales (see Chapter VII, Table 5, for subscales), and differences on each subscale must be tested separately. The hypothesis of lower formalization in government certainly runs counter to the stereotype of excessively formalized bureaucracy in government, and is somewhat inconsistent with the hypothesis 2.A., concerning less flexibility of personnel procedures in government. It is stated as such because it will thus represent a test of a number of the assertions reviewed earlier, particularly those of Buchanan (see Chapter III). While there well may be a profusion of the trappings of formalization in government (many procedural guidelines, regulations, red tape), it may be that the employees do not see themselves as constrained and heavily influenced by them. They may feel a good deal of autonomy, and that procedures and responsibilities are not clearly specified, etc. One would be lead to this conclusion by the observations of Golembiewski (1969) and Buchanan (1975). For these reasons, the hypothesis is stated as it is.

3.C. Government managers will show higher mean responses on the scales of role conflict and role ambiguity. (t-test)

The literature on these two variables would not lead one to predict high correlation or consonance between the two variables, but this hypothesis states them as if they would be positively correlated. The reason is that they are chosen as useful indications as to whether there is any individual-level impact of vague and conflicting goals, performance measures, organizational expectations, etc., and are thus pursued in exploratory fashion.
Task Variables. A contingency theory perspective would lead one to hypothesize higher task variability and difficulty for government managers, on the basis of the previous hypotheses. Lower formalization in an organization, lower goal clarity, and perhaps higher role conflict and ambiguity might be expected to be consistent with higher task variability and difficulty. However, the task variables, although regarded as an indication of information deriving from the task itself, are also to be used as a check on the comparability of the sample. No formal hypothesis concerning differences on these variables will be stated here, although of course such a difference will be tested. The potential inconsistency with a contingency theory argument might be resolved by arguing that government organizations may tend to violate contingency theory prescriptions (or hypotheses). Their structures, roles, and goal attributes may not vary with their technologies, as contingency theory would predict or prescribe that they should, because demands for public accountability, and greater permeability of the organization to external authorities and influences, might attenuate the relationship of technology to other variables.

Given the differences suggested in the preceding hypotheses under the third general proposition, one can pursue the additional assertion under proposition 3 that these differences in informational sources should show a relationship to responses on the expectancy items. This question will be pursued via regression analysis:
3.D. A regression of the expectancy items on perceived goal clarity, formalization, role conflict, role ambiguity, task difficulty and task variability will show that these variables are positively related to the expectancy scales.

3.D.1. The "information component" variables will be positively related to EI responses.

3.D.2. They will be positively related to the Ell-extrinsic responses.

3.D.3. They will be positively related to the Ell-intrinsic responses.

A regression analysis will also be performed with the "information component" variables and the "flexibility of personnel procedures" scale, on the Ell-extrinsic scale, to determine how well the "flexibility..." scale fares against other variables, as a correlate of Ell-extrinsic.

While numerous other hypotheses could be stated and tested with the data reported in the next chapter, the preceding hypotheses are considered the ones of most immediate importance for inquiry into the general propositions. They should provide useful replications and extensions of previous findings, as well as indication of the accuracy of assertions which have been frequently made but seldom tested empirically.
CHAPTER VII
RESEARCH RESULTS

This chapter reports results of the empirical efforts discussed in the last chapter, and of the associated statistical tests on hypotheses. Conclusions drawn from these studies, and elaboration on the project as a whole, will be mentioned here only occasionally; those will be the topics of the next chapter. In the present chapter, there will first be a very brief overview of the results, then a report on the results of the questionnaire distribution process, then a presentation of data from the "background information" section of the questionnaire, which suggests that the business and government samples are roughly comparable on those measures. Next will come a presentation of reliability coefficients computed for scales used, and a brief overview of the results of tests for mean differences between the two samples. Then there will be a review of the results on each of the hypotheses stated in the last chapter, with deeper inquiry into those for which significant mean differences are found, and a presentation of the results of the regressions and correlations proposed in the last chapter. The first item of business, then, is the response to the questionnaire.

Results of Questionnaire Distribution Process

Table 1 reports the number of questionnaires distributed, and the number returned. Of the 296 questionnaires mailed, 235 were returned,
TABLE 1: Number and Percent of Questionnaires Distributed to, and Returned by, Managers in Organizations Participating in the Study.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number Distributed</th>
<th>Number Returned*</th>
<th>Percent Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38</td>
<td>28</td>
<td>73.6%</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>15</td>
<td>83.3%</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>26</td>
<td>83.9%</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>41</td>
<td>82.0%</td>
</tr>
<tr>
<td>5**</td>
<td>40</td>
<td>40</td>
<td>100.0%</td>
</tr>
<tr>
<td>6</td>
<td>48</td>
<td>40</td>
<td>83.3%</td>
</tr>
<tr>
<td>7</td>
<td>32</td>
<td>31</td>
<td>96.9%</td>
</tr>
<tr>
<td>8</td>
<td>36</td>
<td>22</td>
<td>61.1%</td>
</tr>
<tr>
<td>9</td>
<td>43</td>
<td>32</td>
<td>74.4%</td>
</tr>
</tbody>
</table>

TOTAL (with Org. 5): 336 275 81.8%
TOTAL (without Org. 5): 296 235 79.4%

Total Government Returns (1 - 5): 150 (84.7%)
Without Organization 5: 110 (80.3%)
Total Business Returns (6 - 9): 125 (78.6%)

Note: Organizations 1 through 5 are government organizations (1 - 4 are state, 5 is Federal). Organizations 6 through 9 are business organizations.

* Returned as of June 1, 1977

** Questionnaires not distributed by mail. See text, Chapter VI, section on Questionnaire Distribution and Procedure.
for a return rate of 79.4%. Of the government managers, a total of 110, or 80.3% returned their questionnaires; 125, or 78.6% of the business managers returned theirs. Including the questionnaires for Organization 5, where responses were collected on-site, these return rates resulted in a total of 275 returned and usable questionnaires. The return rates are within the range which is commonly considered adequate for questionnaire surveys.

Nevertheless, certain questions do arise from the failure to obtain 100% response rates. While there is no precise, easily-presentable evidence that those returning the questionnaire were not systematically different from those who did not return it, there are indications that that is the case. Data to be presented in the next section will indicate that the government and business samples—those that responded—are roughly similar on many important dimensions; this indicates that it is not the case that certain types or groups were responding, while others were not. Information on the questionnaires indicated that they were, in fact, coming from persons in a wide range of roles and locations within the organizations—since the questionnaires were distributed to persons in a broad cross-section of roles and responsibilities, the high return rate in itself indicated diversity of the sample. In addition, there was considerable variation in the responses from each organization. For example, tests for homogeneity of variance indicated significant differences between government and business samples in the magnitude of variance on all the five satisfaction scales, yet there was appreciable variance with each organization. This provides some evidence that the sample for each
organization did not consist of a subset of the most satisfied managers in the organization—although of course it does not conclusively rule out that possibility. Finally, and in support of this last statement, the last section of the questionnaire—which asked for voluntary comments—elicited both positive and negative comments from a few persons in each organization, both with regard to the questionnaire and the organization. This also might be taken as an indication that responses were coming from a wide range of types, with diverse attitudes and orientations.

The matter of major importance concerning acquisition of responses is the possibility of the inducement of systematic differences in Organization 5 by on-site collection of the data. While this is a quite complicated question, it will be evident in subsequent presentation of data that managers in this organization tended to show responses similar to those in other government organizations, and were not highly divergent in any responses. This is the strongest available evidence that the on-site procedure had no differential impact on response tendencies.

In sum, it seems safe to conclude that the data-gathering procedure covered an adequately large and diverse sample, without creating any substantial systematic differences in results. Further substantiation of this conclusion is available through the "background information" collected.
"Background Information" and the Comparability of the Government and Business Samples

The difficult question of the proper trade-off between a comparable sample and a representative one have been discussed previously, and there seems no way to address the question except through the application of judgement to some data on the two samples. Tests of "statistical significance" are necessarily more of an aid to analysis, rather than a guide to it, so there is no precise resolution to be expected. Moreover, responses on some items are quite dubious. There are points of statistically-significant differences on background items which may be related to results on some of the variables of major interest, reported later. Nevertheless, it will be argued that the two samples show a similarity adequate to support the conclusion that neither sample is biased or weighted in a direction that would have a substantial impact on results to be presented later (points where such a possibility exists are inciated below).

Tables 2 and 3 report the results for most of the background information items—those that can be summarized quantitatively. In Table 2, questions 1 and 2 indicate a similarity in average longevity in the organizations and in position. Question 7, however, gave an indication that the government managers tended to be slightly older, on average, to a degree that was quite significant statistically. The possible relation of this difference to major variables of interest, such as satisfaction with promotion, are discussed later in this chapter. The implications for sample comparability are also quite important, but quite complicated. It may be that government managers actually tend
TABLE 2: Means, Standard Deviations and Ranges of Responses to Selected "Background Information" Questions, and to Task Difficulty and Task Variability Scales, by Government and Business Managers.

"BACKGROUND INFORMATION"

<table>
<thead>
<tr>
<th>Question Number and Subject of Question</th>
<th>Government Managers</th>
<th>Business Managers</th>
<th>Number of Nonresponses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years in Organization</td>
<td>Mn.=16.4 (s.d.=10.1)</td>
<td>17.0 (10.2)</td>
<td>Government:1, Business:0</td>
</tr>
<tr>
<td></td>
<td>Range=44.0</td>
<td>R=41.0</td>
<td></td>
</tr>
<tr>
<td>2. Years in Present Position</td>
<td>5.0 (4.8)</td>
<td>4.7 (3.8)</td>
<td>Government:3, Business:2</td>
</tr>
<tr>
<td></td>
<td>R=25.0</td>
<td>R=18.0</td>
<td></td>
</tr>
<tr>
<td>7. Age</td>
<td>49.4 (9.9)</td>
<td>44.5 (8.6)</td>
<td>Total:3, T =4.24 (p &lt; .000)</td>
</tr>
<tr>
<td>10. Immediate Subordinates</td>
<td>8.8 (11.1)</td>
<td>4.9 (5.4)</td>
<td>Government:0, Business:0</td>
</tr>
<tr>
<td></td>
<td>R=94.0</td>
<td>R=50.0</td>
<td></td>
</tr>
<tr>
<td>11. Total Subordinates</td>
<td>77.7 (121.5)</td>
<td>63.0 (160.5)</td>
<td>Government:0, Business:0</td>
</tr>
<tr>
<td></td>
<td>R=800.0</td>
<td>R=985.0</td>
<td></td>
</tr>
<tr>
<td>16. Superior's immediate Subordinates</td>
<td>7.2 (7.0)</td>
<td>4.6 (2.2)</td>
<td>Government:13, Business:3</td>
</tr>
<tr>
<td></td>
<td>R=49.0</td>
<td>R=11.0</td>
<td></td>
</tr>
<tr>
<td>Superior's total</td>
<td>418.1 (763.0)</td>
<td>248.4 (613.1)</td>
<td>Government:26, Business:7</td>
</tr>
<tr>
<td>Subordinates</td>
<td>R=3998.0</td>
<td>R=3998.0</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
### TABLE 2 (Continued)

#### TASK VARIABILITY AND TASK DIFFICULTY**

<table>
<thead>
<tr>
<th>Question Number and Subject of Question*</th>
<th>Government Managers</th>
<th>Business Managers</th>
<th>Number of Nonresponses</th>
</tr>
</thead>
<tbody>
<tr>
<td>74, 75, 78, 79 Task Variability Items</td>
<td>2.75 (0.59)</td>
<td>2.82 (0.58)</td>
<td>Total: 3, T = -0.9, N.S.</td>
</tr>
<tr>
<td>76, 77, 80, 81 Task Difficulty Items</td>
<td>2.42 (0.74)</td>
<td>2.57 (0.76)</td>
<td>Total: 3, T = -1.67, N.S. (p &lt; 0.096)</td>
</tr>
</tbody>
</table>

Note: See text for interpretation of figures. See Table 3 for results on remainder of background information items.

* See Appendix C for full wording of questions.

** See Table 4 for scale reliability data.
to be somewhat older, at middle management levels--one could support such an assertion with various arguments--and therefore this difference in the samples would actually be appropriate for representativeness. However, one would need extensive data on average age in the two populations--data which is apparently unavailable--to resolve this issue. For present purposes, it is concluded that an average difference of 5 years is not so large as to constitute a major bias in the two samples (although possible impacts are further investigated later).

Questions 10, 11, and 16, concerning number of subordinates and number of subordinates under the manager's superior, were intended as efforts to get at one indication of the scope of a manager's responsibilities. (Of course, it is a limited indication; a foreman might have more subordinates than a high-level advisor who makes decisions influencing a much broader range of events). The figures suggest that the government managers tend to have more subordinates, and work for superiors who have more subordinates, than the business managers. This might indicate somewhat larger roles and responsibilities on the part of the government managers. Such a conclusion would be consistent with some items to be mentioned here, inconsistent with others. Yet the major problem with these data is their validity and interpretability. Many respondents omitted question 16, some saying that they really did not know. It was apparent that there were variations in the respondents' interpretations of the questions, which were not foreseen in the early phases of questionnaire distribution and testing, in time for correction. (For example, one "plant manager" reported he had only a few total subordinates). The extremely wide ranges and
standard deviations make the mean figures hard to interpret, and suggest that statistical tests are not justified. Thus, it seems warranted to conclude that these figures indicate only that both samples include a wide range of managers, in terms of number of subordinates and superior's subordinates, who, on average, had high numbers of subordinates.

Finally, on Table 2 are reported mean responses to task variability and difficulty items, which were intended as very rough indications of the possibility of differences in the task or technology in which the respondents were involved. While further analysis of these responses appears later, the implications for sample comparability are favorable. There are no statistically significant differences, although the difference in task difficulty approaches significance in the direction of higher difficulty reported by the business managers. This latter result is contrary to the outcome which was originally of concern—that government managers might tend to be involved in more complex, nonroutine, highly "technical" tasks. The limitations of this way of comparing the two samples has been mentioned before, and need not be elaborated.

Although not without sources of frustration, data in Table 3 pose fewer dilemmas. The samples are roughly comparable on educational level, sex, race, and income. The line-staff distributions indicate that a higher proportion of business managers termed themselves "staff" types, which is consistent with the earlier indications of differences in number of subordinates. This data is dubious for similar reasons, however. "Plant managers" reported
### TABLE 3: Means, Standard Deviation, and/or Frequencies of Responses to Selected 'Background Information' Questions by Government and Business Managers.

<table>
<thead>
<tr>
<th>Question Number* and Subject of Question</th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Educational Level**</td>
<td>Mn.=1.9 (s.d.=0.8)</td>
<td>Mn.=1.8 (s.d.=0.7)</td>
</tr>
<tr>
<td>1. High school</td>
<td>51 (34%)</td>
<td>39 (31.2%)</td>
</tr>
<tr>
<td>2. College</td>
<td>72 (48%)</td>
<td>72 (57.6%)</td>
</tr>
<tr>
<td>3. Master's</td>
<td>23 (15.3%)</td>
<td>13 (10.4%)</td>
</tr>
<tr>
<td>4. Doctorate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Law Degree</td>
<td>3 (2.0%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>6. Medical Degree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0. No response</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>

6. Sex

<table>
<thead>
<tr>
<th></th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>138 (92%)</td>
<td>122 (97.6%)</td>
</tr>
<tr>
<td>Female</td>
<td>11 (7.3%)</td>
<td>3 (2.4%)</td>
</tr>
<tr>
<td>No response</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>

8. Race

<table>
<thead>
<tr>
<th></th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>131 (87.3%)</td>
<td>123 (98.4%)</td>
</tr>
<tr>
<td>Black</td>
<td>17 (11.3%)</td>
<td>2 (1.6%)</td>
</tr>
<tr>
<td>Oriental</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>

9. Income from Job

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Under 10,000</td>
<td>1 (0.7%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>2. 10,000-15,000</td>
<td>10 (6.7%)</td>
<td>5 (4.0%)</td>
</tr>
<tr>
<td>3. 15,000-20,000</td>
<td>37 (24.7%)</td>
<td>24 (19.2%)</td>
</tr>
<tr>
<td>4. 20,000-25,000</td>
<td>57 (38.0%)</td>
<td>44 (35.2%)</td>
</tr>
<tr>
<td>5. 25,000-30,000</td>
<td>32 (21.3%)</td>
<td>25 (20.0%)</td>
</tr>
<tr>
<td>6. 30,000-35,000</td>
<td>9 (6.0%)</td>
<td>16 (12.8%)</td>
</tr>
<tr>
<td>7. 35,000-40,000</td>
<td>2 (1.3%)</td>
<td>6 (4.8%)</td>
</tr>
<tr>
<td>8. Over 40,000</td>
<td>1 (0.7%)</td>
<td>4 (3.2%)</td>
</tr>
<tr>
<td>0. No response</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>
TABLE 3 (Continued)

<table>
<thead>
<tr>
<th>Question Number* and Subject of Question</th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Consider yourself Line or Staff?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td>70 (46.7%)</td>
<td>53 (42.4%)</td>
</tr>
<tr>
<td>Staff</td>
<td>71 (47.3%)</td>
<td>69 (55.2%)</td>
</tr>
<tr>
<td>No response (or comment &quot;both&quot;)</td>
<td>9 (6.0%)</td>
<td>3 (2.4%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>
themselves as staff types, in some instances, and respondents who obviously held similar positions in the same organization reported themselves differently. There seemed to be obvious variations in the interpretation of "line" and "staff" by respondents, which were not noted until well along in the research process (organizational representatives had felt that the distinction would be clear to members of their organizations). Thus, this distinction seems to warrant little confidence, but even if it did, it might suggest a bias in the direction of differences opposite to those reported in later sections.

Returning to the less troublesome data in Table 3, it appears that the samples are similar in the characteristics mentioned above. The government sample has a somewhat higher percentage of individuals with advanced educational degrees, but a somewhat lower percentage with at least a college degree. The government sample is somewhat more diverse in race and sex, and the government managers are somewhat lower in income level. The differences in race, sex and education might be appropriate for representativeness. Buchanan (1974) argues that government organizations tend to contain more minorities and women, largely as a result of greater progress in affirmative action. Given the nature of government organizations, one might also expect more persons with advance professional training or advanced degrees (Anthony, 1975, p. 46; Mosher, 1968). Regardless of the representativeness considerations, however, one would not expect major impacts on findings for a sample of this size from the variations noted.
In sum, concerning the analysis of background information, it seems reasonable to conclude, in spite of the frustrations and uncertainties noted, that the sample is roughly comparable. It is not weighted or biased in the direction of forcing a certain result on the variables to be discussed in following sections (with the possible exception of some points which are noted). This elaborate attention has been given to the background data, some of which is dubious and hard to interpret, because the question of an appropriate sample is so crucial in this relatively undeveloped area of research. While interpretation cannot be precise, and frustrations abound, these are, in a sense, nice problems to have. The data presented are more thorough and elaborate than for any previous study of this type, including those where constraints on space in journals was not a consideration (Porter and Lawler, 1968). If problems exist, it is largely because this project created them through attention to details often omitted. With indications, then, of the appropriateness of the sample for comparisons, we can review indications of the reliability of scales described in Chapter V, for use in the research; then we can begin consideration of tests of the hypotheses.

**Reliability of the Scales Used**

Table 4 presents reliability scores on the scales used in research, except for the satisfaction scales, computed with the Kuder-Richardson 20 for nondichotomous items (i.e., the Cronbach Alpha). As the table indicates, the coefficients for the scales beginning with "Role ambiguity" and down the list to "Expectancy II-
### TABLE 4: Kuder-Richardson Reliability Coefficients on Scales Used in the Research.

<table>
<thead>
<tr>
<th>Scale Name</th>
<th>Questionnaire Items (page no. in App. III)</th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formalization Scales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Codification</td>
<td>1 through 4 (p. 4)</td>
<td>.64</td>
<td>.73</td>
</tr>
<tr>
<td>Rule Observation</td>
<td>5, 6 (p. 4)</td>
<td>.64</td>
<td>.72</td>
</tr>
<tr>
<td>Specificity of Job Descriptions</td>
<td>9 through 13 (p. 4)</td>
<td>.92</td>
<td>.91</td>
</tr>
<tr>
<td><strong>Role Ambiguity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15, 16, 19, 22, 23, 26 (p. 5)</td>
<td>.86</td>
<td>.80</td>
</tr>
<tr>
<td><strong>Role Conflict</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14, 17, 18, 20, 21, 24, 25, 27 (p. 5)</td>
<td>.85</td>
<td>.78</td>
</tr>
<tr>
<td><strong>Perceived Clarity of Organizational Goals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28, 29 (p. 6)</td>
<td>.85</td>
<td>.85</td>
</tr>
<tr>
<td><strong>Perceived Flexibility of Personnel Procedures</strong></td>
<td>30 through 40 (p. 6 and 7)</td>
<td>.80</td>
<td>.77</td>
</tr>
<tr>
<td><strong>Expectancy I (E1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>47, 50, 56, 61, 69, 72 (pp. 7-9)</td>
<td>.87</td>
<td>.84</td>
</tr>
<tr>
<td><strong>Expectancy II--Extrinsic Rewards (EII-EXT)</strong></td>
<td>41 through 45, 52 through 55, 62 through 65, 68, 73 (p. 7-9)</td>
<td>.87</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Expectancy II--Intrinsic Rewards (EII-INT)</strong></td>
<td>46 through 49, 57 through 59, 66, 67, 70 (pp. 7-9)</td>
<td>.78</td>
<td>.73</td>
</tr>
<tr>
<td><strong>Expectancy II--Meaningful Public Service</strong></td>
<td>51, 60, 71 (pp. 8 and 9)</td>
<td>.83</td>
<td>.84</td>
</tr>
<tr>
<td><strong>Task Variability</strong></td>
<td></td>
<td>.64</td>
<td>.70</td>
</tr>
<tr>
<td><strong>Task Difficulty</strong></td>
<td></td>
<td>.60</td>
<td>.63</td>
</tr>
<tr>
<td><strong>Job Involvement</strong></td>
<td></td>
<td>.68</td>
<td>.69</td>
</tr>
</tbody>
</table>
### Table 4 (Continued)

<table>
<thead>
<tr>
<th>Scale Name</th>
<th>Questionnaire Items (page no. in App. III)</th>
<th>Government Managers</th>
<th>Business Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>7 through 9 (p. 11)</td>
<td>.35</td>
<td>.50</td>
</tr>
<tr>
<td>Interest in Innovation</td>
<td>10 through 12 (p. 12)</td>
<td>.29</td>
<td>.28</td>
</tr>
</tbody>
</table>
meaningful public service show fully adequate interitem consistency for consideration as scales. The formalization scales, and the scales for task variability, task difficulty, and job involvement are somewhat lower, but all will be accepted, for present purposes, as marginally adequate. However, the subsequent discussion must take into account the very low coefficients for several of these latter scales.

Of major importance is the inadequate reliability of the scales of "motivation" and "interest in innovation," which such a low degree of interitem consistency, and consequently such high error in content sampling or behavior domain that the sets of questions cannot be considered consistent measures of the same construct. While this lack of interitem consistency on some of the scales is troublesome, the tests of the hypotheses will be presented as stated, with elaborations, where useful, to take into account low reliability coefficients. Having taken into account the nature of the sample and the reliability of the scales, attention can now be focused on the results of statistical tests on hypotheses.

Overview of Comparisons of Business and Government Samples

Before proceeding systematically through the results for hypotheses stated in Chapter VI, the reader might prefer to peruse the entire set of comparisons performed, rather than trying to keep track of the general results while going through the hypotheses. Table 5 presents means for the government and business samples, and results of T-tests for differences between those means, for all scales used in the research. As a brief overview and introduction
TABLE 5: Comparisons of Mean Scores for Business and Government Managers, on Scales Constructed from Questionnaire Items.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Government Managers</th>
<th>Business Managers</th>
<th>Significance Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formalization Scales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Codification</td>
<td>Mn.=3.37 (s.d.=0.60)</td>
<td>Mn.=3.22 (s.d.=0.63)</td>
<td>T=2.0 p&lt;.046 (df=273)</td>
</tr>
<tr>
<td>Rule Observation</td>
<td>2.45 (0.71)</td>
<td>2.14 (0.66)</td>
<td>T=3.6 p&lt;.000 (df=273)</td>
</tr>
<tr>
<td>Rule Manual</td>
<td>4.09 (0.79)</td>
<td>3.72 (0.96)</td>
<td>T=4.12 p&lt;.001 (df=273)</td>
</tr>
<tr>
<td>Job Description</td>
<td>3.89 (0.89)</td>
<td>3.90 (0.86)</td>
<td>T=0.13 n.s. (df=273)</td>
</tr>
<tr>
<td>Specificity of Job Descriptions</td>
<td>3.54 (0.56)</td>
<td>3.23 (0.55)</td>
<td>T=4.6 p&lt;.000 (df=273)</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>14.7 (4.04)</td>
<td>14.4 (3.51)</td>
<td>T=0.7 N.S. (df=273)</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>24.5 (5.13)</td>
<td>24.4 (4.69)</td>
<td>T=0.2 N.S. (df=273)</td>
</tr>
<tr>
<td>Clarity of Organizational Goals</td>
<td>7.04 (1.77)</td>
<td>7.07 (1.76)</td>
<td>T=-0.15 N.S. (df=272)</td>
</tr>
<tr>
<td>Flexibility of Personnel Procedures *</td>
<td>3.65 (0.52)</td>
<td>2.62 (0.46)</td>
<td>T=17.1 p&lt;.000 (df=272)</td>
</tr>
<tr>
<td>Expectancy I (El)</td>
<td>3.62 (0.56)</td>
<td>3.56 (0.55)</td>
<td>T=0.9 N.S. (df=273)</td>
</tr>
<tr>
<td>Expectancy II -- Extrinsc Rewards (El1-EXT)</td>
<td>3.19 (0.48)</td>
<td>3.51 (0.40)</td>
<td>T=-7.02 p&lt;.000 (df=273)</td>
</tr>
<tr>
<td>Expectancy II -- Intrinsic Rewards (El1-INT)</td>
<td>3.81 (0.40)</td>
<td>3.71 (0.39)</td>
<td>T=1.98 p&lt;.05 (df=273)</td>
</tr>
<tr>
<td>Expectancy II -- &quot;meaningful public service&quot;</td>
<td>3.89 (0.60)</td>
<td>3.24 (0.71)</td>
<td>T=8.14 p&lt;.000 (df=243.6)</td>
</tr>
<tr>
<td>Task Variability</td>
<td>2.75 (0.59)</td>
<td>2.82 (0.58)</td>
<td>T=-0.9 N.S. (df=272)</td>
</tr>
</tbody>
</table>
TABLE 5 (Continued)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Government Managers</th>
<th>Business Managers</th>
<th>Significance Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Difficulty</td>
<td>Mn.=2.41 (s.d.=0.74)</td>
<td>Mn.=2.56 (s.d.=0.76)</td>
<td>T=-1.67 N.S. (df=272) p &lt; .09</td>
</tr>
<tr>
<td>Job Involvement</td>
<td>15.48 (2.16)</td>
<td>15.37 (2.28)</td>
<td>T=0.4 N.S. (df=273)</td>
</tr>
<tr>
<td>Motivation</td>
<td>4.33 (0.53)</td>
<td>4.26 (0.61)</td>
<td>T=0.9 N.S. (df=268.4)</td>
</tr>
<tr>
<td>Interest in Innovation</td>
<td>4.32 (0.83)</td>
<td>4.53 (0.77)</td>
<td>T=2.14 p &lt; .03 (df=271)</td>
</tr>
<tr>
<td>Satisfaction with work</td>
<td>40.44 (9.74)</td>
<td>41.10 (7.71)</td>
<td>T=-0.63 N.S. (df=272.3)</td>
</tr>
<tr>
<td>Satisfaction with Supervisions</td>
<td>40.99 (13.78)</td>
<td>43.75 (10.21)</td>
<td>T=-1.91 N.S. (df=269.4) p &lt; 0.06</td>
</tr>
<tr>
<td>Satisfaction with Coworkers</td>
<td>40.77 (13.23)</td>
<td>45.01 (9.94)</td>
<td>T=-3.09 p &lt; .002 (df=267.3)</td>
</tr>
<tr>
<td>Satisfaction with Pay</td>
<td>14.53 (6.33)</td>
<td>15.39 (5.28)</td>
<td>T=-1.23 N.S. (df=273)</td>
</tr>
<tr>
<td>Satisfaction with Promotion</td>
<td>7.84 (7.06)</td>
<td>15.01 (8.71)</td>
<td>T=-7.39 p &lt; .000 (df=237.7)</td>
</tr>
</tbody>
</table>

* Lower score indicates higher flexibility
to the presentations which are to follow, it can be noted that there were a number of statistically significant differences. Highly significant differences were found on some of the formalization scales, on flexibility of personnel procedures, on Expectancy II items, and on two of the satisfaction scales. The several differences which are significant at the .03 to .05 level make it evident that the high degrees of freedom make some small differences become significant; this makes evident the reasons for the decision, mentioned earlier, to concentrate on differences significant at least at the .01 level.

Noteworthy is the failure of most of the "information component" variables--the role variables, organizational goal clarity, and task variables--to show government-business differences. Differences on formalization scales, also part of these "information component" variables, are in the direction opposite to that hypothesized. Apparently, the strongest differences are shown in the flexibility of personnel procedures scale, the Ell-EXT scale, the Ell-public service scale and the scale of satisfaction, all in the direction of lower scores by government managers, except on the Ell-public service question. With this overview as a means of preliminary orientation, we can proceed through the results on hypotheses, with emphasis on further inquiry into points where significant mean differences are shown.
In reviewing the hypotheses, a finding of no mean difference will be taken as a failure of those hypotheses concerning differences. This decision rule raises an important question concerning the impact of the individual organizations on the results. The unit of analysis is the individual, not the organization, but the organization is nevertheless an important source of potential effects on the managers' responses to the questions. It could be that the data were collected from a relatively small subset of the population of organizations which are not representative of the population of government or business organizations. For example, it might be that three of the four business organizations were quite high in mean score on one scale, but the fourth was quite low, thus washing out a difference with government organizations (which were all low) which might show up if a larger sample of organizations were included. As a further example, there might be one unusually "unhappy" business organization which causes the satisfaction score for the four business organizations, taken together, to be so low that no difference appears between that group and the government group. The idea is that there is a factor--the organization--which represents a cluster of potentially influential, but unspecified variables, but which is not necessarily random or representative for the two samples, and we wonder if it might be having an impact on the mean differences for the two groups. For the cases where no mean differences between the two groups are found, it seems adequate in the present case to resolve this question by perusal of the data.
Appendix D presents the mean scores, by organization, on all the dependent variables on which no mean differences were found (as indicated in Table 5). Perusal of this data will indicate that there are no cases of apparent influence on the mean difference due to overlap between the two samples of organizations caused by outliers from one of the groups. This conclusion is substantiated by the nonsignificant results of one-way analyses of variance (nonsignificant F) by organization, in the case of each of these variables.

A similar question arises in consideration of variables for which mean differences were found, and is more important in these cases. The argument that the differences are due to the government-business distinction are most convincing where each government organization is lower than, or higher than, each business organization. If this is not the case, i.e., if there is overlap among the organizations, it is less convincing to argue that the mean differences are due to the government-business distinction, rather than to other attributes of the organizations from which the samples were drawn. Methods of trying to deal with this problem are presented in the following review of results on specific hypotheses.

Results of Significance Tests on Specific Hypotheses

General proposition I was the source of a number of hypotheses concerned with government-business comparisons on several scales of motivation and satisfaction, and with some of the interrelationships of these scales.
Hypothesis 1.A. predicted lower mean scores for government managers on scales of job satisfaction. As indicated on Table 5, differences which were significant at at least the .01 level were found for two of the five subscales of satisfaction, satisfaction with coworkers ($p < .002$) and satisfaction with promotion ($p < .000$). Both differences were in the direction of lower satisfaction on the part of government managers. Table 6 presents the mean responses on each of these two subscales for the managers in each of the organizations participating in the study (Table 6 also contains data which will be referred to in discussion of other hypotheses). From the table it can be seen that there was overlap between the government and business organizations on mean response to the satisfaction with coworkers scale. Although the mean for government managers as a group is lower than the mean for business managers as a group, one government organization, Organization 2, has the highest mean score of all, and another, Organization 3, is higher than two of the business organizations. The data on satisfaction with promotion indicates a highly significant difference between government and business managers, which holds across organizations. Organization 2 again is markedly high among government organizations, but is nevertheless lower than each business organization in mean response.
TABLE 6: Means and Standard Deviations, by Organization, on Scales for which a Significant T was Found in Comparison of the Government to the Business Sample

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=28)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Rule Observation (s.d.=0.72)</td>
<td>2.43</td>
<td>2.33</td>
<td>2.29</td>
<td>2.40</td>
<td>2.66</td>
<td>2.21</td>
<td>2.13</td>
<td>2.18</td>
<td>2.06</td>
<td>2.50</td>
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<td>(n=15)</td>
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<td></td>
<td></td>
<td></td>
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<td>8,266</td>
</tr>
<tr>
<td>Specificity of Job Descriptions</td>
<td>3.57</td>
<td>4.43</td>
<td>3.28</td>
<td>3.55</td>
<td>3.75</td>
<td>3.36</td>
<td>3.03</td>
<td>3.24</td>
<td>3.28</td>
<td>5.16</td>
</tr>
<tr>
<td>(n=26)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility of Personnel Procedures*</td>
<td>3.70</td>
<td>3.40</td>
<td>3.63</td>
<td>3.83</td>
<td>3.53</td>
<td>2.79</td>
<td>2.42</td>
<td>2.68</td>
<td>2.58</td>
<td>41.9</td>
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<tr>
<td>(n=41)</td>
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<td>8,265</td>
</tr>
<tr>
<td>Expectancy II-Extrinsic Rewards (ELL-EXT)</td>
<td>3.11</td>
<td>3.20</td>
<td>3.24</td>
<td>3.00</td>
<td>3.21</td>
<td>3.46</td>
<td>3.51</td>
<td>3.53</td>
<td>3.56</td>
<td>6.96</td>
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<td>8,266</td>
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<tr>
<td>Expectancy II-Meaningful Public Service</td>
<td>3.88</td>
<td>4.13</td>
<td>3.77</td>
<td>3.80</td>
<td>3.99</td>
<td>3.45</td>
<td>2.95</td>
<td>3.08</td>
<td>3.36</td>
<td>11.14</td>
</tr>
<tr>
<td>(n=31)</td>
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<td>8,266</td>
</tr>
<tr>
<td>Satisfaction with Co-workers</td>
<td>40.1</td>
<td>49.8</td>
<td>43.8</td>
<td>37.8</td>
<td>38.9</td>
<td>46.6</td>
<td>46.5</td>
<td>42.3</td>
<td>43.4</td>
<td>3.64</td>
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<td></td>
<td></td>
<td></td>
<td>p &lt; .025</td>
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</table>

* = Significant T at p < .05
<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(df)</td>
</tr>
<tr>
<td>Satisfaction with Promotion</td>
<td>7.28</td>
<td>11.6</td>
<td>8.27</td>
<td>7.05</td>
<td>7.35</td>
<td>12.8</td>
<td>16.4</td>
<td>15.9</td>
<td>15.8</td>
<td>8.28</td>
</tr>
<tr>
<td></td>
<td>(5.43)</td>
<td>(7.46)</td>
<td>(7.23)</td>
<td>(7.64)</td>
<td>(7.08)</td>
<td>(8.72)</td>
<td>(9.59)</td>
<td>(8.95)</td>
<td>(7.43)</td>
<td>(8,266)</td>
</tr>
</tbody>
</table>

* Higher score means lower flexibility
As mentioned just above, these overlapping scores (between government and business organizations), or the absence of them, is of concern because they are relevant to consideration of whether the differences found are generalizable to the population of government and business organizations. While one might debate the point, it is assumed here that if each of the government organizations is different from each of the business organizations, in the same direction, it is more convincing to argue that the difference is due to general differences between government and business organizations. To make such comparisons, the procedure devised by Scheffe for post-hoc comparisons among treatment means (or totals) was applied to the data.

Rationale for use of the Scheffe procedure is as follows: Hays (1963, p. 475) notes that, in a one-way analysis of variance design with more than two treatment groups or conditions (which would be represented by the organizations in the present instance) the F test is an "omnibus" test which indicates only that there is at least one treatment which differs significantly from the others. There are obviously cases where it is useful to pursue the matter further through additional comparisons among treatment effects. For cases, like the present one, where such comparisons cannot be firmly planned prior to the experiment, a number of procedures for "post-hoc" or "a posteriori" comparisons among groups have been devised. The most conservative of these procedures is the Scheffe, which allows for comparisons among all possible pairs of treatment groups, with the probability of a Type I error among all of the tests
set at a predetermined level. The Scheffe method is said to be less sensitive to violations of normality assumptions and of homogeneity of variance assumptions, and, unlike most of the other methods, is suitable for use with unequal n for the treatment groups (Myers, 1972, p. 365). As noted, it is also quite conservative, and a difference must be much larger, to show significance, than under other methods (Winer, 1971, p. 201). For all of these reasons, the Scheffe method seems acceptable here, although one might argue that since the procedure was devised for use in true experimental designs, it is inappropriate for use in designs, such as the present one, which are not truly experimental. The response to such an argument, in addition to the reasons given just above, is that the method is not being used blindly here; it is merely a way of substantiating judgements which can be made from perusing the data, concerning the divergence of the business and government organizations, and pointing out instances of very sharp divergence. The main problems resulting from absence of a true experimental design are the difficulties in ruling out alternative explanations, and this problem will be addressed in the next chapter. Finally it might be noted that reputable scholars in organization behavior have seen fit to apply the Scheffe procedure in designs which were not truly experimental (House and Dessler, 1974, p. 26).

After this introduction, the results of the Scheffe procedure for the satisfaction subscales can be stated briefly. The SPSS program for the procedure reports the results in the form of homogeneous subsets which can be formed from the set of treatment
groups—the subsets which do not differ significantly from each other, but for which there are significant differences from the other groups (Nie, et al, 1975, p. 431-432). The question of interest for the present is whether the government groups separate from the business groups in such an analysis.

For the Satisfaction with Coworkers scale, the Scheffe procedure shows no significant difference between any of the groups (organizations), and groups them all as one homogeneous subset. A less conservative procedure (the Duncan method) also reflects the overlap between government and business organizations, and fails to separate the two. For the Satisfaction with Promotion scale, the Scheffe procedure indicates that Organization 6 does not differ significantly from the five government organizations, while Organization 2 does not differ significantly from the four business organizations. The less conservative Duncan procedure actually separates the government and business organizations into two homogeneous subsets (not significantly different from each other, but each significantly different from each of the business organizations). However, we are only accepting the conservative Scheffe results for present purposes, and they make evident what is clear from perusal of the data: Organization 2 tends in the direction of the business organizations on this measure, and Organization 6 is lower than the other business organizations, in the direction of the scores for government organizations. While the mean difference for the government and business groups, taken together as total groups, is quite significant, one might conclude
that some attribute of the organization, or associated with it, is rivaling the government-business distinction in its impact on satisfaction with promotion.

Thus, this Scheffe procedure helps to confirm impressions one might draw from the data. It will be reported for other measures, where the overall F is significant, in the effort to pinpoint those measures on which the government-business distinctions appear to be greatest.

Hypothesis 1.B. concerned differences between government and business managers on scales of motivation (1.B.1.), interest in innovation (1.B.2.), and job involvement (1.B.3.). As indicated on Table 5, differences significant at the .01 level were not found for any of these variables. The mean difference for interest in innovation was significant at the .03 level, but, as noted earlier, since the high degrees of freedom make even very slight differences show up as statistically significant, this is not considered an acceptable level of significance for present purposes. The very low reliability score for this scale (Table 4: $r_{xx} = .30$) is further justification for not making much of this difference.

Hypothesis 1.C. predicted lower mean responses by government managers to scales of effort-performance (El) and performance-reward expectancies, except in the case of items concerning "meaningful public service." Table 5 indicates a finding of no significant difference on the El scale. As mentioned in the last chapter, the El items were broken into a scale including those that relate performance to extrinsic rewards (El-EXT) and another scale of
those relating performance to intrinsic rewards (EI1-INT). Because of their questionable applicability to business managers, the expectancy items relating performance to involvement in "meaningful public service" were kept separate, for entirely separate testing and consideration. Table 5 shows a highly significant difference for the EI1-EXT items (p < .000), a difference for the EI1-INT scale which is significant at an unacceptable level (p < .05), and a highly significant difference for the EI1-"meaningful public service" items. Table 6 indicates that each government organization is lower than each business organization on the EI1-EXT items, and each is higher than each business organization on the EI1 items pertaining to meaningful public service.

For the EI1-EXT measure, these differences do not show up overwhelmingly in the Scheffe procedures. While the method results in no significant differences between government organizations, it does not show significant differences between several government and several business organizations. So, even though each government organization is lower on this measure than each business organization, several of the differences between pairs of business and government organizations are not large enough to show up as significant under the conservative Scheffe procedure.

As for the EI1-"meaningful public service" items, here also several of the higher means for business organizations are not significantly different from government organizations under the Scheffe method.
TABLE 7: Correlation Matrix and Regression Equations for Expectancy Scales and Scales of Motivation, Interest in Innovation, and Job Involvement.

<table>
<thead>
<tr>
<th>Mean Values</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.59</td>
<td>X₁ = EI</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.31</td>
<td>X₂ = EI - EXT</td>
<td>0.248</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.77</td>
<td>X₃ = EI - INT</td>
<td>0.578</td>
<td>0.362</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.44</td>
<td>X₄ = Motivation</td>
<td>0.110</td>
<td>0.129</td>
<td>0.249</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>4.29</td>
<td>X₅ = Interest in Innovation</td>
<td>0.053</td>
<td>0.083</td>
<td>0.081</td>
<td>0.316</td>
<td>1.0</td>
</tr>
<tr>
<td>4.42</td>
<td>X₆ = Job Involvement</td>
<td>0.134</td>
<td>0.193</td>
<td>0.259</td>
<td>-0.007</td>
<td>0.169</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Ｅ</th>
<th>ＥⅠ</th>
<th>ＥⅠ-EXT</th>
<th>ＥⅠ-INT</th>
<th>Ｒ²</th>
<th>Ｆ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>2.89</td>
<td>-0.05</td>
<td>0.06</td>
<td>0.38</td>
<td>0.06</td>
<td>6.34</td>
</tr>
<tr>
<td></td>
<td>(t=0.75)</td>
<td>(0.75)</td>
<td>(3.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest in Innovation</td>
<td>3.62</td>
<td>F &lt; 0.01</td>
<td>0.10</td>
<td>0.11</td>
<td>0.010</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>(0.95)</td>
<td>(0.72)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Involvement</td>
<td>9.19</td>
<td>-0.16</td>
<td>0.54</td>
<td>1.30</td>
<td>0.08</td>
<td>7.68</td>
</tr>
<tr>
<td></td>
<td>(0.40)</td>
<td>(1.83)</td>
<td>(3.14)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 1.D. predicted that regression analysis would show that the expectancy scales to be positively related to the scales of motivation involvement, and interest in innovation (1.D.1.) and that the E11-INT scale would be more positively related to job involvement than would the other expectancy scales. Table 7 shows that this hypothesis was generally unsuccessful. (While Table 7 reports much nonsignificant data, that data is reported in detail because of the assumption, here and elsewhere, that research of an exploratory or developmental nature should be reported in considerable detail, for evaluation by others who might wish to improve upon it). Although Table 7 reflects some points where coefficients were significantly different from zero, it indicates that the expectancy variables accounted for little of the variance in the dependent variables, either individually or in regression equations. E11-INT scale did emerge as the strongest correlate of job involvement, as expected. The E11-INT scale also was the strongest "predictor" of motivation. Some implications of these findings, and of the general lack of success of the regression analysis, will be discussed in the next chapter.

Reward Preference Data. As described in the previous chapter, respondents were asked to rate the importance of various work-related rewards. Although we have rejected formulations of expectancy theory which call for multiplication of such responses by expectancy items, it is useful to have some indication, albeit crude, or respondents' valuations of rewards used in expectancy items. Table 8 presents mean responses to the reward preference items by government and
TABLE 8: Means and Standard Deviations of Responses on Reward Preference Items by Government and Business Managers, and Results of Significance Tests on Differences.

<table>
<thead>
<tr>
<th>Item</th>
<th>Government</th>
<th>Business</th>
<th>Significance Tests*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recognition from your organization</td>
<td>Mn=5.57 (s.d.=1.16)</td>
<td>5.61 (1.14)</td>
<td>T=-0.28 (df=270)</td>
</tr>
<tr>
<td>2. Higher pay than you now make.</td>
<td>5.19 (1.17)</td>
<td>5.90 (0.99)</td>
<td>T=-3.41 (df=271) p &lt; .001</td>
</tr>
<tr>
<td>3. A promotion.</td>
<td>5.19 (1.43)</td>
<td>5.48 (1.39)</td>
<td>T=-1.64 (df=271)</td>
</tr>
<tr>
<td>4. Job security</td>
<td>5.75 (1.23)</td>
<td>5.63 (1.32)</td>
<td>T= 0.79 (df=271)</td>
</tr>
<tr>
<td>5. Respect and friendliness from your colleagues and coworkers.</td>
<td>5.81 (1.01)</td>
<td>5.66 (1.23)</td>
<td>T= 1.06 (df=271)</td>
</tr>
<tr>
<td>6. A sense of worthwhile accomplishment in your work.</td>
<td>6.59 (0.68)</td>
<td>6.52 (0.89)</td>
<td>T= 0.68 (df=225.4)</td>
</tr>
<tr>
<td>7. Development of your abilities through your work.</td>
<td>6.09 (0.89)</td>
<td>6.18 (0.88)</td>
<td>T=-0.91 (df=271)</td>
</tr>
<tr>
<td>8. A good feeling about yourself, as a result of your work.</td>
<td>6.40 (0.72)</td>
<td>6.28 (1.09)</td>
<td>T= 1.03 (df=204.5)</td>
</tr>
<tr>
<td>9. Engaging in meaningful public service</td>
<td>5.79 (1.05)</td>
<td>4.47 (1.41)</td>
<td>T= 8.70 (df=222.6) p &lt; .000</td>
</tr>
<tr>
<td>10. Making a good deal of money.</td>
<td>4.72 (1.20)</td>
<td>5.16 (1.26)</td>
<td>T= 2.96 (df=271) p &lt; .003</td>
</tr>
<tr>
<td>11. Doing work that is helpful to other people</td>
<td>5.93 (1.01)</td>
<td>5.49 (1.31)</td>
<td>T= 3.11 (df=270) p &lt; .002</td>
</tr>
</tbody>
</table>
TABLE 8 (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Government</th>
<th>Business</th>
<th>Significance Tests*</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Making important decisions and exerting an important influence on your organization.</td>
<td>5.69 (1.13)</td>
<td>5.89 (1.03)</td>
<td>T = -1.47 (df = 270)</td>
</tr>
<tr>
<td>13. Achieving status and prestige</td>
<td>4.52 (1.37)</td>
<td>4.92 (1.32)</td>
<td>T = -2.45 (df = 270) p &lt; .015</td>
</tr>
<tr>
<td>14. Working for a capable superior or supervisor</td>
<td>6.17 (1.04)</td>
<td>6.12 (1.06)</td>
<td>T = 0.41 (df = 270)</td>
</tr>
</tbody>
</table>

Note: Items were scored from 1 = "extremely unimportant" to 7 = "extremely important." See text for discussion of appropriateness of applying T-test to this data.

* Significant differences indicated by probability statements. Fractional degrees of freedom indicate comparisons for which separate variance estimate was used.
business managers, and the results of T-tests on those differences. As indicated on the table, business managers were higher than govern­
ment managers, to a statistically significant degree, in average rated importance of making "higher pay than you now make" (#2), and "making a good deal of money" (#10). To a degree that approached significance at the .01 level, business managers were higher in their ratings of the importance of "achieving status and prestige" (#13). Government managers were significantly higher on mean rated importance of "en­
gaging in meaningful public service" (#9), and "doing work that is helpful to other people" (#11). The differences between the means, and the size of the T's, were not large, except in the case of the "meaningful public service" question. Implications of these findings will be discussed in the next chapter.

It should be noted briefly that application of parametric T-
tests to this data may not be entirely appropriate--most responses to the one-item scales fell in the higher scores, and the data would be more appropriately considered nonparametric. However, nonparametric tests available in the SPSS package (Chi-Square, Eta, etc.) indicate highly significant differences for the same comparisons where the T-tests indicate them. So, the most appropriate non­
parametric test, the Kolmogorov-Smirnov test, although somewhat less powerful than the T-test (Mueller, et al, 1970, p. 426-428), would almost certainly show a similar pattern of significant results. Since, throughout this project, interpretation of "statistical significance" will be cautious and conservative, there is little utility in applying the Kolmogorov-Smirnov test, rather than the T.
General Proposition 2 concerned the effect of personnel procedures, and was refined into hypotheses concerning differences in government and business managers on a scale of "flexibility of personnel procedures," and the relation of those responses to responses on the Ell-EXT scale. Table 5 indicates a highly significant difference, as hypothesized, in the direction of less "flexibility" perceived by government managers (note that this scale is scored such that a higher mean indicates lower flexibility). Table 6 indicates that the mean for managers in each government organization is higher than the mean for managers in each business organization. Concerning the relation of the flexibility scale to Ell-EXT, the simple correlation between the two scales, for the total sample, is -0.51 (p < .001, df = 274). This indicates a fairly strong relationship between perceptions concerning the flexibility of personnel procedures (particularly with regard to reward practices) and the responses on the Ell-EXT items.

The strength of the government-business differences on this personnel procedures measure are reflected in the results of the Scheffe tests. The government and business organizations separate into two homogeneous subsets, each government organization significantly higher on this measure than each business organization, even under this very conservative procedure.

General Proposition 3 led to hypotheses predicting differences in responses on questions concerning organizational formalization, goal clarity, role conflict and ambiguity. Also important here are comparisons of responses on questions about task characteristics,
and analysis of the relation of all the variables just mentioned to responses on Expectancy scales.

In light of the high frequency of assertions about unclear goals and performance criteria in government, and related assumptions, it is quite interesting that so few of these hypotheses were substantiated by results. Table 5 shows that, even though small mean differences were showing up as significant or marginally so, there were no significant differences between the government and business managers on measures of perceived organizational goal clarity (Hypothesis 3.A.), role conflict and role ambiguity (Hypothesis 3.C.), and perceived task difficulty and perceived task variability.

Tests of Hypothesis 3.B. did result in significant differences on several of the formalization subscales (rule observation, rule manual, and specificity of job descriptions), but in the direction of higher formalization perceived by government managers. This is, of course, opposite to the direction hypothesized, although not surprising or counterintuitive. Rather, it could be viewed as consistent with the general stereotype of more "bureaucracy" in government.

Under the Scheffe procedures, no significant differences between organizational means for the rule observation measure were found. (This is possible, in spite of the significant overall F, because of the conservative nature of the Scheffe method). The overlaps between government and business organizations on mean score on the specification of jobs measure results, of course, in the failure of the Scheffe method to separate the two types of organizations.
Hypothesis 3.D. predicted that regression analysis would show that the "information component" variables would be significantly related to the expectancy scales, and that the flexibility of personnel procedures scale would also show significant relationships to the expectancy scales. Table 9 shows the results of the regression of each of the expectancy scales on the information component variables and the personnel procedure scale. While a number of coefficients are significantly different from zero, the $R^2$ statistics for the three equations indicate that this set of independent variables does not account for a large amount of the variance in any of the expectancy scales. (Stepwise regression procedures indicate that the $R^2$ statistics could not be raised using only a subset of the independent variables.) However, for this type of research, the fairly high $R^2$ for the Ell-EXT variable is worthy of some note. It is obviously due to the effect of the flexibility of personnel procedures measure and the role ambiguity measure. As noted earlier, the simple correlation between Ell-EXT and the "Flexibility..." scale is -0.50. The simple correlation between role ambiguity and Ell-EXT is -0.42. The implications of these findings, and of the results of the regression analyses in general, will be discussed in the next chapter.

Correlations Among Measures Used in the Research Table 9 does not present a correlation matrix for the regressions of the expectancy variables on the information component variables because the matrix is simply too extensive for presentation here. However, there are a number of significant correlations among
TABLE 9: Regression Equations for Expectancy Variables

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formalization Subscales</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>3.45</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>E11-EXT</td>
<td>4.65</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>E11-INT</td>
<td>3.52</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Independent Variables (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Flexibility of Personnel Procedures</th>
<th>Task Variability</th>
<th>Task Difficulty</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>0.10</td>
<td>0.06</td>
<td>F &lt; .01</td>
<td>.08</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>(1.96)*</td>
<td>(1.00)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E11-EXT</td>
<td>-0.31</td>
<td>0.07</td>
<td>0.01</td>
<td>.38</td>
<td>18.0</td>
</tr>
<tr>
<td></td>
<td>(8.92)**</td>
<td>(1.68)</td>
<td>(0.19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E11-INT</td>
<td>0.06</td>
<td>0.10</td>
<td>-0.02</td>
<td>.13</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>(1.69)</td>
<td>(2.37)*</td>
<td>(0.42)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001
measures used in the research which should be reported, so
Appendix E presents a matrix, with levels of significance, of
correlations between results of all scales used in this research,
and some additional variables. Pursuit of the primary objectives
of this project (indicated by the hypotheses stated) precludes full
attention to many of the correlations. However, a number of those
results, in addition to those already noted, may be of use and
interest for other scholars, and for further efforts by this writer.
For example, the simple r for role ambiguity and role conflict was
0.44. For role ambiguity and specification of jobs, r = -0.41.
For role ambiguity and perceived organizational goal clarity,
r = -0.53. For task difficulty and task variability, r = 0.41.

General Summary of Results of Statistical Tests. While
their implications will not be elaborated until the next chapter,
it is useful to reiterate, briefly, some of the major findings of
the statistical tests. Obviously, the most convincing separation
of the government and business samples is in their responses, as
groups and by organization, on the "flexibility of personnel
procedures" scale. Government managers' responses indicated that
they perceived less flexibility, or a greater rigidity, in personnel
procedures affecting administration of important rewards and outcomes
to managers. Government managers were also significantly higher
on the Expectancy II--"meaningful public service" items, although
dubious applicability of these items to business managers complicates
interpretation of this difference. There were also significantly
lower scores by the government managers on the Expectancy II-extrinsic reward scales and the Satisfaction with Promotion scale, although the government and business organizations did not clearly separate on these measures, under the conservative Scheffe procedures. Other significant differences—lower scores by government managers on the satisfaction with coworkers scale, and higher scores on several of the formalization subscales—are interesting, but are not as large as the others. The T's and F's are smaller, and there is more overlap among government and business organizations.

In addition to simple differences between government and business, the data analysis revealed some interesting interrelationships among the variables. While the regression of the motivation, interest in innovation, and job involvement scales on the expectancy scales was not convincing (especially in view of the low reliability of the motivation and interest in innovation scales), the EI II-intrinsic rewards scale did emerge as the strongest correlate of job involvement in that group of variables. The regressions of the expectancy scales on the "information component" variables pointed up "flexibility of personnel procedures" as a strong correlate of EI II-extrinsic rewards, and role ambiguity as a fairly strong correlate. As well, there are a number of interesting correlations between variables, discussion of which is not within the purview of this project.

Having presented the data analysis with emphasis on the findings, per se, with relative inattention to the interpretation of them,
we can now begin such efforts at interpretation. The next chapter will give attention to the implications of the findings, and to more general conclusions for the study as a whole.
CHAPTER VIII

CONCLUSIONS AND DISCUSSION OF RESEARCH RESULTS

The previous chapter was concerned primarily with presenting the results of the hypothesis tests. This chapter will give interpretations of those results. First, some general considerations about interpreting the findings will be discussed. Then there will be an overview of the major conclusions, followed by a more thorough discussion of the interpretation of results for the specific propositions and hypotheses. This discussion will be relatively conservative, in its effort to stay fairly close to the data and maintain caution in drawing conclusions. After that, a less cautious discussion of the results, involving more speculation and broader inferential leaps, will be presented; it will include an effort to relate major conclusions to broad questions raised in earlier chapters and to other literature in public administration.

General Considerations in Interpretation of the Findings

Before turning to the interpretation of the findings, it is important to consider some points which apply in general to the process of drawing conclusions from the data which has been reported.

On "obviousness" of findings. Since certain of the findings tend to corroborate assertions made frequently in the literature, some persons might argue that the findings are "obvious" and therefore of
little value. For example, the findings on differences in flexibility of personnel procedures tend to corroborate the assertions made by Macy (see Chapter III) concerning the frequency of such complaints by public administrators. Some might complain, then, that the findings tell us nothing we did not already know. Such complaints overlook the importance of establishing an empirical and systematic base for our knowledge in public administration, and the usefulness of empirical substantiation of armchair observations. Significantly, it would have been just as "obvious," from the frequency of such assertions, if the comparisons relevant to role ambiguity and organizational goal clarity had shown significant differences—which, of course, they did not. Moreover, such complaints would reflect ignorance of the discussion of this problem of the seeming obviousness of many social scientific findings; this problem frequently arises because the complexity of social phenomena often makes them amenable to multiple plausible explanations, such that the one explanation which gets confirmed seems "obvious" (Jones and Gerard, 1967, pp. 33-35). This point is very important in introducing empirical findings in the field of public administration, but these comments are adequate to resolve it for the remainder of this discussion.

Methodological considerations. There are certain basic doubts about the conclusions to be drawn from this data, which are best resolved by general comments at the outset, rather than in reiteration in the discussion. First, there are some questions concerning validity of the findings. The data is all based on self-report, it may have been subject to social desirability effects, and systematic validation
of the scale responses was not possible. In response, it can be argued that self-report is perhaps the best way, if not the only way, to collect some of the data involved, such as managers' perceptions concerning connections between performance and rewards. As for social desirability effects, the anonymity of the questionnaires seems to have avoided this problem, as indicated by numerous responses which were quite unflattering to the organizations represented. As for validity, in various senses, this is a particularly difficult problem but there is some reassurance in the fact that the findings tend to be quite reasonable and logical. It is conceivable that there was a validity problem in that the questions might have had different meanings for persons in different organizations (for example, by the attachment of differing implications to the same words, such as "work" or "promotion"). This matter was addressed as carefully as possible in the interviews with organizational representatives, and the fairly simple wording of the questions should have contributed to prevention of such difficulties.

Still another potential source of confoundment is the absence of a truly experimental design; the "treatments"--employment as a manager in a government or business organization--were not directly administered by the researcher, obviously, and the subjects were not randomly assigned to conditions. As Kerlinger (1973) notes, absence of such provisions leaves open the possibility of numerous alternative explanations for findings. A number of factors might operate systematically to produce the differences found. While this is a potential source of confusion in interpretation, it is also noteworthy that most
conceivable alternative explanations of the present findings nevertheless involve suggestions of differences in government and business managers, or their organizations. Nevertheless, the clear specification of those differences is the main aim, and several alternative hypotheses will have to be dealt with by applying judgement to the findings.

A final matter which is of major concern as a general methodological consideration is the effect of possible inadequacies of measures used in testing hypotheses. It may be that some of the failures to find government-business differences on certain of the measures do not necessarily reflect absence of such differences, but inadequacy of the measures. As elaborated below, a major example in this study is the Patchen scale of motivation, which leaves uncertainty as to whether it fails to differentiate government and business managers due to its inadequacies as an operationalization of motivation, or due to the actual absence of such differences.

In conclusion, concerning all of these points, they must be addressed in the name of responsible scholarship, but they do not jeopardize the claim that this research represents a useful and interesting contribution to the literature. The discussion to follow should demonstrate that, especially in view of the state of development of the field, the results are quite meaningful and informative.
Overview of Major Conclusions

Before going through the individual hypotheses for interpretation of their results, it is useful to present a summary of the major conclusions to be drawn from the results reported in the last chapter. While these points will require elaboration and further justification later, it should be useful to the reader to have them drawn together here. First, interpreting the results fairly conservatively, one might draw the following conclusions:

1) The major conclusion supported by the findings concerns managers' perceptions about the personnel procedures governing various important incentives or rewards in their organizations, such as pay, promotion, and removal (firing). The responses to the "flexibility of personnel procedures" scale support the conclusion that government managers perceive greater constraints on the administration of those incentives to managers in their organizations, and, concommitantly, greater constraints on the association of such incentives with performance. One might further argue that this perception by government managers, of less flexibility in personnel procedures affecting important incentives, reflects the impact of civil service procedures on management in government organizations.

2) Closely related are the lower average scores by government managers on the Expectancy II scales concerning extrinsic rewards, which indicate perceptions, on the part of government managers, of weaker connections between performance in work and various externally-mediated incentives, such as pay, promotion, recognition, job security, and friendliness and respect of coworkers. The lower score on this
scale can also be taken as support for the conclusions about the impact of the civil service system, even though the scale contains items not directly affected by the formal personnel procedures and requirements. The high correlation between this EII-extrinsic scale and the flexibility of personnel procedures scale supports a conclusion that the EII-extrinsic responses are strongly related to the perceptions concerning personnel procedures; there is justification, then, for saying that the perception of greater rigidity of personnel procedures is closely related to feelings of a weaker relationship between one's own performance and resultant rewards.

3) Reasoning quite cautiously, one would have to say that the effects of these differences in perceived reward contingencies are not clear. Such differences would suggest lower motivation and performance on the part of government managers. Comparisons on self-reported motivation, job involvement, and interest in innovation showed no differences, however. In addition, the government managers showed lower valuation of financial rewards—one of the incentives they perceived as less related to performance—and they were higher on their expectancies concerning the "meaningful public service" reward. For these and other reasons, if one were drawing conclusions cautiously, one would have to say that these data are inconclusive as to any differences in motivation and performance as a result of differences in expectancies.

4) As noted, the two groups of managers show different valuations of certain incentives. In spite of a number of methodological doubts, these might be taken as indications of differences between the two
types—especially in view of similar findings in previous research.

5) Lower scores by the government managers on satisfaction with promotion and with coworkers is generally consistent with a number of previous findings of lower satisfaction on the part of government managers. The findings, particularly the stronger "satisfaction with promotion" result, might be taken as further indications of a general tendency toward lower satisfaction on the part of government employees.

6) There was no substantiation in these data for the frequent observations about vague and conflicting goals, performance objectives, evaluation criteria, individual responsibilities, etc. This finding—or lack of one—is interesting, in view of the frequency of such assertions in the literature. Inadequacy of the present techniques for such tests must be considered, but the results at least suggest the need for refinement of these assertions along various lines, and suggest that perceived vagueness of goals, responsibilities, etc., is not endemic to government organizations.

While the foregoing conclusions might be drawn, even if one is being cautious, one might venture somewhat farther from the data in arguing their implications. It will be argued below that the government-business differences in perceptions of personnel procedures, and in perceptions of contingencies of extrinsic incentives, are reflections of an enduring, general difference between most government and most business organizations in the United States. It will also be argued that government organizations apparently face particular difficulties in motivating employees and maintaining their satisfaction. Another conclusion is that differences in employee perceptions as to the
clarity and inconsistency of organizational goals, personal responsibilities, and so on, are not likely to appear as a general difference between government and business organizations; at least up through the middle management level, such perceptions should be influenced by factors other than those associated with the government-business distinction. While refined research might pursue this issue further, this result indicates a commonality among the two types of organizations, which will be discussed later.

Both the more conservative and the less cautious conclusions point to some important directions for future research. For example, the significant findings justify efforts at extension and replication, aimed at further confirmation of their generalizability. The discussion of the generalizability of the present findings, in turn, points up the need for more systematic inquiry into the differences between government organizations themselves--by level of government, by technology, or by other attributes. These and other research directions are suggested below.

Review of Conclusions on Hypotheses

There are a number of points to be made in elaboration and extension of the preceding overview, including points about complexities in interpretation, alternative explanations, and other matters. To this end, it is best to address the propositions and hypotheses individually, in the order of their original presentation. This discussion will remain fairly conservative and close to the data. Later sections will take up broader, somewhat more speculative interpretations, and conclusions as to significance of the present findings for
general questions raised in earlier chapters. Implications for future research will also be taken up later. The present review of hypotheses will, of course, delve into these latter topics (broader interpretations, research directions) at several points, but the more thorough and systematic treatment of them will come later. As noted, then, the present discussion will begin with the first of the general propositions.

**General Proposition 1**

Proposition 1 was the source of hypotheses which led to indications of some differences between the government and business samples which are relevant to motivation and incentives.

**Hypothesis 1.A: Differences in responses on satisfaction scales.**

Results for this hypothesis indicated lower satisfaction with coworkers and with promotion for government managers. On the other scales, there were no significant differences, although the satisfaction with supervision responses might be considered to have approached significance (p. <.06) in the direction of lower satisfaction for government managers. In a general way, these findings of lower satisfaction on the part of government managers are consistent with the set of studies reviewed in Chapter III, all of which found lower satisfaction scores by government managers, although there was variation in the measures used. This variation in measures used is the reason for saying the present finding is consistent with previous ones "in a general way."

While there are limits on the generalizability of any of these individual studies, including the present one, it is quite significant
that a number of studies in a number of contexts have all found similar results.

Even reasoning quite cautiously, one might be swayed by the general consistency of results reported for a number of studies in a number of settings. The set of results supports the suggestion that government managers in the United States tend to be somewhat less satisfied with various aspects of their work. It may be that government organizations, due to various constraints or exigencies, are simply less able to satisfy their managers along various lines, which may vary from place to place. On the other hand, the array of findings of lower satisfaction among government managers may reflect the impact of the bad stereotype of government organizations and employees which apparently exists among many people in the United States (see Chapter I, and Chapter III on Kilpatrick, et al). Government managers may share this stereotype, or may be sensitive to it, and it may color their attitudes toward their jobs. This tendency of researchers to find lower satisfaction by government managers could be said to reflect an "incentive problem" in government, in that lower satisfaction should reflect lower levels of important incentives. In Chapter IV it was noted that there tends to be a distinction in the literature between incentives for joining and remaining with an organization, on the one hand, and incentives for hard work and productivity within the organizations, on the other; this project, it was said, is most concerned with the latter. In Chapter VI it was mentioned that satisfaction, in various conceptions, is often found to be related to turnover and absenteeism, but seldom to productivity. One can put these
two points together and conclude that if the lower satisfaction of
government managers represents an "incentives problem," it should be
mainly a problem in incentives for retention, and may well show no re-
lation to motivation, effort, and productivity. However, one might
pursue in further research a more likely relationship— that govern-
ment managers tend to be less satisfied, and this tends to be related
to a greater willingness to leave their jobs (as found by Kilpatrick,
et al, 1964). This tendency for satisfaction to be more closely re-
lated to retention than performance, together with the emphasis in
this project on incentives to effort, is the reason that the design
involves relatively little attention to means of explaining the dif-
ferences on satisfaction.

In addition to this question of the significance of still another
finding of different responses on satisfaction scales, there are im-
portant questions as to the specific findings of the present project
(differences on satisfaction with promotion and with coworkers). Such
interpretations are made difficult by the conceptual mixing within the
J.D.I. scales. For example, a look at the scale for satisfaction with
promotion will reveal that the scale has items concerning both oppor-
tunities for promotion, and the fairness and performance-relatedness
of promotion. This makes it difficult to sort out exactly what the
lower promotion satisfaction scores are indicating—less opportunity
or less fairness? (It might also be noted that this is also a problem
for the interpretation mentioned in the preceding paragraph.) Most
of the items on the scale concern chances for promotions—opportunities,
regularity of promotions, etc.—and this raises the possibility that
government managers in this sample tend to be in positions with limited advancement opportunities. One possibility is that, since they tend to be older (as reported earlier), they see themselves as approaching, or holding, the highest level they hope to achieve. This interpretation is supported by a significant negative correlation between age and satisfaction with promotion ($r = -.22, p < .001$). However, even though this correlation is highly significant in a statistical sense, it does not account for a great deal of the variance, and one would expect that something else is influencing the scores.

Another explanation, suggested by comments of organizational representatives before and after the gathering of the data (although they were not aware of this finding at the time), and suggested by comments on a number of questionnaires returned by government managers, is that middle managers in the state government organizations may face limited advancement opportunities due to permeation of the promotion process by political factors. For example, one government respondent commented on his questionnaire that he was as far as he could go without getting into politics. One organizational representative mentioned in the preliminary interview that his advancement opportunities would be severely limited unless there were a change in administration to the other political party. This interpretation is not firmly substantiated by the available data, but raises interesting questions for pursuit in future research efforts—do some, or most, government managers see their advancement opportunities as limited by the political process? The question is related to a broader issue which has received comment, but little empirical attention in public administration
the implications of the presence, in many government organizations, of political appointees at highest levels, with more permanent subordinate components consisting of career types. The issue has implications not just for incentives and motivation, but for such matters as innovation and change (i.e., long-run vs. short-term political objectives, and other matters). Still another issue is raised; the degree of political permeation, in the form of patronage and other forms, of various organizational processes may be a major variable to be considered in research on incentives and motivation in the public sector. It may also be an important variable for consideration in efforts to devise typologies of government organizations or jurisdictions.

While all these suggestions are put forward as valuable and interesting, there is nevertheless a drawback to this "political ceiling" interpretation of the present results. The average score for promotion satisfaction was also quite low for the federal government managers (Organization 5), who are much better insulated from the political environment than are the state government managers. This points to the conclusion that the satisfaction with promotion scores reflect the impact of the rigid personnel procedures, the perception of which is discussed in other sections. The government managers may see their prospects for promotion, as well as the fairness and performance-relatedness of the promotion process, as limited by excessively rigid advancement procedures and structures. Neither this nor the preceding interpretation is clearly substantiated by the data, however. The finding of the strong government-business difference on satisfaction with promotion is nevertheless a very important finding, which has
worrisome, but not entirely clear, implications for management in the public sector. Suggestions as to these implications will be presented later.

As for the lower responses by government managers on the satisfaction with coworkers scale, this difference was not so great as the previous one. Yet the impulse to take it rather lightly should be resisted, since it replicates a similar finding by Buchanan (see Chapter III). The finding is consistent with some of the assertions of Buchanan and of Golembiewski, noted in earlier chapters, to the effect that government organizations tend to include a greater diversity of individuals and groups. It is also consistent with perception of a weaker connection between extrinsic rewards (particularly firing and promotion) and performance, and of greater rigidity of personnel procedures governing the administration of such rewards. The feeling that incentives such as promotion, pay, and firing are not tied to performance is quite consistent with a lower evaluation of one's peers, and there could be a causal relationship. (I feel that my peers are of low calibre, therefore their promotion to the lofty status of being my equal, or their receipt of the same amount of pay as I, indicates that such rewards are not related to performance). Under the criteria established early on, this finding must be treated as relatively weak or unconvincing. However, in view of the replication of Buchanan's finding, there is justification for further research on interpersonal perceptions in government organizations.

The failure of the other satisfaction scales to show differences should also be noted as an indication that circumstances are not
necessarily abysmal in government organizations. In particular, the satisfaction with work scale indicated that the government managers were not substantially lower in their feelings as to how stimulating, respected, etc. their work is.

Finally, what might be said of the prospects for generalization to other organizations of the differences on the two satisfaction scales? On the basis of the Scheffe procedures reported earlier, the difference on satisfaction with promotion is strong enough to argue that one should expect to find this difference in most samples of government and business organizations. The Scheffe procedures could not clearly separate all government from all business organizations, and this suggests a strong impact of factors associated with the organization, which are independent of the government-business distinction. Nevertheless, if one were pressed for predictions as to which differences would show up in additional samples, the data supports the inclusion of this difference. As for the satisfaction with coworkers scale, the overlap in scores among business and government organizations would suggest greater impact of organizational factors than of factors associated with the government-business distinction. The similar finding by Buchanan justifies recommendation of further inquiry into this, and closely-related matters, but the present data are inconclusive, under the decision criteria adopted here. Here, also, arises the difficult problem of saying what we mean by a "difference," which is discussed elsewhere. By a government-business difference, do we mean all government organizations are different from all business organizations, do we mean that they tend to be different—
most are lower or higher, etc., or do we mean that they are different on average (although most may be higher, on average they are lower)? Because of the small number of organizations represented here, we are accepting those instances where the managers from each government organization are grouping separately, as the points where one can best predict the managers from other samples would show differences. Under these criteria, the finding on satisfaction with coworkers is inconclusive. As noted, however, broader, somewhat more speculative interpretations of these findings will be mentioned later.

Hypothesis 1. B: No differences on scales relevant to "motivation."

Hypothesis 1. B. led to no adequately significant differences on the scales of motivation, interest in innovation, and job involvement. As indicated by the reliability data reported in the last chapter, the first two of these might be rejected as inadequate scales of the proposed concepts. They might also be invalid as operationalizations of the concepts. These shortcomings admit some inconclusiveness into the effort at interpretation of the findings as a whole. The implications of these failures could be discussed at great length. However, to allow for attention to significant findings, let a few comments suffice. Although the scales of motivation and interest in innovation are apparently inadequate as coherent measures, and as operationalizations and valid measures of those complex and illusive concepts, the magnitude of responses on the items supports the conclusion that both government and business managers in general tend to feel that they work hard and to feel that they do not hesitate to propose and accept changes. At least, if they do not feel this way they are certainly unwilling to
admit it on a questionnaire such as the one used in this project. While the scales do not show coherence (interitem consistency) and do not differentiate well among groups, the preceding limited conclusion seems fully warranted.

The construction of adequate scales of "motivation" may be an insuperable problem, as indicated by the footnote concerning Prof. Guion's statement. The Patchen scale seems inappropriate for managers, in retrospect, since most tend to work hard, or to feel that they do, and are unlikely to feel that time drags. The Patchen scale asks how hard the respondent works relative to others in his/her organization, and therefore seems inappropriate for comparisons among organizations--one organization may simply have more hardworking people. If scales of something called "motivation" are attempted, such efforts would be most appropriate where there are ample opportunities for validation, especially in view of the likelihood that such responses will be subject to social desirability effects. As for the interest in innovation scale, it is more reasonable to expect that a scale of attitudes toward innovation could be successfully developed and used, and the failure of this scale should serve as impetus to development of more appropriate ones.

The results for the job involvement scale are quite interesting since Buchanan found a difference on this measure, while this study did not. As discussed earlier, Buchanan's scale was apparently confounded with items pertaining to organizational identification, and the present findings suggest that that confoundment may have been the cause of the differences between government and business managers,
which Buchanan reported. However, an element of doubt is introduced by our ignorance of the range of differences between state government organizations and managers, on the one hand, and federal managers and organizations, on the other. Perhaps the predominance of state government managers in this sample altered the result, although this seems unlikely, since Appendix E will show that managers in the federal government organization (#5) were highest of all in mean response of the involvement scale—a direction contrary to Buchanan's result.

More important is the evidence here casting doubt on Buchanan's interpretation of his involvement results as indications of an absence of "service ethic" on the part of government managers. Here, we have found no difference in responses on the involvement scale, but more importantly, results already reported and discussed below show that when asked specifically about public service, the government managers made responses which are not consistent with Buchanan's conclusions. They rate involvement in meaningful public service as more important than do business managers, and see a stronger relationship of their work to such an outcome. While the limitations of this finding are numerous, and will be discussed, these responses at least demonstrate that the determination of the existence of a service ethic is too complicated to be resolved by reference to job involvement scale responses.

These fairly limited and cautious conclusions, concerning the three scales chosen as indicators of motivation, seem clearly warranted by the data. More expensive conclusions involving these data will be discussed later.
Hypothesis 1.C: Differences on expectancy scales. This set of hypotheses led to findings of differences on expectancy scales, which were particularly significant for those items concerning extrinsic rewards and those concerning "meaningful public service." The main interpretation of the findings concerning extrinsic reward expectancies has been mentioned earlier, in the overview of conclusions. These results indicate that government managers perceive a weaker connection between their own performance and the achievement of various extrinsic incentives. As noted also, there are indications that these perceptions are, to a great extent, related to the inflexibility of personnel procedures in the government organizations—to the constraints under the civil service procedures.

In addition to the difference in responses on the expectancy items concerning extrinsic incentives, there was a difference on the items referring to intrinsic incentives. Government managers reported higher expectancies of achieving the intrinsic incentives. The difference was significant at only the .05 level, which is inadequate under the criteria chosen for this study. The finding, however, at least suggests the possibility that the constraints on government managers' access to extrinsic rewards are balanced by greater access to intrinsic incentives. This interpretation is consistent with the finding of higher scores by the government managers on the expectancy items referring to "meaningful public service," and with the absence of differences on the motivation, job involvement, and interest in innovation scales. The inadequate level of significance, however, together with the doubts about the public service items (to be discussed below) and
about two of the three "motivation" scales, cause this interpretation--
that government managers' motivation is maintained through intrinsic
and public service incentives--to remain inconclusive. The more free-
ranging conclusions to be presented later will actually deemphasize
this interpretation.

As mentioned, the "meaningful public service" items are subject
to some doubts, but they deserve serious consideration. These items
might have been considered as part of the scale referring to intrinsic
rewards, but they are idiosyncratic to this project (although the
wording was drawn from a published study, as described earlier). They
also seem heavily biased in favor of a difference between government
and business managers. For these reasons, they are treated separately,
as exploratory efforts. The higher ratings on these items by govern-
ment managers might be taken as an encouraging indication of a service
ethic on their parts, were it not for some troubling doubts. They
may be subject to much higher likelihood of social desirability re-
sponses, when answered by government managers--"public service" may
simply be more of a "buzzword" to them. Thus, the items may not ade-
quately tap the possible altruistic or public service motives of busi-
ness managers. Moreover, these results raise the difficult problem of
how to interpret the quantitative responses gathered in this research.
Granted they are higher, but in absolute terms, the means for the gov-
ernment managers in some organizations are not a great deal higher
than in some of the business organizations. Is there enough of a
difference to assure us that the government managers do feel a service
ethic, and regard feelings of involvement in provision of public
service as an important reward? Thus, there is some inconclusiveness in the results, but raising such doubts amounts to applying stringent academic criteria to the findings. The results are nevertheless important and useful. In advance of these findings, there was major uncertainty as to whether the items would show a difference, even though they seemed biased in that direction. One might easily have argued that many businessmen are highly motivated by public service motives. The success of these items in differentiating the two types of managers can be taken as a rough, preliminary suggestion that engagement in public service is an important incentive to many government managers. More importantly, the use of items similar to these might be applied to a more elaborate, well-designed effort to analyze the operation of these sorts of motives, and the corresponding incentives, in government and business organizations.

While broader interpretations will be mentioned later, some limited conclusions on the generalizability of these findings are appropriate now. The Scheffe procedures, and the criteria we are using in their interpretation, do not strongly support generalization of the results for the Expectancy II-extrinsic reward scales to other organizations. However, there were strong government-business differences on these items, with the mean for each government group lower than the mean for each business organization. In view of the inclusion on this scale of items concerning coworkers and recognition, it seems logical that organizational factors might have a major impact on the results, and one might hesitate to generalize to all government and business organizations. However, since the responses are correlated
with, and consistent with, the personnel procedure responses, as dis- 
cussed later, it seems very appropriate to argue that one would expect 
such differences to occur for most samples of government and business 
organizations and managers. As for the items concerning meaningful 
public service, the formative and exploratory nature of these items 
make it appropriate to emphasize the need for further investigation 
and refinement, with questions of generalizability held in abeyance.

**Hypothesis 1.D: Weak correlation between expectancy and motiva-
tion scales.** The expectancy scales, taken together, did not serve as 
strong correlates with the motivation, interest in innovation, and 
involvement scales. However, it should be of interest to some re-
searchers that the EII-intrinsic scales showed a significant correla-
tion to the job involvement measure, for this broad sample of managers.

**Reward preferences: Differences on financial and service in-
centives.** The government managers were significantly lower in their 
ratings of items concerning pecuniary incentives ("higher pay than you 
make" and "making a good deal of money") and were higher in their 
ratings of items concerning altruistic or public service incentives 
("engaging in meaningful public service" and "doing work that is help-
ful to other people"). These results are consistent with the argument 
that in general government managers should be more motivated by ser-
vice and altruistic motives, and less by pecuniary motives. Work in 
government provides, supposedly, more of the former than the latter, 
and one would expect persons to gravitate to those organizations and 
types of work that offer incentives most appealing to their motives. 
(Lawler, 1973; also see Chapter IV). The findings on ratings of
pecuniary rewards are also consistent with previous research (Lawler, 1971, p. 55).

As indicated previously these results complicate interpretation of the responses on the expectancy scales. Since we have no adequate measure of motivation or effort extended, we must try to draw any conclusions on those matters mainly from the expectancy items. Yet these reward preference responses complicate such efforts. Lower scores by government managers on the Expectancy II-extrinsic items might lead us to conclude that there are incentive problems, and probably motivation problems, in government organizations. Yet these reward preference responses, together with the results on the expectancy scales referring to public service and to intrinsic rewards, suggest that government managers may be responsive to different incentives. Thus, the differences in responses on the Expectancy II-extrinsic scale may not justify a conclusion that such differences have important implications for motivation, effort, morale, etc.

There are reasons not to draw this last inference, however. Most importantly, there are no differences in rated importance of other incentives which appear on the expectancy scales—notably promotion, job security, recognition, and friendliness and respect of coworkers. One might reason then, that perceived differences in access to such incentives through performance—as indicated by the differences on the Expectancy II-extrinsic scales—would suggest disturbing implications for motivation and the efficacy of the incentive system. In addition, there are so many limitations and complications in the interpretation of these reward preference items that one could discuss them at
tremendous length. For example, one might note the possible lack of independence between availability of an incentive and the rating of its importance. Thus, there is the possibility of a "sour grapes" effect, where an incentive is rated lower because it is not available, whereas it might be quite influential if made available. A number of such complications, which one encounters in measuring the valuations of rewards or incentives, and interpreting such measurements, are discussed in Chapter V in the consideration of expectancy theory. In view of these severe difficulties with this sort of data, one might be even more hesitant about letting these results dictate the interpretation of other findings. So, in making cautious interpretations, it seems most reasonable to conclude that the reward preference data serve as preliminary suggestions of points to be followed up in further research, concerning differences in government and business managers. They serve as basis for suggestions concerning the differential impact of pecuniary and public service motives (and associated incentives) in government and business organizations, but not yet as clear substantiation of such phenomena. Finally, while they raise doubts, they do not weigh heavily against an interpretation of the results on the Expectancy II-extrinsic scale as indicative of constraints on extrinsic incentives in government organizations which might well be assumed (although not firmly substantiated here) to be detrimental to motivation, effort, etc. Put more simply, the point is that, although we cannot prove it here, it certainly looks bad that government managers tend to see a weaker connection between performance and various extrinsic incentives.
General Proposition 2.

The second of the general "propositions" or research questions suggested differences between government and business managers in their perceptions concerning personnel procedures affecting their organizations, and these hypotheses led to the strongest, most convincing indications of government-business differences produced by this study. Another hypothesis under the proposition predicted a correlation between responses on the "flexibility of personnel procedures" scale and the expectancy II-extrinsic rewards scale; this hypothesis is also supported by the data.

The overview presented earlier has already indicated the main conclusions drawn from these findings: the government managers perceive greater constraints on the administration of important incentives (pay, promotion, removal), due to the personnel procedures governing their organizations; these perceptions reflect the impact of the civil service regulations governing these organizations, and are in turn related to the perceptions of weaker connections between performance and extrinsic incentives (as indicated by the EI1 scales).

Even within this limited set of conclusions, there are some major inferential leaps, which should be justified. First, the data provide no direct evidence that the differences on the questions about personnel procedures are due to government civil service regulations. However, the frequent observations concerning the effects of such regulations--discussed in Chapter III--justify this conclusion. It is hard to suggest an alternative explanation for the clear divergence between the two sets of managers on this matter. Second, there is a
highly significant correlation between the personnel procedure responses and the expectancy II-extrinsic scale, but that correlation is by no means perfect. Thus, while the civil service system may substantially effect perceptions about connections between performance and rewards, the relation is by no means absolute, and there is obviously considerable variation in individual reactions.

Of major importance to efforts at going beyond this limited set of conclusions are decisions as to the generalizability of these findings. Do the differences apply in general to business and government organizations? The more free-ranging conclusions to be discussed later will pursue the argument that they do, and will emphasize in particular the argument that these differences are relatively enduring, as opposed to transient. For now, however, it is important to proceed more carefully through some points which can be cited both in favor of, and in opposition to, the generalization of these conclusions to other government and business organizations.

The constraints on our ability to generalize are severe. All we really know, from the data, is that this set of five government organizations are distinct on this measure from these four business organizations. As noted in Chapter VI, we really have only limited information as to the representativeness of the sample, and such representativeness is fundamental to generalization. Moreover, the sample of government organizations (and managers) consists mostly of organizations from one particular state government. The wide variation in civil service systems might be cited as a reason for caution in generalization of these findings. For example, some authors have argued
the superiority of the federal civil service system over those of most states and localities, in providing for the association of incentives with performance (Savas and Ginsburg, 1973). There has been an incentive awards program under the federal system for some time, and this and other provisions—such as better promotional criteria—are sometimes cited as features which distinguish the federal system from others. As a further example, one might note that some states and localities do not have a "merit" system. For many reasons, then, one might be quite hesitant about concluding that the present findings can be generalized to all or most of the government and business organizations in the United States.

In spite of these substantial limitations on generalizability, an argument can be made for the general applicability of the findings. The separation between the two samples was quite wide, as indicated by the Scheffe procedures. Each government organization scored higher (indicating less flexibility) than each business organization. This consistent difference is particularly noteworthy, since a federal organization was included in the government sample. This organization has had an incentive awards program in operation for some time. Therefore its similarity on this measure with the state government organizations gives at least some indication that the concerns cited in the last paragraph, about the effect of a predominance of state government organizations in this sample, might not be valid objections. Moreover, while the representativeness of the sample is open to question, at least an effort was made to ensure that the samples were not highly unusual or biased. Finally, the results are consistent with the
observations and criticisms concerning civil service procedures in the United States, which are stated so frequently as to raise the concern that some readers might regard the present finding as "obvious." There is then, support for the argument that this difference would tend to hold in comparisons of government and business organizations in the United States.

This conclusion will actually be fully accepted and extended in the discussion to be presented later. There, it will be argued that the finding is not only generalizable, but is fundamental and enduring (that is, it is not a temporary or easily-modifiable distinction). That discussion is postponed, however, because it involves broader inferential leaps, and the present discussion is aimed at a careful review of drawbacks and difficulties as well as positive conclusions. Moreover, the discussion fits more appropriately with later materials concerning general conclusions from the research, and the relations of the findings to broad questions raised in earlier chapters.

Before turning from this data on perceptions about personnel procedures, the discussion should stress some additional points. One important consideration is the preliminary nature of this "flexibility of personnel procedures" scale. Although the results receive great emphasis in this dissertation, the scale and its items require further consideration and development, for justification of the instrument's status as a scale. In addition, analysis of personnel procedures and their impacts might be extended to a number of considerations not covered by the instrument as presently constituted. For example, one might add items which refer to the use of additional important incentives,
such as various forms of punishment, including formal reprimands. Representatives of the government organizations sometimes mentioned the formal reprimand as a very important control device, but one which was hard to use. Thus, a number of more elaborate and subtle items and research techniques might be attempted, for further development of the scale and for further clarification of the results produced by this study.

The existence of such additional considerations does not severely undercut the importance of the findings from the present study, of course. The results serve as important indications in their own right, as well as providing suggestions as to future research directions.

**General Proposition 3.**

This general research question led to hypotheses predicting differences on scales which were chosen as useful for testing frequent observations concerning vague, multiple objectives and performance measures, vague individual responsibilities, and related matters in government organizations. Differences on perceived organizational goal clarity, perceived formalization, and perceived role conflict and role ambiguity were predicted. Also compared were perceptions as to task variability and task difficulty. Regression analyses of the relations of all of these variables to the expectancy scales were also undertaken.

The results indicated no differences which supported the suggestion that the frequent assertion about government organizations is accurate. Nor did the regression analysis indicate strong relations of many of these variables to the expectancy items. Thus, there is no substantiation for the argument that differences in the clarity of objectives,
etc. have an adverse impact on perceptions as to achievement of incentives.

Later, these results will be broadly interpreted as an indication of a commonality among all government and business organizations. For now, some detailed considerations must be presented.

It should be stressed that there are some major doubts concerning the validity of these measures. First, the measures may be inadequate as reflections of the middle managers' true perceptions. Second, the perceptions of the middle managers may be invalid as indications of the actual circumstances within the organization (i.e., they are at best an indirect reflection of the actual vagueness of performance criteria, etc.).

Concerning the first of these doubts, absence of systematic validation is troublesome, but one can mount an argument for the face validity of the items: scales were assembled which were judged to be relevant to an "information component" of an incentives model, i.e., which seemed to be concerned with information relevant to assigned tasks, responsibilities, etc., and which therefore might serve as indicators of information concerning availability of, and access to, various incentives. These scales contained items which seemed to have face validity as tests of some of the assertions about government-business differences on clarity of objectives, etc.—items asking whether respondents felt their job goals were clear, whether they felt they knew what their responsibilities were, whether they felt sure of how much authority they had, how easily they could determine whether they had done their work right, and similar items. The absence of differences
in responses to these items from government and business managers in
a variety of organizations and organizational roles is quite interest-
ing, regardless of a number of potential doubts. The indication is
that government managers, relative to business managers, certainly
did not perceive any of the sorts of vagueness, looseness, and uncer-
tainty often suggested (by Buchanan for instance. See Chapter III).
If anything, government managers, as a group, showed some feelings
of tighter structure, as indicated by the formalization scales. For
government organizations, the vagueness, multiplicity, and conflict of
goals or objectives may still be a major challenge, especially for
budgeting, management control, planning, evaluation, etc. However,
there is no indication from the present project that such a difficulty
is reflected in the perceptions of individual middle managers, in
feelings of uncertainty as to his/her own responsibilities, objectives,
etc.

The second of the doubts about validity—as to whether perceptions
reflect actual circumstances—is even harder to resolve. There is
simply no way of being certain whether these self-reports of perceptions
actually indicate an absence of differences in the clarity of organiza-
tional goals and the related matters. Perhaps different items—more
objective indicators, or differently worded ones—would have revealed
differences. Perhaps differences would appear if data were gathered
at a different level, such as at the highest organizational levels
where, in government organizations, "political" considerations may
be more salient, or the difficulties of management control and re-
source allocation in the absence of clear performance indicators would
be of greater concern. Given the frequency of the assertions about government organizations which are under consideration, it is important that such possibilities be pursued in future research efforts. Reasoning cautiously, however, one could only conclude that the present data only support the suggestion that there seems to be no difference between government and business middle managers in their perceptions as to the clarity of the goals of their organizations, of their own responsibilities and roles, and so on.

This conclusion is of major interest because of its inconsistency with assertions by Buchanan and Golembiewski. As noted earlier, they cited the greater autonomy and structural looseness at the management level in government organizations. Particularly noteworthy for their conflict with these assertions are the significant findings on perceived formalization. These data indicated that the government managers tended to feel that there was greater emphasis in their organization on assuring that employees observed rules, and that procedures and job descriptions were more specific and formalized. While the contradictory nature of these findings is important, the overlap among government and business organizations on these measures justifies hesitancy in generalizing these findings. It seems appropriate, by conservative criteria, to conclude that the question of generalizability is not conclusively resolved.

As a final matter, the regression analyses performed under this proposition did not produce many of the results predicted, except for the strong relationship between Expectancy II-extrinsic and flexibility of personnel procedures, which has already been discussed. Although
it is not related to government-business differences, other researchers might find the correlation between Expectancy II-extrinsic and role ambiguity to be quite interesting. It is significant for the present project because it supports, and justifies, the original rationale behind the regression of the expectancy scales on the "information component" scales. It seems that perceptions of a lack of clarity in objectives, in one's authority and responsibilities, is related to the perception of a weaker connection between performance and incentives. This is the sort of argument which was basis for planning this analysis at the outset. Obviously, however, this relationship was not relevant to government-business differences, since role ambiguity showed no differences along those lines.

General Conclusions and Suggestions for Further Research

General Integrative Conclusions

Having considered the results fairly cautiously, staying fairly close to the data, the discussion must now turn to broader conclusions which will address major questions raised in earlier chapters. These matters are closely related to suggestions for further research, which are also of concern here. Both the general conclusions and the research directions range fairly far from the data, are debatable, and could be discussed at immense length. It is best simply to present them fairly briefly and directly, without belaboring the disclaimers and doubts which one is tempted to state at many points.
These integrative conclusions will be organized around two major questions: Has the study produced evidence of differences between public and private organizations? Has the study produced useful insights concerning incentives and motivation?

With regard to the first question, the answer is yes. Questionnaire responses by a sample of government middle managers were compared to responses by a sample of business managers. Strong, consistent differences were found on perceptions as to: 1) constraints on application of incentives such as pay, promotion, and firing, under the personnel rules and procedures governing the organization; 2) the degree to which extrinsic incentives are tied to performance; 3) satisfaction with certain aspects of work (promotion, coworkers); and 4) the importance (to the respondent) of certain incentives, such as financial rewards, and altruistic service opportunities.

While a number of doubts about these findings have been mentioned, their occurrence is actually quite significant, in view of several factors. First, this area of research has not been extensively developed, and it would have been quite easy to miss significant differences simply by asking the wrong questions or otherwise misdirecting the research, due to the relative scarcity of previous inquiry. Second, only a limited number of hypotheses were pursued. Remember that the "general propositions" were specified for the purposes of narrowing the inquiry to a manageable set of questions. Previous chapters, and the suggestions for future research, indicate a number of additional issues and questions which could be studied. Moreover, some differences on the variables studied in the dissertation may have failed to
appear because of inadequate operationalizations; as indicated in earlier chapters, the research was dealing with some very complex concepts. Finally, it might be pointed out that some persons would have asserted at the outset that there are no differences between public and private or government and business organizations. While they can certainly mount convincing arguments against the conclusiveness of the present data, they are at least faced with the task of explaining away empirically-demonstrated differences. At a minimum, the debate would be refined to a focus on some clear issues.

More important than the preceding points are questions about the degree to which these differences are fundamental, enduring ones. The question is broader than the matter of generalizability; it involves consideration also of how immutable over time these differences might be.

This question is of great importance in drawing conclusions from the strongest of the findings, the difference in mean responses on the "flexibility of personnel procedures" scale. A major argument for the generalizability of the finding, in addition to the strength and consistency of the difference in the samples studied here, is the frequency with which differences of this nature are cited by experienced observers. In addition to the somewhat more scholarly references cited in Chapter III, there have been, around the time of this writing, a number of journalistic discussions of problems with the civil service system, particularly at the federal level. Articles have appeared in such periodicals as the Wall Street Journal, the Washington Monthly, and Reader's Digest, which have noted the difficulties in removing or
disciplining inadequate performers in the federal service. The articles bem oan the "deadwood" problem--the inability to remove inadequate em-
ployees--as well as the general problem of divorcement of rewards from performance. In two of the articles, the Chairman of the Civil Service Commission is quoted in expression of concern over this situation. Of course, all of this journalistic discussion, and even the Chairman's statements, may simply reflect inaccurate stereotyping and jumping to conclusions. False, simplistic assumptions are not uncommon in public debate and decision-making in the United States. Nevertheless, the unanimity of opinion strongly supports the generalizability of the findings under consideration.

Paradoxically, however, this public discussion raises doubts about the degree to which the difference is fundamental and enduring. The articles report suggestions as to ways of altering the present rigidities. For example, it is suggested that agencies might be allowed to terminate a limited number of inadequate employees on a periodic basis. These suggestions, as well as the public debate itself, raise the possibility that the civil service procedures might be changed in ways that would alter the results of studies such as this dissertation. Thus, the more general question is raised: while the result may be generalizable, is that generalizability permanent?

There are strong arguments, however, supporting the conclusion that the distinction is enduring and fundamental. While modifications of civil service systems may be undertaken, those hoping for major change underestimate the complications and dilemmas involved in operation of large-scale, highly formalized and centralized personnel
systems within political environments in the United States.

One major dilemma results from the need to operate the personnel systems within the context of political selection for a number of the positions involved. Although the threat of the "spoils system" may have largely abated in many jurisdictions, there will nevertheless be a continuing need for assurances against political abuses. As noted in discussion of the satisfaction with promotion data, a number of problems—including motivational problems—can result from even fairly limited degrees of "patronage." Thus, there will be a continuing need for government personnel procedures to be highly systematic and formalized. Central personnel bodies—civil service commissions—will almost certainly retain extensive influence over personnel procedures. Thus, the formal procedures and constraints necessary to prevent adverse impacts of the political selection process will tend to limit managerial autonomy in personnel decisions (such as pay raises, promotions, removal) and thus maintain relative rigidity of personnel procedures governing major extrinsic incentives. Moreover, even if greater autonomy in such decisions were allowed, political criteria—political party affiliation, for example—could enter into the decisions; this could also have the effect of divorcing incentives from actual performance of the work. It seems, then, that inflexible personnel procedures governing extrinsic incentives, and the consequent weakening of the relation between performance and extrinsic incentives, is related to another distinction between government and business organizations suggested in Chapter III, the greater influence on public organizations of the political environment.
Relatively inflexible personnel procedures in government organizations will also tend to be perpetuated by other apparently unique attributes of their environments, and their relations with their environments. The personnel procedures of government organizations, like many other of their administrative procedures, will be affected by their accountability to external individuals or bodies with legal or formal authority to influence their procedures. The civil service commissions, or equivalent bodies, will not be the only entities to have major influences; legislative committees and the courts can have major authority in matters pertaining to formal structures and procedures for carrying out personnel functions. More generally, then, the personnel systems of government organizations must be more highly formalized and standardized, because of the actual or potential involvement of external authorities, and the requirement for accountability to such authorities. Meeting such requirements will involve procedural regularities and checks of the sort Golembiewski (1969) apparently has in mind when he speaks of the tendency to legalistic procedures and procedural regularity in most government agencies.

Closely related is an aspect of the organization's relations with its environment which is even more vague and difficult to conceptualize than the previous matter. Caiden (1971) notes the uniquely demanding expectations of government held by Americans, for greater fairness, openness, responsiveness, honesty, and so on. It might be seen as less appropriate, then, for government organizations to fail to accord employees fair treatment. Some of the periodicals which publish stories bemoaning the difficulty of firing poor performers in government
also carry stories complaining of summary dismissal or reassignment to less desirable duties of civil servants who displease their superiors. This general pressure on government to be fair and careful in treatment of employees might interact with the tendency of government personnel procedures to guarantee due process, and rights of appeal. Thus, such expectations might be closely related to the impact of accountability to legal or formal authorities in maintaining the high formalization and procedural complexity, and therefore the relative inflexibility, of personnel procedures in government organizations.

Still another factor which will tend to perpetuate the circumstances indicated by the data under consideration is the entrenchment of the "merit system" in the United States. Not only is there support for such procedures among civil servants. There are also continuing efforts at the federal level to encourage implementation of merit principles by other levels of government. While merit principles in themselves do not--indeed, should not--produce the sorts of inflexibilities observed in this study, pressures or supports for highly formalized and systematized personnel procedures will tend to weigh against managerial autonomy in decisions about administration of extrinsic incentives. Thus, such influences will tend to perpetuate the circumstances indicated by the findings here.

For the preceding reasons, then, one might expect continuation of the distinction between the effects of personnel procedures in government and business organizations observed here. One would expect a concomitant weakness of the perceived connection between performance and extrinsic rewards, as found in the present study. A major
implication of the finding is that efforts to remedy this situation should be pursued. It is concluded, however, that one should expect continuation of the relative inflexibility of procedures, and the relative weakness of perceived incentive-performance contingencies, due to fundamental characteristics of government and government organizations. Thus, while the two differences themselves might not be "fundamental," they are apparently related to distinctions which are fundamental or basic. It is concluded, then, that in the United States, government organizations will tend to be subject to greater rigidity in the procedures and rules governing administration of major extrinsic rewards (pay, promotion, dismissal, disciplinary action). Largely as a result of this rigidity, government will tend to perceive a weaker connection between work performance and such incentives as pay, promotion, and dismissal.

Closely related to this conclusion is another broad interpretation of the data: government organizations in the United States face greater difficulty, relative to that faced by business organizations, in maintaining the motivation and satisfaction of their employees. The job satisfaction data reported here, together with the other studies indicating the same general result, are the major substantiation for the part of this conclusion referring to satisfaction. There is increasing evidence that government managers tend in general to be less satisfied than business managers, although the causes are not entirely clear.

As for the reference to greater difficulty in motivation, the data provide little direct substantiation for such a conclusion.
As described earlier, the data on importance attached to various incentives, on expectancies concerning "meaningful public service" and intrinsic incentives, and on responses to the motivation scales, could all be woven together to support the argument that there are no government-business differences in motivation. This conclusion, however, is rejected for a number of reasons: the dubious validity of the public service items and the motivation items, the stronger differentiation of the two samples on the items concerning personnel procedures and extrinsic expectancies, and the presence of these latter scales of items referring to incentives which government and business managers rated equally. For example, the two samples showed no differences on ratings of the importance of promotion or removal, yet there were differences on the personnel procedure items and the expectancy items referring to these incentives. Also, the lower satisfaction scores by government managers suggest frustrations or dissatisfactions which might tend to affect motivation. The data seem to indicate, then, the existence of some particular frustrations, constraints, and inequities in the government organizations, which would almost certainly have an impact on motivation. Of course, one should not conclude that the difference is massive. Certainly the motivation data and other parts of the results should be taken as indications that there are many highly motivated, hardworking, satisfied government employees. However, the present data warrants the conclusion that there will continue to be uniquely difficult frustrations and constraints that make motivation and satisfaction of employees a particularly difficult challenge in the public service.
While the preceding discussion may seem to belittle the significance of the differences between the two samples in their ratings of the importance of various incentives, that distinction is actually quite important. The lower rating of financial incentives by the government managers, and the higher rating of service and altruistic incentives, are consonant with a number of other studies, mentioned in Chapter III. The present finding is further evidence of the generalizability of such differences. The preceding paragraphs argue not against the importance of this finding, but against the conclusion that it indicates no difference in motivation between the two groups; the point is that even if government managers place less value on money and more on service opportunities, they still can be discouraged and frustrated over constraints on promotion, over inadequacies of coworkers and other matters. Nevertheless, the finding raises important considerations to be kept in mind in proposing ways of overcoming the incentive and motivation problems already discussed. There seem to be a number of individuals entering the public service, and already in it, who might be more responsive to incentives appealing to altruistic or service motives than to financial motives. While this does not preclude the importance of efforts to remedy the constraints on extrinsic rewards and the weak linkage between performance and extrinsic incentives, it suggests that in many cases improvements could be attained by efforts to appeal to intrinsic motives as well. For example, increased efforts to provide feedback concerning the individual's and the organization's contributions to public service might be effective in combating frustration and discouragement. The finding
has theoretical significance as well, as further substantiation of the need to consider such individual differences in research and thinking on career choices and performance on the part of administrators and managers.

One might conclude all the preceding material on general interpretations by referring back to the general propositions stated and pursued in this dissertation. The discussion has described generally affirmative conclusions on the first two of these general research questions. With regard to the first, the data are taken as indications of generalizable, lasting differences on satisfaction among middle managers, expectancies concerning certain extrinsic rewards, and differences in valuation of certain incentives. In spite of the absence of differences on the scales relevant to motivation, it was also concluded that there are particular difficulties in maintaining motivation and satisfaction in government organizations. With regard to the second of the propositions, which concerned the impact of personnel procedures governing extrinsic rewards, the strongest of conclusions was drawn--the relatively rigid constraints on administration of extrinsic incentives, under civil service procedures and regulations, are a general and enduring feature of government organizations, and are related to fundamental distinctions between government and business organizations. As mentioned, conclusions on both these general questions have practical and theoretical implications.

Interpretation of findings on the third of the general propositions, however, brings up a final matter to be considered under this question of whether the results indicate government-business differences.
The absence of differences on all scales chosen for inquiry into the assertions concerning relatively vague goals and performance criteria in government organizations, except the formalization scales, suggests a commonality among government and business organizations. The results indicate that middle management roles in both types of organization are highly similar in the extent to which roles, responsibilities, and objectives are perceived as being well-defined, and the extent to which the tasks involved are seen as variable and complex (difficult). To the extent that any differences are indicated--by the differences on several of the subscales of perceived formalization--they are actually in the direction of somewhat tighter structuring in the government organizations. This may reflect the sort of procedural formalization and regularity suggested under the discussion of the personnel procedures, above, which arises due to requirements for accountability.

The suggestions as to future research directions will raise a number of additional possibilities, but the indication from this data is that there is a similarity between government and business organizations in the degree of clarity, complexity, difficulty and structuring of middle management tasks and roles.

Significantly, after the extensive discussion of the first general question, about public-private differences, raised at the beginning of this section the second question, about findings relevant to motivation and incentives, can be dealt with rather briefly. This project has not made immense progress in clearing up conceptual complications discussed earlier, and has not provided for major advances in theories concerning motivation and incentives. Nevertheless, several significant
and useful findings concerning relevant relationships have been noted (such as the relationship between role clarity and extrinsic expectancies). More importantly, however, a claim might be made for the major importance of the evidence here of the impact of organizational personnel procedures on individual expectancies. This finding joins only one similar one (Kopelman, 1976), known to this author, as empirical evidence of the impact of formal incentive systems on individuals' responses on expectancy items. It should be quite interesting to those concerned with research on expectancy theory to see that individuals within major categories of organizations respond to expectancy items in meaningful and predictable ways; the finding constitutes a general validation of the expectancy items and suggests an opportunity for further inquiry into determinants of responses on expectancy items.

**Implications for Further Research**

Closely interrelated with the discussion of conclusions, throughout this chapter, are a number of questions raised by the present research which might be pursued further. While a number of the questions, and means of pursuing them, could be discussed at great length, in the interest of clarity a number of suggestions will be presented here fairly concisely:

1) Efforts at replication and extension of the significant findings from this study are warranted:
   a) Further comparisons of responses on satisfaction scales by government and business managers are called for, in view of the accumulating evidence of a widespread difference in satisfaction. Such efforts should go farther than the present study in giving attention
to determinants of the differences, as well as to the effects of them. Suggestions along these lines have already been made (pp. 281, 282, 284).

b) Similarly, the findings on personnel procedures and extrinsic expectancies warrant replication and refinements. The "flexibility of personnel procedures" scale requires further development, as discussed earlier, but a number of additional things could be done to extend understanding of the impact of the civil service systems on administration of incentives. For example, superiors might be queried concerning their feelings of control over their subordinates, and their judgements as to the adequacy of the incentives they could offer. With regard to the extrinsic expectancy items, more elaborate sets of items might be used, to cover a wider or better-selected group of incentives, and better measures of dependent variables (motivation, effort, performance) should be attempted.

c) The individual differences in valuation of incentives should be pursued. In view of its potential usefulness in the study of bureaucratic behavior, it is quite important that there be more work on conceptualization and analysis of the service ethic, on the part of both business managers and government administrators. Does it tend to take different forms--such as in the choice of a different referent (community, organization, disadvantaged group, an ideal)--within the two groups? Do certain government and business organizations tend to offer greater satisfaction of such motives, and do they tend to accumulate members who place higher value on such incentives? Thus, the intrinsic and "public service" expectancies might be further
investigated at the same time. It is important, in view of the ac-
cumulation of results on satisfaction scales, to inquire into the
perceived adequacy of opportunities to attain intrinsic and altruistic
incentives.

2) Although no differences were found on the scales chosen for
inquiry into the assertions about 'vague goals' in government organ-
izations, a number of questions remain. The questions or measures
could have been simply inadequate. Better measures may yet reveal
a distinction; for example, questions which ask for actual statements
of objectives and criteria might be more revealing. In addition, it
may be that the impact of this difference, if it exists, is felt only
at the highest organizational levels. A shift in the unit of analysis--
to top administrators--might produce different results. Most impor-
tantly, there is a need for further clarification of these assertions--
what are they actually suggesting, concerning which organizations and
which levels?

3) Although considerable attention was devoted to definition of
the public-private and government-business distinctions, the reader
has probably noticed some lack of clarity as to whether conclusions
regarding government-business are applicable to public-private. The
answer for now would be that such findings would be applicable to
large subsets of the public and private groupings. The need for
further clarification of the public-private concepts and distinctions
is obvious, however.
4) In addition to variables and issues which actually received direct attention, the study raises a number of new issues for further research.

a) The possible influence of the "political environment" is suggested at several points of the study. Since this cluster of variables is considered by a number of authors to be a point of fundamental distinction between public and private or government and business organizations, it is surprising that more elaborate conceptual models of this factor are not available. It seems that elaboration of conceptual models or frameworks of the "political environment" as part of an organization's environment has been attempted only occasionally (Walmsley and Zald 1973) in the public administration and organization theory literature. Such conceptualization is of primary importance, but there are also some questions about its impact which are in need of further study. For example, does the "political environment" complicate the goal-set of the organization, and contribute to the assertions about vague or multiple objectives in government organizations? It would be interesting to compare sets of decision criteria or objectives reported by government and business managers, to look for differences in the number of items attributable to the political environment. As another example, what are the incentive effects of the political environment? Does excessive patronage lower satisfaction with promotion opportunities, as suggested earlier?
b) Finally, difficulties in interpretation of the present findings have arisen at several points, due to the weakness of our knowledge of differences among various types of government organizations and among organizations at the various levels of government. For example, decisions as to the generalizability of some of the findings were complicated by the unavailability of material on distinctions between federal and state governments and agencies, or on the types of organizations represented in government. Similar questions arose in consideration of the data on valuation of rewards. It seems important, then, that efforts be made to compile information about similarities and differences among public organizations at different levels of government, and among different types of organizations in government. As difficult as the task might be, the effort to construct a typology of government organizations would be a very valuable undertaking.

In brief conclusion, there are numerous useful research questions and directions which arise from the present study. More generally, concerning the entire study, it can be claimed that important differences between public and private organizations have been empirically demonstrated. The findings reported concerning incentives and motivation in government and business organizations, have major practical and theoretical implications, especially in the insight they provide as to the impact of civil service systems on the incentive systems of government organizations.
APPENDIX A

TYPES OF INCENTIVES MENTIONED IN SOME PROMINENT REFERENCES, WITH EXAMPLES

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Definition (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUTHOR: Barnard (1938)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I. Specific Incentives</strong></td>
<td></td>
</tr>
<tr>
<td>a. Material inducements</td>
<td>Can be &quot;specifically offered to an individual&quot; (see a-d)</td>
</tr>
<tr>
<td>b. Personal, nonmaterialistic inducements</td>
<td>(money, things, physical conditions)</td>
</tr>
<tr>
<td>c. Desirable physical conditions of work</td>
<td>(distinction, prestige, personal power, dominating position)</td>
</tr>
<tr>
<td>d. Ideal Benefactions</td>
<td>&quot;satisfaction of ideals about nonmaterial, future or altruistic relations&quot; (pride of workmanship, sense of adequacy, altruistic service for family or others, loyalty to organization, aesthetic and religious feeling, satisfaction of hate and revenge).</td>
</tr>
<tr>
<td><strong>II. General Incentives</strong></td>
<td></td>
</tr>
<tr>
<td>e. associational attractiveness</td>
<td>&quot;cannot be specifically offered to an individual&quot; (see e-h)</td>
</tr>
<tr>
<td>f. customary working conditions</td>
<td>Social compatibility, freedom from hostility due to racial, religious differences.</td>
</tr>
<tr>
<td></td>
<td>conformity to habitual practices, avoidance of strange methods and conditions.</td>
</tr>
</tbody>
</table>
Appendix A (Continued)

g. opportunity for feeling of enlarged participation in the course of events

(h. condition of communion)

(association with large, useful, effective organization)

(partial comfort in social relations)

AUTHOR: Simon (1945)

Incentives for employee participation

(salary or wage, status and prestige, relations with working group, promotion opportunities)

Incentives for elites or controlling groups

(prestige and power)

AUTHOR: Clark and Wilson (1961), and Wilson (1973)

Material Incentives

Tangible rewards which can be easily priced (wages and salaries, fringe benefits, tax reductions, changes in tariff levels, improvement in property values, discounts, services, gifts).

Solidary Incentives

Intangible incentives without monetary value and not easily translated into one. They derive primarily from the act of associating.

Specific Solidary Incentives

Those which can be given to or withheld from a specific individual (offices, honors, deference).

Collective Solidary Incentives

Rewards created by act of associating, and enjoyed by all members if enjoyed at all (fun, conviviality, sense of membership or exclusiveness, collective status or esteem).
Appendix A (Continued)

Purposive Incentives
Intangible rewards that derive from satisfaction of contributing to worthwhile cause (enactment of a law, elimination of government corruption).

AUTHOR: Downs (1967)

General "motives or "goals" of officials
(Power—within or outside bureau, money income, prestige, convenience, security, personal loyalty to work-group or organization, desire to serve public interest, commitment to a specific program of action).

AUTHOR: Niskanen (1971)

Variables that may enter the bureaucrat's utility function
(salary, perquisites of the office, public reputation, power, patronage, output of the bureau, ease of making changes, ease of managing the bureau, increased budget).

AUTHOR: Lawler (1969)

Extrinsic rewards
Extrinsic to the individual, part of the job situation, given by others.

Intrinsic rewards
Intrinsic to the individual and stem directly from job performance itself. They satisfy higher-order needs such as self-esteem and self-actualization (feelings of accomplishment, and of using and developing one's skills and abilities).
Appendix A (Continued)

**AUTHOR: Herzberg, et al (1957)**

Job "factors" or aspects. Rated in importance by large sample of employees. In order of average rated importance: security, interest, opportunity for advancement, company and management, intrinsic aspects of job, wages, supervision, social aspects, working conditions, communication, hours, ease, benefits.

**AUTHOR: Locke (1968)**

External Incentive An event or object external to the individual which can incite action. (Money, knowledge of score, time limits, participation, competition, praise and reproof, verbal reinforcement, instructions).
APPENDIX B

DEFINITIONS OF INCENTIVE(S)

English and English (1958)

1) An object or external condition, perceived as capable of satisfying an aroused motive, that tends to elicit action to attain the object or condition.

2) A supplementary goal object that elicits behavior tending toward attainment of the main goal; anything that increases the apparent satisfyingness of a goal; e.g., offering a child a prize for conscientious study...

3) Any manipulatable aspect of the environment that can be used to energize and direct...behavior.


For every goal there exists, analytically, at least one incentive to satisfy it. Thus if profit is a goal, it could also be an incentive that would satisfy that goal; i.e., offer of attainment or satisfaction of a goal can logically be an incentive. Positive and negative incentives in the context of agency are mechanisms that increase the agent's relative return to his genuinely preferred goals from pursuing the principal's over alternate goals (including the agent's self-goals alone) with, or without, increasing the agent's return to his genuinely preferred goals. The agency definition of incentive implies the fact that the offering of incentives by one party generally induces or dissuades certain behavior on the part of another party.

National Commission of Productivity and Work Quality (1975)

Imply that "incentive" covers anything that is intended to increase employee motivation (from monetary incentives through job redesign).

Birch and Veroff (1966)

If an organism consistently approaches or consistently escapes certain consequences when free to do so, those consequences are said to have incentive value. We can describe incentive value as positive if an organism engages in activities which establish and maintain contact with the consequences, and negative if he removes himself from or resists being taken into their vicinity.

...it becomes crucial that those who execute the program have incentives or inducements to act in directions which are consistent with the objectives of the program... The program must also be explicitly designed to provide incentives or inducements for the relevant decisionmakers outside the public agency to act in directions which are consistent with program objectives...

Thus, like the dictionary, he regards incentives as inducements.


An incentive is any gratification, tangible or intangible, in exchange for which persons become members of the organization ("the decision to participate") and, once in the organization, contribute time, effort or other valued resources ("the decision to work")...(this) inducements-contributions balance must be maintained.

An "incentive system" is the "sum of all rewards given to members."

Vroom (1964) p. 15.

Preference...refers to a relationship between the strength of a person's desire for, or attraction toward, two outcomes...Psychologists have used many different terms to refer to preferences. The terms, valence,...Incentive,...attitude,...and expected utility...all refer to affective orientations toward outcomes. (Emphasis mine)


A psychological cue, which increases our perceptual awareness of a need, is called an incentive. An employer can motivate you by making you aware of a need through the use of an incentive. Wages are an incentive to cue an individual to perceptual awareness of needs that can be gratified through the acquisition of wages. (They also note that a deadline can be an incentive).


An incentive is a stimulus which incites action. In its broad usage "incentive" is applicable to any inducement, material or non-material, which impels, encourages, or forces a person to perform a task or accomplish a goal. A psychological reaction is the primary effect of an incentive. Its secondary effect is behavior. (Emphases in original).

Motivation is an internal state, beyond the ability of another person to manipulate directly. A situation external to the individual may be structured in such a way as to channel motivational forces and efforts into desired activities. Obtaining the incentive for particular behaviors satisfies the need and thus removes it, just as drinking water removes thirst sensations. Incentives may be either positive or negative. Those that satisfy needs and are pleasurable are positive incentives. Those that establish unpleasant consequences—outcomes to be avoided—are negative incentives.

(Emphases his. Herbert references Maier, 1973)

American Heritage Dictionary of the English Language (1969)

Incentive n. Something inciting to action or effort, as the fear of punishment or the expectation of reward. adj. Inciting, motivating.


Incentive refers to an increased willingness, not capacity. As implied by its derivation of setting the tune for a song, compulsion is not involved. Capacity and willingness may be deemed to shade off into one another like a spectrum...(Incentives) operate only in the sphere of voluntary effort.

...schemes may not succeed and a distinction must be made, wherever relevant, between incentive scheme and incentive effect.

Incentive schemes may be called economic if they involve giving a worker an opportunity to earn something more in exchange for more productivity: either more money earnings with which the worker can attain higher standards of living; or, indirectly economic, give the worker promotion or economic security.

Lynton...considers that "the term incentive has acquired so many meanings that it has become meaningless."

...the words "incentive effect" do not include...increased production directly due to changes...in (a) equipment and its lay out (b) organization and methods of work (c) selection and training of workers (d) physical environment; and to changes...in hours of work and such changes in wages as result in better food and material conditions as will make the worker more physically capable of production.
Appendix B (Continued)

An incentive is, in short, some scheme which aims to increase willingness but not necessarily capacity to produce. It is thus correlated to "morale" which also refers to human willingness rather than capacity.

Wilson (1973), p. 31. (Also see reference to Wilson, above).

...incentives may be tangible or intangible and include any valued benefit, service, or opportunity in exchange for which an individual is willing to contribute time, effort, or resources to an organization. Persuasion will be treated here as a kind of incentive: motivating a person, by exhortation or example, to share the goals of the organization and instilling in him a sense of duty or a feeling of guilt that impels him to work toward those goals.


An incentive theory is one which emphasizes that organisms can in some sense anticipate reinforcement, and that such an anticipation serves in some way to facilitate instrumental behavior...(notes different emphasis on incentive, as opposed to drive, by different theorists)...Thus, it is possible to conceive of incentive as a component of drive, as parallel to drive, or as replacing drive... Just as the concept of drive arises from the notion that there are conditions which impel an organism to some sort of action, so the concept of incentive arises from the notion that there are objects in the environment to which the organism is attracted. Drives push and incentives pull.

Locke (1968)

An external incentive is defined as an event or object external to the individual which can incite action. It is argued that if goals or intentions are a necessary condition for most kinds of behavior, then incentives will affect behavior only through their effects on goals and intentions and will have no effect independent of their effects on goals and intentions...

Pohlman (1971)

...something of financial value, given by an organization to an individual, couple, or group to induce some birth planning behavior... includes payments to medical and other personnel...excludes salaries... key element in use of term incentive is that the amount given varies according to performance.
Appendix B. (Continued)

disincentives and negative incentives--something negative imposed on an individual, couple, or group (or something positive taken away) by an organization, in view of a birth planning failure or the failure to produce a desired birth planning behavior.

"motive" or "need" is inside the individual's skin; an "incentive" typically is not.
APPENDIX C

QUESTIONNAIRE USED IN THE RESEARCH

MANAGERIAL ATTITUDE QUESTIONNAIRE

This questionnaire is for a survey of the attitudes and perceptions of managerial-level personnel in organizations in the Columbus area. The study is for a Ph.D. dissertation in Public Administration at Ohio State University. Your participation is very important to the success of the project, and will be greatly appreciated.

INSTRUCTIONS

Do not sign your name. Your answers are completely anonymous, and they will be coded and combined with the responses of many others. The identities of participating organizations will also be confidential.

The questions ask for judgements and opinions about your work and your job situation. They are not aimed at evaluating you or your organization. There are no right or wrong answers.

Choose the response that comes closest to your opinion. It is better not to dwell on any one question; give your first reaction. Please answer each question.

If others around you have not received this questionnaire, it is because the study cannot cover each person and a sample from each organization was selected. You have not been singled out for any reason other than that.

When finished, please fold the questionnaire and mail it in the addressed, post-paid envelope attached to the back of the questionnaire.

Participation of each person is essential. The study requires responses from different viewpoints and situations. Certainly you must be busy, but please provide your responses as soon as possible.

Your cooperation will be greatly appreciated.

Hal G. Rainey
The Ohio State University
Appendix C (Continued)

Organization: __________________

Questionnaire #

BACKGROUND INFORMATION

These questions concern your personal background and experience, and will provide useful information for the study. Remember that your responses will be completely anonymous.

1. How long have you been employed by the organization in which you now work? ______ years.

2. How long have you been employed at your present position? ______ years.

3. During your career, how long have you been employed in government organizations? ______ years.
   In business organizations? ______ years.
   In other private organizations ______ years.
   In other types of employment? ______ years.

4. If you are employed by government, please give your Federal GS rating ______ or your State pay grade ______.
   Are you certified? Yes ______ No ______ Not Applicable ______.
   (Please omit this question, if you are not employed by government.)

5. Please indicate the highest educational level you have completed:
   ______ Some high school or high school degree.
   ______ College degree (major field: ____________)
   ______ Master's degree (field: ____________)___
   ______ Doctorate (field: ______________________)
   ______ Law degree
   ______ Medical degree

6. Are you: male ______ female ______

7. How old are you? ______ years

8. Race: White ______ Black ______ Oriental ______ Other ______ specify)
Appendix C (Continued)

9. Please indicate the general level of your before-tax annual income from your present job by checking one of the following:

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 10,000</td>
<td></td>
</tr>
<tr>
<td>10,001 - 15,000</td>
<td></td>
</tr>
<tr>
<td>15,001 - 20,000</td>
<td></td>
</tr>
<tr>
<td>20,001 - 25,000</td>
<td></td>
</tr>
<tr>
<td>25,001 - 30,000</td>
<td></td>
</tr>
<tr>
<td>30,001 - 35,000</td>
<td></td>
</tr>
<tr>
<td>35,001 - 40,000</td>
<td></td>
</tr>
<tr>
<td>Over 40,000</td>
<td></td>
</tr>
</tbody>
</table>

10. How many immediate subordinates do you have—those who report directly to you? ____.

11. How many subordinates do you have in all—those reporting directly to you or reporting to one of your direct subordinates? _______.

12. Think of the unit of your organization over which you have authority. What is this type of unit called (that is, "section," "bureau," "division," "office," etc.)? _______.

13. What is the general title for persons with the amount of authority you have (that is, "Division Chief," "Director," "section head," etc.)? _____________________.

14. Do you consider yourself line ____ or staff ____? (Check one).

15. How many levels of authority are there between you and the top person in ________________ (not including you and the top person)? _________.

16. How many immediate subordinates does your superior have, besides yourself? ______________.
   How many total subordinates? ______________.
Appendix C (Continued)

REWARD PREFERENCES

This section concerns the value you attach to various rewards or motivational factors in your work. Please consider how important each item is to you, regardless of whether or not you are now receiving it through your work. In the blank next to each item, please write the number of one of the following responses:

1 means you consider it extremely unimportant
2 means unimportant
3 means slightly unimportant
4 means neither important nor unimportant
5 means slightly important
6 means important
7 means extremely important

For example, if you feel that the reward or motivational factor is "slightly unimportant", write a 3 in the blank. If you feel it is "important", write a 6 in the blank, and so on.

1. Recognition from your organization (awards, praise, etc.)
2. Higher pay than you now make
3. A promotion
4. Job security
5. Respect and friendliness from your colleagues or coworkers
6. A sense of worthwhile accomplishment in your work
7. Development of your abilities through your work
8. A good feeling about yourself, as a result of your work
9. Engaging in meaningful public service
10. Making a good deal of money
11. Doing work that is helpful to other people
12. Making important decisions and exerting an important influence on your organization
13. Achieving status and prestige
14. Working for a capable superior or supervisor
Appendix C (Continued)

**ORGANIZATIONAL AND WORK PROCESS CHARACTERISTICS**

The questions in this section concern various characteristics of your work and your work setting, as you perceive them.

**Organizational procedures.** For the following items, please circle one of the five responses, to indicate the degree to which you feel the statement is true or false as a description of your situation in the organization:

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither True nor False</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. First, I feel that I am my own boss in most matters.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>2. How things are done around here is left pretty much up to the person doing the work.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>3. People here are allowed to do almost as they please.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>4. Most people here make their own rules on the job.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>5. The employees are constantly being checked on for rule violations.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>6. People here feel as though they are constantly being watched to see that they obey all the rules</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>7. There is no rules manual.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>8. There is a complete written job description for my job.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>9. Whatever situation arises, we have procedures to follow in dealing with it.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>
### Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither True nor False</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Everyone has a specific job to do.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>11. Going through proper channels is constantly stressed.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>12. The organization keeps a written record of everyone's job performance.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>13. We are to follow strict operating procedures at all times.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>

**Role characteristics.** These items refer to characteristics of a person's work role in an organization. Please circle one of the responses. The items do not refer to whether the characteristic is desirable or undesirable and are not concerned with how well you perform your job.

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither True nor False</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. I am required to do things that should be done differently.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>15. My job has clear, planned goals and objectives.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>16. My time is divided properly between various assignments.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>17. I receive an assignment without the manpower to complete it.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>18. I have to buck a rule or policy in order to carry out an assignment.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>19. I know what my responsibilities are.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>
Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither False nor False</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. I work with two or more groups who work quite differently.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>21. I receive incompatible requests from two or more people.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>22. I know exactly what is expected of me.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>23. I feel certain about how much authority I have.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>24. I do things that are apt to be accepted by one person and not by others.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>25. I receive an assignment without adequate resources and materials to execute it.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>26. Explanations of what has to be done are clear.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>27. I work on unnecessary things.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>

Organization goal characteristics.

28. The organization for which I work has goals which are very clearly defined. | VT | T | N | F | VF |

29. It is easy to give a precise explanation of the goals of my organization. | VT | T | N | F | VF |
Appendix C (Continued)

Personnel rules and procedures. These questions concern formal personnel rules and procedures covering managerial-level members of your organization. In some organizations, these may actually be legal statutes. By "managers" we mean supervisory and administrative personnel above first-line supervisors. In answering, think of the actual impact of the rules, not simply their formal purpose. Please circle your response. (Masculine pronouns are used for brevity, but the questions also apply to female managers.)

<table>
<thead>
<tr>
<th>Question</th>
<th>Very True</th>
<th>True</th>
<th>False nor</th>
<th>False</th>
<th>Very True</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. A manager's job is protected here by formal rules governing removal from the organization.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>31. If a manager is particularly effective, it is easy, under the rules, for his superior(s) to reward him with higher pay.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>32. If a manager is not pulling his weight, it is easy, as far as formal procedures are concerned, for his superior(s) to fire him.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>33. Because of the rules here, promotions are based mainly on performance.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>34. Here, the formal personnel procedures tend to protect a manager from having his pay reduced.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>35. Even if a manager is a poor performer, formal rules make it hard to remove him from the organization.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>36. The rules governing promotion make it hard for a good manager to move up faster than a poor one.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>
Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>False</th>
<th>Nor True</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>37. Due to the rules, pay raises for managers are based more on longevity than on performance.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>38. Even if a manager is doing a poor job, the rules tend to prevent demotion to a lower level.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>39. The formal pay structures and rules make it hard to reward a good manager with higher pay here.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>40. The personnel rules and procedures that govern my organization make it easy for superiors to reward subordinates for good performance.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>

Job characteristics. These statements might be used to describe a person's job. Some may seem similar, but actually each asks about a different aspect of your job, so do not worry about consistency in responding. You are not asked to judge whether they are desirable or undesirable, but only whether they are true of your job. The questions mention your "work" and "output". This includes work for which you are responsible, but which you supervise or direct as a manager, rather than doing yourself. Please circle your answer:

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>False</th>
<th>Nor True</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>41. Producing low quality work leads to decreased job security.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>42. Producing a high quality of work increases my chances for higher pay.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>
Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither True</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.</td>
<td>If I complete my work requirements on time, it will increase my chances for promotion.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>44.</td>
<td>If I produce a high quantity of work output, I will receive recognition from the organization.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>45.</td>
<td>Getting my work done on time leads to more friendliness and respect from my coworkers.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>46.</td>
<td>Doing high quality work makes me feel a sense of worthwhile accomplishment.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>47.</td>
<td>Trying as hard as I can leads to high quality output.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>48.</td>
<td>Producing a lot of work output does not lead to my feeling that I am developing my abilities.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>49.</td>
<td>I feel badly about myself if I fail to meet my work requirements in timely fashion.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>50.</td>
<td>Doing things as well as I am capable leads to high quality output.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>51.</td>
<td>Producing high quality work makes me feel that I am contributing to a meaningful public service.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
</tbody>
</table>
### Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither nor</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>52.</td>
<td>If I produce a high quantity of work output, it will lead to higher pay.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>53.</td>
<td>Turning out a high quantity of work will lead to a promotion.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>54.</td>
<td>The organization will give me recognition for getting my work done on time.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>55.</td>
<td>Failure to produce high quality work will result in less respect and friendliness from my coworkers.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>56.</td>
<td>Trying as hard as I can leads to turning out my work on time.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>57.</td>
<td>Completing my work in timely fashion gives me a feeling of worthwhile accomplishment.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>58.</td>
<td>Doing high quality work makes me feel that I am developing my abilities.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>59.</td>
<td>Doing a lot of work leads to my feeling good about myself.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>60.</td>
<td>Turning out a high quantity of work makes me feel that I am doing a meaningful public service.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
<tr>
<td>61.</td>
<td>Doing things as well as I am capable leads to a high quantity of work output.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
</tr>
</tbody>
</table>
### Appendix C (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Very True</th>
<th>True</th>
<th>Neither True nor False</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>62. Completing my work in timely fashion leads to higher pay here.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>63. Producing a low quality of work decreases my chances for promotion.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>64. I will receive recognition from the organization if I produce high quality work.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>65. Turning out a high quantity of work will lead to increased respect and friendliness from my colleagues or coworkers.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>66. I feel a lack of worthwhile accomplishment when I fail to do a high quantity of work.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>67. When I get my work done on time, I feel that I am developing my abilities.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>68. Turning out a high quantity of work output increases my job security.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>69. Doing things as well as I am capable leads to turning out my work on time.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>70. Producing high quality work makes me feel good about myself.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>71. Completing my work on time leads to the feeling that I am performing a meaningful public service.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>
Appendix C (Continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Very True</th>
<th>True</th>
<th>Nor</th>
<th>False</th>
<th>Very False</th>
</tr>
</thead>
<tbody>
<tr>
<td>72. Trying as hard as I can leads to a high quantity of output.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
<tr>
<td>73. Failure to get my work done on time decreases my job security.</td>
<td>VT</td>
<td>T</td>
<td>N</td>
<td>F</td>
<td>VF</td>
</tr>
</tbody>
</table>

The following questions are also about characteristics of your job, but are more directly concerned with the nature of the work your job involves. Five response choices follow each question. Please circle your choice:

74. How much the same are the day-to-day situations, problems, or issues you encounter in performing your major tasks?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Very much</th>
<th>Mostly</th>
<th>Quite a bit</th>
<th>Very much</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much the same are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the day-to-day situations,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problems, or issues you</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>encounter in performing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>your major tasks?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

75. How many of these tasks are the same from day to day?

<table>
<thead>
<tr>
<th>Choice</th>
<th>About all</th>
<th>Many are</th>
<th>About half</th>
<th>Some are</th>
<th>Almost none</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many of these tasks are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the same from day to day?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

76. In the past three months, how often did difficult problems arise in your work for which there were no immediate or apparent solutions?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Once a week</th>
<th>About 2-4 times a week or less</th>
<th>About 2-4 times a day</th>
<th>5 times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problems arise in your</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>work for which there were</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no immediate or apparent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>solutions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

77. About how much time did you spend solving these work problems?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Less than 1 hr./wk.</th>
<th>About 1-4 hrs./wk.</th>
<th>About 2-3 hrs./day</th>
<th>About 4 hours or more per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much time did you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>spend solving these work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problems?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

78. During a normal week, how frequently do exceptions arise in your work which require substantially different methods or procedures for doing it?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Very Rarely</th>
<th>Occasionally</th>
<th>Quite Often</th>
<th>Very Often</th>
<th>Constantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>During a normal week, how</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>frequently do exceptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>arise in your work which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>require substantially</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>different methods or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>procedures for doing it?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C (Continued)

79. How often do you follow about the same work methods or steps for doing your major tasks from day to day?

Very Seldom  Sometimes  About half  Quite  Very
the time  often  often

80. How easy is it for you to know whether you do your work correctly?

Very  Quite  Somewhat  Quite  Very
Difficult  Difficult  Easy  Easy  Easy

81. What percent of the time are you generally sure of what the outcomes of your work efforts will be?

40% or less  41%-60%  61%-75%  76%-90%  91% or more

WORK ATTITUDES AND PERCEPTIONS

This section concerns your orientation towards your work and various aspects of it.

For these, please circle a response to show how much you agree or disagree with the statement:

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The major satisfaction in my life comes from my job.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>2. The most important things that happen to me involve my work.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>3. I'm really a perfectionist about my work.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>4. I live, eat, and breathe my job.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>5. I am very much involved personally in my work.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>6. Most things in life are more important than work.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
</tbody>
</table>
Appendix C (Continued)

For these, please put an "X" in the blank next to your answer:

7. On most days on your job, how often does time seem to drag for you?

   _____ About half the day or more    _____ About one-eighth of the day
   _____ About one-third of the day     _____ Time never seems to drag
   _____ About one-quarter of the day

8. How often do you do some extra work for your job which isn't really required of you?

   _____ Almost every day      _____ Once every few weeks
   _____ Several times a week  _____ About once a month or less
   _____ About once a week

9. Would you say you work harder, less hard, or about the same as other people doing your type of work in your organization?

   _____ Much harder than most others     _____ A little less hard than most others
   _____ A little harder than most others
   _____ About the same as most others     _____ Much less hard than most others

10. In your kind of work, if a person tries to change his usual way of doing things, how does it generally turn out?

    _____ Usually turns out worse; the tried and true methods work best in my work.
    _____ Usually doesn't make much difference.
    _____ Usually turns out better; our methods need improvement.

11. In my kind of job, it's usually better to let your supervisor worry about new or better ways of doing things.

    _____ Strongly agree      _____ Mostly Disagree
    _____ Mostly agree        _____ Strongly disagree
Appendix C (Continued)

12. How many times in the past year have you suggested to your supervisor a different or better way of doing something on the job?

- Never had occasion to do this during the past year
- Once or twice
- About three times
- About five times
- Six to ten times
- More than ten times during the past year

13. Work perceptions. Think of your present work. What is it like most of the time? In the blank beside each word given below, write

Y for "YES" if it describes your work
N for "NO" if it does not describe your work
? if you cannot decide

<table>
<thead>
<tr>
<th>WORK</th>
<th></th>
<th>WORK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fascinating</td>
<td></td>
<td>Useful</td>
<td></td>
</tr>
<tr>
<td>Routine</td>
<td></td>
<td>Tiresome</td>
<td></td>
</tr>
<tr>
<td>Satisfying</td>
<td></td>
<td>Healthful</td>
<td></td>
</tr>
<tr>
<td>Boring</td>
<td></td>
<td>Challenging</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td></td>
<td>On your feet</td>
<td></td>
</tr>
<tr>
<td>Creative</td>
<td></td>
<td>Frustrating</td>
<td></td>
</tr>
<tr>
<td>Respected</td>
<td></td>
<td>Simple</td>
<td></td>
</tr>
<tr>
<td>Hot</td>
<td></td>
<td>Endless</td>
<td></td>
</tr>
<tr>
<td>Pleasant</td>
<td></td>
<td>Gives a sense of accomplishment</td>
<td></td>
</tr>
</tbody>
</table>
14. **Perceptions of supervision.** Now think of your supervisor, and the supervision you receive. What is it like most of the time? Please indicate whether each of the following words describes it, in the way you did above (Y = yes, N = no, ? = cannot decide).

<table>
<thead>
<tr>
<th>SUPERVISION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ Asks my advice</td>
<td>_____ Tells me where I stand</td>
</tr>
<tr>
<td>_____ Hard to please</td>
<td>_____ Annoying</td>
</tr>
<tr>
<td>_____ Impolite</td>
<td>_____ Stubborn</td>
</tr>
<tr>
<td>_____ Praises good work</td>
<td>_____ Knows job well</td>
</tr>
<tr>
<td>_____ Tactful</td>
<td>_____ Bad</td>
</tr>
<tr>
<td>_____ Influential</td>
<td>_____ Intelligent</td>
</tr>
<tr>
<td>_____ Up-to-date</td>
<td>_____ Leaves me on my own</td>
</tr>
<tr>
<td>_____ Doesn't supervise enough</td>
<td>_____ Around when needed</td>
</tr>
<tr>
<td>_____ Quick-tempered</td>
<td>_____ Lazy</td>
</tr>
</tbody>
</table>

15. **Perceptions concerning coworkers.** Now consider the people you work with. What are they like most of the time? Please respond to the following words just as you have done in the questions above (Y = yes, N = no, ? = cannot decide).

<table>
<thead>
<tr>
<th>COWORKERS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ Stimulating</td>
<td>_____ Talk too much</td>
</tr>
<tr>
<td>_____ Boring</td>
<td>_____ Smart</td>
</tr>
<tr>
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<td>_____ Easy to make enemies</td>
<td>_____ Hard to meet</td>
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Appendix C (Continued)

16. Pay perceptions. Now think of the pay you receive. In the blanks, write a response to show whether the word describes your pay (Y = yes, N = no, ? = cannot decide).

PAY

___ Income adequate for ___ Income provides luxuries
normal expenses ___ Insecure

___ Satisfactory profit ___ Less than I deserve
sharing ___ Highly paid

___ Barely live on income ___ Under paid
___ Bad

17. Perceptions concerning promotion. Now think about promotions. What are they like, as far as your present job is concerned? Please respond to the following words, just as you did above (Y = yes, N = no, ? = cannot decide).

PROMOTIONS

___ Good opportunity for ___ Unfair promotion policy
advancement ___ Infrequent promotions

___ Opportunity somewhat ___ Regular promotions
limited ___ Fairly good chance
___ Promotion on ability for promotions
___ Dead-end job

___ Good chance for
promotion

Any comments or criticisms you wish to include, concerning anything on the questionnaire, will be appreciated:

THANK YOU FOR YOUR COOPERATION
APPENDIX D

TABLE 10

Means and Standard Deviations, by Organization, on Scales for which There Was No Significant Difference Between Total Government and Total Business Samples.
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APPENDIX E

TABLE 11: Correlations Among Questionnaire Scales Used in the Research

KEY to abbreviations used as row and column headings on following pages:

- AGE = respondent's age in years
- SATWK = Satisfaction with Work
- SATSUP = Satisfaction with Supervision
- SATCOW = Satisfaction with Coworkers
- SATPAY = Satisfaction with Pay
- SATPRO = Satisfaction with Promotion
- JOBCOD = Job Codification
- RULOBS = Rule Observation
- SPECJOBS = Specificity of Job Descriptions
- ROLEAMB = Role Ambiguity
- ROLECON = Role Conflict
- GOALCLR = Perceived Organizational Goal Clarity
- PERSPRO = Perceived Flexibility of Personnel Procedures
- EL = Expectancy I
- ELIEXT = Expectancy II-extrinsic incentives
- ELINT = Expectancy II-intrinsic incentives
- ESV = Expectancy II-"meaningful public service"
- TSKVARY = Perceived Task Variability
- TAKDIFF = Perceived Task Difficulty
- INVLMNT = Job Involvement
- MOTVN = Motivation
- INOVINT = Interest in Innovation

(Note: All scales based on self-report via questionnaire responses, and therefore all might be considered "perceived").

KEY to tabular data on following pages:
The first figure reports the correlation coefficient for the two variables (row and column). The second figure, in parentheses, reports the degrees of freedom for the test of significance. The third figure, preceded by "S=", gives the level of significance of the correlation coefficient.

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Appendix E (Continued)
FOOTNOTES

1 In a phone conversation with Professor Guion concerning these scales, he told me that they had had problems with this scale of motivation, in that they were losing the separation of the subscales. He felt that I would have to develop my own scales, if I wanted a scale of motivation based on self-report. He said he was not at all optimistic about the prospects for development of generally-applicable scales of work motivation.

2 For a more elaborate review of the literature on "technology," see Backoff and Rainey (1977).
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