INNOVATION IN MUNICIPAL PERSONNEL OFFICES:
AN EXPLORATORY STUDY OF TWO
FEDERAL REGIONS

DISSERTATION

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By

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The purpose of this research is to investigate the innovation process in municipal personnel offices by answering three questions. What factors are related to the innovativeness of personnel offices? What factors are involved in the diffusion of personnel innovations from one city to another? What intraorganizational processes are involved in the decision to adopt personnel innovations? This research focuses on ten innovations selected by a panel of both personnel academicians and practitioners. Data collection involved a mail survey sent to all cities over 25,000 in the Chicago and Dallas federal regions and in-depth interviews with personnel directors in twenty-two cities.

Personnel innovativeness was measured by using indicators of the speed of adoption, extent of implementation, and a combined indicator for each of the ten innovations. Independent variables included characteristics of the community, organizational environment, personnel offices, and the directors' perceptions of the innovations themselves. Correlation and regression analysis reveal only modest
associations with a few of the independent variables employed, thereby indicating that no particular city or organization is most conducive to personnel innovativeness. The data do indicate, however, that certain variables produce a greater change in the innovativeness measures than others; the directors' perception of innovation radicalness has a negative effect on innovation, while city size, director tenure, and the perception of a governmental mandate are positively related to change.

Innovation diffusion is investigated by examining the rate and extent of adoption and the directors' assessments of information sources and by identifying innovation leaders. Adoption graphs reveal that none of the cumulative adoption patterns approximate the "S"-shape evidenced in earlier studies and that virtually all the innovations began or experienced a rapid increase in adoption around 1971-1972. Directors' ratings of informational sources indicate federal, state, and regional agencies are not likely sources of information, while journals, meetings, other cities, and individuals within the city are more acceptable. Directors believe that federal assistance is of little value and that state and regional assistance is unavailable. Six cities are identified as innovation leaders, although they have few common characteristics and are seldom mentioned as sources of information by other cities. Most directors named cities
within their own state and of the same size when looking for information about personnel innovations.

Interviews with directors concerning the adoption process reveal the director and the city manager are often primary motivators of personnel innovation due to their professional experience. The city council usually becomes involved only if the change requires modification of existing ordinances or if added money is needed. Factors these officials believe are important to adoption include director professionalism, proper staffing, and outside assistance early in the change process and political and communication skills during adoption and implementation. Economic resources and the priority the personnel function is accorded are important throughout the process of innovation.

The implications of this research are both practical and theoretical. Officials interested in more complete innovation diffusion would do well to stress the non-radicalness of the change and any applicable governmental mandates. Federal, state, and regional governments can obviously improve both the availability and applicability of personnel information. In terms of theory, the research offers support to both the rational and power-based models of decision making and change, although the latter seems most appropriate in explaining radical change.
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CHAPTER I

INNOVATION IN LOCAL PERSONNEL OFFICES

Introduction

Public managers today are faced with unparalleled pressures for change. The "tax revolts" of the past few years are only the most recent manifestations of those pressures, resulting in what has now become known in professional circles as "cutback management." Although the problems associated with change and adaptation are apparent at all levels of government, they are particularly acute at the municipal level. Local government managers are now called upon to provide the greatest amount of direct public services available in this federal system, implementing national policies while remaining responsive to the demands of their respective constituencies.

Personnel managers in municipal governments have faced more of those pressures over the past fifteen to twenty years than virtually any other area of government. Efforts by federal and state agencies to enforce national goals such as employment equity, representativeness, and efficiency have fallen largely upon the shoulders of local human resource agencies. These pressures, combined with the explosion in state and local employment over the past two decades, have
dramatically changed the structure and function of the municipal personnel office. Once viewed as somewhat of a record keeping-caretaker activity, personnel management has emerged as not only an important part of any modern organization but also as a dynamic force for change across virtually every functional area.

Despite a wide variety of growing intensity of research on the subject of change, we still know comparatively little about the processes involved or the factors which are believed to facilitate its occurrence. One finding that has emerged from this body of research is that no general theory of change is possible; the nature of the change process appears to operate by a completely different set of rules in each functional area studied. This research intends to add to the body of knowledge about change by investigating the phenomenon in the area of municipal personnel policy.

This chapter provides a general overview of the literature associated with organizational policy change, introducing the present research on municipal personnel innovation. Upon completion of this chapter, the reader will be able to understand why many organizations, particularly public organizations, are often static systems, and will become aware of some of the general strategies that can be used to create conditions for change. Particular attention will be paid to the often turbulent environment of the local personnel office. After noting the relevance and potential
benefits of innovation in this area, the author reveals significant gaps in prior research as well as some of the methods which will be used to avoid them in this study.

Change: Ubiquity and Uncertainty

The often-quoted aphorism that "the only thing constant is change" has never been more appropriate than today. Virtually every segment of society is in a state of flux, the influences of which affect the lives of all individuals. Although citizens of other nations are in similar states of transition, Americans seem to have a particular obsession with change. This preoccupation is clearly not a recent phenomenon, as one need only reiterate Alexis de Tocqueville's observation in 1935 that change "is the general and systematic idea upon which your great people direct all their concerns."

The 1960's were perhaps the most tumultuous decade in United States history. Demographic, technological, political, and social changes indelibly marked those years, the effects of which reverberated throughout the 1970's and continue into the 1980's. The 1970's were also a time of change although more subtle, solidifying the advances of the prior decade while moving into new areas. One need not recite examples of these tumults—we live them in our daily lives.

Change is a necessary ingredient in society, but it is not always easy to accomplish or to deal with when it does arrive. In fact, most individuals remain reluctant to
undertake innovative change because of the often severe costs associated with such ventures. Decision makers desiring to alter current forms and procedures must not only have the ability to discover and utilize the information and resources needed for such an effort, but must also have the courage to take what are at times momentous risks. Information is never complete and resources never sufficient. One simply cannot foresee all the potential costs, cannot be sure that the benefits of the change will materialize, or, if they do, whether they will be worth the costs incurred. Just as there are examples of disorder through lack of change, so are there many instances where change has been the precipitator of disorder—and personal risk. As one author aptly stated, "the innovator is like Prometheus, and what happened to him is hardly encouraging" (42, p. 66).

Organizational Change

Organizations are conscious assemblages of individuals designed to be used toward some end (3, p. 73). Through these instruments, man has been able to cope with his world and accomplish what cannot be done alone. The success of organizations in accomplishing these tasks is reflected by their current omnipresence—we have become, to use Presthus' (55) phrase, an "organizational society" of the highest magnitude.

As instruments and reflections of man, organizations also exhibit the human paradox about change. Needing change
to survive while fearing its outcome, organizations are simultaneously attracted to it and recoil from it (6). The security of organizational stability must, however, give way to adaptation, for the instrument's fate is clearly that of its master. Loss of this crucial tool of survival would spell chaos in short order. To quote one organizational scholar, "the capacity of modern man to control his destiny in a changing or organizational society hinges upon his collective ability to change the key formal organizations" (12, p. 441).

Thus, in a very real sense both organizations and society have no choice in the matter, for adaptation is essential to survival. But the converse is equally true—organizations must also maintain a certain level of stability. As was the case with individuals and societies, history is replete with examples of organizations which have failed due to an inability both to respond to their rapidly changing environments and to realize the need for internal consistency. Wright (79, p. 29) defines internal consistency as "the design and management of subsystems of activity that are supportive of each other and, in tandem, serve as the means to goal attainment." Without adequate cohesion of these subsystems, without the ability to utilize the naturally occurring conflicts in these contrived social systems toward the achievement of the organization's purposes, the result will be the same as a lack of environmental consonance.
The entity will explode from within, however, rather than collapse due to external forces.

Organizational leaders must, therefore, attempt to strike a productive balance between these converse forces. They must counterpoise the demands of the organization for both maintenance and innovation.

In simple terms, you cannot maintain a system without innovation, nor can you innovate without maintaining the system. The manager faces the challenge of balancing the maintenance demands and the innovation demands (54, p. 164).

Unfortunately, this challenge is only rarely met. The manager's role is most commonly perceived as one of internal coordination, not adaptation.

... in the excitement of this managerial balancing act ... the maintenance aspect of the manager's function seems to get more attention. Innovation is left to the staff specialist (internal consultant) or outside consultant. While the operating manager may year for the change role, the maintenance aspect of his function consumes his time, narrows his vision, truncates his time horizon, saps his energy, and in sum seduces his attention to the flow of goods and services through the system (54, p. 164).

It is important to realize that the systematic non-adaptive nature of most organizations is not due to an unwillingness of managers to change, rather to the fact that the more pressing and immediate production concerns of the enterprise demand the lion's share of their attention. Managers simply must respond to these pressures for production and efficiency, and as a result their change role often assumes secondary importance.
This lack of emphasis on adaptation and change by managers has led many scholars to note the phenomenon in society and to comment on its likely implications. Victor Thompson (73, p. 5) observes that "most modern organizations in government and business are a bit under-innovative," and asserts that their lack of innovation is a direct result of their bureaucratic design. Warren Bennis (8) goes so far as to contend that today's bureaucracies are incapable of achieving sufficient change within a rapidly evolving society, and that they will cease to exist within twenty-five to fifty years as a direct result.

Innovation in the Public and Private Sectors

Although the demise of bureaucracies is hardly apparent some fifteen years after Bennis's prediction, most observers agree that the innovative capacity of organizations in both the public and private sectors can be markedly improved. Much is often publicly made of the creative or adaptive abilities of commercial entities, but the private concerns of the business community for improved innovativeness can be vividly seen in their calls for more competitive technologies to spur lagging industries. Several articles in business magazines and journals lament the "breakdown of United States innovation," often blaming this problem on supercautious management (the "MBA syndrome") or excessive governmental regulation (9, 74). These journalistic critiques are
butressed by frequent comparative analyses of American and foreign businesses' innovative capacity. One such study of 500 innovations recently conducted for the National Science Foundation indicates American and British industries lag far behind their West German and Japanese counterparts (22, 31).

Organizations in the public sector, particularly in state and local governments, are almost constantly characterized as non-innovative. Criticisms of these governments in this regard and the attendant reasons for their lack of innovativeness are so often repeated they have almost become cliches. In fact, some observers even argue that these organizations are inherently non-innovative.

By the late sixties, our state and local governments and community institutions faced problems of a magnitude unique in their history and, almost everywhere, they were doing badly with them. The external world was and is placing enormous pressures for the adaptation of the cumbersome machinery of state and local government to new problems and challenges. A need has been created for large-order increases in the rate of innovation and for the development of answers for problems where both traditional approaches and the new ideas tested to date have been failures. Moreover, the pressure on fiscal resources has become acute, and there is a parallel demand for greater productivity and efficiency in the provision of the routine services of government.

... Our state and local governments are superbly equipped to do what they did yesterday. But these governments are not designed to be highly efficient, responsive, flexible, or innovative. Any effort in this direction must run against the momentum of the system (38, pp. 4, 8).

Hayes and Rassmusen describe the symptoms of such maladies as the paucity of self-generated innovations, the slowness
of these organizations to implement change, and their ignorance or perversion of program guidelines. They believe their cause lies in the inherent lack of surplus energy in local government needed to devote to innovation. Public managers are so pressed to manage internal affairs that they simply have little of the time or few of the resources necessary to devote to change.

Crawford (14) describes many of the same symptoms, but believes the fractured structure of local governments is to blame, as it inhibits efforts to increase the use of science and technology in these agencies.

. . . the far-flung, fragmented market afforded by local governments presents severe difficulties to industrial distribution of advanced technology products . . . in fact, the general arrangement of intra-governmental science relations in the United States does not facilitate continuing accomplishment of problem definition and research priority-setting for public users, or systematic transfer of scientific and technological contributions for use in policy making and governmental operations at state and local levels (14, p. 6).

Baumol (5) similarly argues that public sector organizations are inherently under-innovative and that productivity increases are impossible because they are intrinsically labor-intensive. He further asserts the gap between the "progressive" (i.e., business) and "non-progressive" (i.e., governmental) sectors will inexorably widen because governments are denied the traditional routes to change the improved output—capital accumulation, economies of scale, and technological development. Other frequently cited
barriers to innovation in local governments include lack of money, lack of systematic demand for increased efficiency, short-term time horizons of elected officials, opposition by unions and other affected groups, lack of trained personnel, and "incentive" systems which penalize poor performance more than they reward good performance (1, p. 6; 23).

In defense of these governments, commonly-made assertions such as these may be valid only on the surface, for closer examination of public organization's actions often reveals a more innovative character than first glance would disclose. For example, an underlying normative argument is commonly inferred that each new innovation that comes along should be adopted. However, any perceived "resistance" that public managers exhibit may "reflect rational considerations concerning the cost-effectiveness" of the innovation (24, p. 16). The official may be "very reluctant to invest capital in unproved new technologies or to try untested new policies" because of a perceived duty to guard the public fisc (53, p. 2).

In fact, studies comparing public and private organizations in terms of their innovative capacities frequently determine there is no significant difference between the two generic groups when extraneous factors are controlled (57, 64). There is even some evidence to support the counter argument that public organizations are even more innovative than their private sector counterparts. According to Feller
and Menzel's (24) reanalysis of Yin and others (80), cities tend to use innovations which may not lead to service improvement (i.e., excess innovation or innovation for innovation's sake) for the very reasons they are presumed to be under-innovative—lack of measurable outputs and incentive systems. However, this body of information is in the minority, for most comparisons conclude public organizations are either less innovative or no different from business organizations. Neither group, however, can claim to be highly change-oriented.

General Innovation Strategies

Recognizing the predominance of stability in many of today's organizations and the very real need for change therein, today's managers often employ one or more of several general strategies designed to improve the adaptive capability of their enterprise. These themes or strategies are usually meant to promote the requisite processes and climate necessary for change, as opposed to the promotion or generation of specific innovations. Three will be outlined here—organizational development, functional specialization, and periodicity. Each has its own particular advantages and disadvantages, depending upon situational variables inherent in its use and the degree of direction needed.

The term organizational development (OD) refers to a set of techniques designed to increase the capacity of an
organization to accept change and increase the entity's effectiveness (6, 32). The particular techniques include data gathering, organizational diagnosis, sensitivity training, team development, and use of change agents. Targets of these methods are usually such behavioral aspects as individual values, group norms, and interpersonal relations.

The underlying theme of these organizational development methods is to teach members of the enterprise to accept change as an on-going process. Innovation is viewed as the norm and such organizational characteristics as structural looseness, changing individual roles, professional and programmatic diversity, open communication, and group decisions are strongly promoted. This technique is probably best suited when radical or large-scale innovations are contemplated (63, pp. 290-291).

A second method which may be useful in promoting organizational innovation is **functional specialization**, or the designation of the adaptive role of the system to a particular subunit. Long considered a basic tenet of managerial thought, this change technique is perhaps the most commonly employed (e.g., research and development units) and has the potential for being the most efficient means of accomplishing innovation. By altering the level of functional specialization in the organization, one can theoretically alter the structure of the system to correspond
to the particular phase of the innovation process or other environmental conditions. Unfortunately, this tactic may not always be successful, for research and development reports may be ignored by relevant decision makers, units segregated from the body of the organization, or financial support be withdrawn. Such incidents have been known to occur in local government where planning departments sometimes operate in name only.

Another potential hazard of this method is pointed out by Victor Thompson (73). Specialized subunits often have a very loose internal structure and environment for planning purposes and creativity, while the rest of the organization is tightly knit for implementation. A "corrosive effect" may occur as a result of the interaction of these two very different environments, in which the looseness of the planning organization may detrimentally affect the other areas. Despite these drawbacks, functional specialization may be the most feasible of the approaches to facilitate small-scale innovations, or to protect change agents through compartmentalization.

Periodicity refers to the utilization of alternating organizational decision-making forms and structures. One increasingly common manifestation of this general category is known as a "matrix" or matrix structures, where a project framework is superimposed upon a basic functional hierarchy. The matrix provides for overlapping authority, as members
have a dual assignment to both their project and their functional department. Its theoretical advantages include manpower flexibility, faster response to program needs and client desires, and overall improved productivity (11, p. 172). Other common examples of this approach to change include the rotation of top administrators to similar operational climates but with differing areas of functional responsibility, regular infusion of the organization with new personnel from varying backgrounds, especially in the organizational boundary positions (12), and the development of parallel groups to work on the same problems (70, p. 475).

Periodicity is not as encompassing a technique as OD or functional specialization, generally being much more limited in its scope and impact. However, it should be considered as a powerful sub-strategy, fitting in well with Bennis's (7, p. 261) call for temporary organizations.

These three broad categories of change inducements are commonly cited in the managerial literature, but should not be considered either comprehensive or unique. John W. Gardner's (30) rules on "how to prevent organizational dry rot" are very similar to many of the ideas presented above—proper recruitment and development of talent, a hospitable environment for the individual, built-in provisions for self criticism, fluidity of internal structure, adequate internal communication, avoidance of ruletropism (excessive rule adherence) and vested interest, a forward looking mentality,
and a pride in one's workmanship. Unfortunately, neither Gardner's rules nor the general prescriptions outlined above can adequately guide the manager in search of change. They are instead much more similar to the "proverbs of administration" outlined by Herbert Simon (71) than effective directions for innovation and adaptation. What is needed is an understanding of the conditioning environmental variables and the types of organizations in which each can be most successfully employed.

Relevance of Public Innovation Research

Whether government organizations are inherently under-innovative or not, it remains clear that public agencies are today currently facing innovation and leadership crises of momentous proportions. In 1950, Hyneman (40, p. 26) observed that agencies "may fail to take the initiative and supply the leadership that is required of them in view of their relation to particular sectors of public affairs." His observation falls unnervingly close to prophesy, especially in light of the unflattering remarks of their current critics. His comments lead one to view these agencies' failures as being of both a reactive and proactive nature---they have not adequately responded to expressed desires or to those needs not expressed or expressed only weakly. Occupying a strategic position in society, these organizations are expected to lead change as they are in a better position to
see these problems and address them than most other societal members (48, p. 111).

Such observations should not be construed as a blanket criticism of all public offices, for many have taken bold approaches in both recognizing and responding to societal needs and pressures. These demands for change have confronted public managers at an unprecedented rate, coming from the publics they serve, their political superiors, and their own professions. A perceived low innovation rate is, perhaps, understandable when one considers the number of general (e.g. management by objectives or zero-base budgeting) and specific (e.g. new traffic control systems) innovations they have had to confront in recent years.

Still, we have little idea why so many of these changes failed in some settings and succeeded in others. Only small amounts of data are available to comprehend why certain changes are more readily accepted by all organizations. Yet the benefits of such research are real. Additional information on public innovation has the potential for significant payoffs, both in terms of a theory of social change and in improved organizational productivity.

Social Change

Virtually all the upheavals discussed thus far may be grouped under the general heading of social change. Social change is the "process by which alteration occurs in the
structure and function of a social system" (60, p. 3), and has been a topic of great concern to scholars in a variety of disciplines. Most of these studies, either explicitly or implicitly, discuss the twin processes of adoption and diffusion in relation to change. In fact, Barnett (4), Fliegel and Kilvin (27), and others assert that an understanding of the processes of innovation and diffusion will provide the key to the broader understanding of change.

The process by which an innovation is spread through communication channels to members of a social system... over time is called diffusion. When an innovation is diffused and adopted (either symbolically or behaviorally) by a sufficient number of the relevant units in a social system to register an impact (becoming an integrated part of the normative patterns in the system) it is said that a social change has occurred in the system under discussion (81, p. 14).

Thus, because public organizations comprise a significant set of social systems (levels of government, professional associations within levels of government) and the topics they address are of vital concern to all members of society, research in the area of public innovation can carry a significant theoretical payload.

The heuristic value of the study of innovation to academia is well-established, although its specific applicability varies from discipline to discipline. Economists have less interest in using their research results than political scientists or sociologist, due largely to the generally competitive economic nature of the markets studied. Social scientists, however, probably have less interest in
the utility of research results than non-academicians, particularly businesses and federal government agencies. Such research is often viewed as complementary to intervention theory and techniques, potentially furthering the goals of efficiency and equity (77).

**Productivity**

One of the most commonly cited examples of these innovation research payoffs is in productivity improvement, for the introduction of innovative approaches is believed to be a key factor in improving organizational performance. Efforts in recent years to improve productivity through "cutback management" are current examples of this efficiency emphasis and the broader set of pressures placed upon public managers. Numerous studies have provided evidence that "substantial increases in productivity can be made in public sector organizations through innovative management techniques, procedures, and hardware products" (57, p. 342; 36,; 50; 51; 52).

These "hardware products" have been the target of much of the public innovation research, and comprise the largest portion of productivity studies. M. Frank Hersman, Director of the Office of Intergovernmental Science and Research Utilization for the National Science Foundation, defines what he terms "public technology" as technology which is explicitly responsive to the policy goals and operational requirements of
governments; it is technology for the civilian sector designed to supply technical alternatives in carrying out governmental roles and missions (14, p.).

Recent research efforts in this area have investigated the diffusion and adoption of numerous such technologies in a variety of governmental agencies, including the use of information processing tools and fire-fighting equipment in local agencies (20, 23). The advantage of investigating these innovations is that adoption is usually easy to identify and study. However, Peter Drucker noted as early as 1955 that

Among the major innovations of the past ten or fifteen years . . . the basically non-technical innovations have had the greater impact . . . and have contributed more to the increase in productivity in this country, than all technical innovations . . . . In the long view of history it is for social innovations--and not technical ones--that America may be best remembered (18, pp. 15-16).

In light of Drucker's comments, the emphasis on technological innovation appears misplaced. Research is needed in the adoption and diffusion of non-technical (i.e., non-hardware) innovations.

**Municipal Personnel Innovation:**

*Purpose of This Research*

The preceding sections present many crucial points upon which this research is based; so, it is prudent to review them at this time. First of all, change is clearly a requisite of any functioning entity, but is particularly important to man's basic instrument of survival--organizations. It is equally clear that change is not easily accomplished,
and, as a result, many organizations are less innovative than perhaps they can or should be. Although some general prescriptions for organizational change have been offered in the literature and in practice, they are generally lacking in sufficient specificity to allow managers to employ them successfully. Thus, innovation research can have significant payoffs in terms of both theories of social change and in productivity improvement for organizations.

Public organizations are especially criticized for being non-innovative, even to the point that it is assumed they are inherently static, non-innovative systems. Yet, today's public managers are increasingly called upon to administer their duties in the most efficient and productive manner possible and to be responsive to the needs of the publics they serve. The demand for service improvement is particularly acute in municipal governments, where a shrinking public fisc and the proximity of their constituency places enormous pressures upon these managers to increase organizational productivity and responsiveness.

Municipal personnel offices are perhaps one of the best examples of the targets of such pressures for change, as numerous legal, political, and societal tumults during the past two decades have radically altered the personnel function. Raymond A. Shapek (68) notes three of these influences from the federal sector which have made state and local personnel resource management a crucial issue for the 1970's and
1980's--the rapid growth of these governments' employment and payroll costs, the added managerial responsibilities as a result of the increasingly complex requirements of the federal grants-in-aid system, and the complications of the personnel manager's role as a result of major national legislation.

The growth of state and local governments since 1955 has been nothing short of phenomenal, and was largely due to revenues made available by the federal government. From 1955 to 1973, employment in state and local governments increased by 117.5 per cent compared to 17.1 per cent at the federal level and 35.8 per cent in the private sector. By 1974, four-fifths of all civilian governmental employment was in states and municipalities (75). As a result of these general changes and the more explicit emphasis on local service delivery in the "new federalism" (President Richard Nixon's service decentralization) of the 1970's, human resources became these governments' largest budget item, comprising as much as 80 per cent of some cities' expenditures. Thus, sheer numbers and the budgetary importance of effective personnel management has placed additional pressures on these local officials' roles.

The shifting emphasis to local service delivery was also accompanied by additional federal and state dollars, along with sometimes explicit conditions for their expenditures. The proportion of state and local budgets from the
federal government more than doubled from 1954 to 1974, rising from 11.4 per cent to 25.5 per cent. State aid to local governments increased dramatically as well, from 41.7 per cent of locally derived revenues in 1954 to 57.5 per cent in 1974. Almost all of the grant programs represented by these funds were passed by Congress and state legislatures with accompanying administrative regulations promoting federal or state intervention in local personnel practices. A survey of 221 grant programs conducted by the Federal Assistance Review Task Force for the Department of Labor discovered 172 specific instances of requirements or procedures related to personnel administration (72, p. 70).

The most visible manifestation of these federal actions has been in the imposition of federal "merit system" standards, initially included in the Social Security Act of 1935.

It should be noted that not all actors view this intrusion as desirable. Robert Craig, of the National Association of Counties, believes federal intervention is "inappropriate because it usurps local prerogatives, it dictates use of tax revenues used by state and local governments and it violates the intergovernmental partnership" (13, p. 69). Others, such as the American Federation of State, County, and Municipal Employees president Jerry Worf, favor increased federal action and leadership to bring uniformity to these 80,000 governmental units and to improve comparability with their private sector counterparts. Desirable
or not, the point remains clear that these mandates have significantly increased the personnel manager's duties and responsibilities.

The final area of federal influence involves enactment of numerous pieces of legislation affecting personnel administration, both financially and in terms of social impact. These include, but are not limited to,

(a) the Comprehensive Employment and Training Act (CETA) and a series of other programs administered by the Department of Labor (DOL), including the Occupational Safety and Health Act of 1970 (creating such agencies as the Occupational Safety and Health Administration in the DOL, the National Institute of Occupational Safety and Health in the Department of Health, Education and Welfare, and the independent Occupational Safety and Health Review Commission), the Age Discrimination Act of 1967, and the extension of the Equal Pay Act of 1963 to state and local governments by the Fair Labor Standards Act,

(b) the 1972 Equal Employment Opportunity Act, through which state and local governments became subject to the provisions of Title VII of the Civil Rights Act of 1964 prohibiting discrimination in employment practices. These measures are vigorously enforced by such agencies as the Equal Employment Opportunity Commission, the Department of Justice, and the Department of Health, Education and Welfare. Coincidental with these Congressional and administrative
steps in equal employment opportunity have been numerous
court decisions such as the landmark *Griggs v Duke Power
Company* (401 US 424, 433), which affirmed the rights of job
applicants to a fair and valid selection and promotional
process, and

(c) numerous executive orders and court decisions
relating to collective bargaining and labor-management rela-
tions. Executive Orders 10988 issued in 1962 and 11491 in
1969 clearly supported union recognition in the public sector,
and provided the impetus for a great deal of local action in
this area. Over two-thirds of the local governments respond-
ing to an International City Management Association survey in
1974 reported collective bargaining agreements with local
employee associations. Although the average number of bargain-
ing units these cities must deal with is five, the City of
New York must work with 242 separate employee groups (68,
p. 44).

These national policies, along with the increased size
of local governments and the numerous conditions of grants-
in-aid, have tremendously altered municipal personnel
managers' roles and greatly increased the pressures placed
upon them for change. Few other areas of government have
had to face more of these adaptational pressures.

Unfortunately, not all municipal personnel offices are
responding to these challenges at the same rate. While some
have significantly altered their procedures to fit these
changing conditions, many continue to use outmoded and, in some cases, illegal practices. A survey was conducted for the National Civil Service League in 1969 to determine the "state of the art" of the civil service in the United States. Covering over 600 of the largest units of government which employ over 75 per cent of the non-teaching state and local public employees, the survey found many problem areas (65). Also, a series of critical case studies of municipal personnel systems brought together in a ten-volume series of "reference files" was published at about that time (56), generating a great deal of controversy in the personnel literature (13, 28).

The product of these studies was an updating of the National Civil Service League's Model Public Personnel Administration Law in 1970, the sixth Model Law since the League wrote the first U. S. Civil Service Law in 1883 (the federal Pendleton Act) and the first update since 1953. The League served as both the lightening rod for complaints and a source of technical assistance for implementation of these guidelines. Among the complaintants was, interestingly enough, the United States Civil Service Commission, which particularly objected to the advocacy of compensatory programs for the disadvantaged (e.g., test validation, elimination of the rule of three).

As mentioned above, several government grant-in-aid programs have also been developed in an attempt to improve
managerial capacities and speed the use of improved procedures. One such program is based on the Intergovernmental Personnel Act of 1970 (IPA, Public Law 91-648), its original purpose being to "strengthen and increase the management and training of state and local government personnel" (49,). The IPA program provides for direct grants to states and cities, technical assistance, temporary assignments between state, local, university and federal personnel, the admission of state and local employees to training programs, the development of cooperative recruitment and examining programs, and the administration of merit employment standards applicable to over thirty federal grant-in-aid programs (70 per cent of all federal grant funds).

In the first three years of the program, over 7,000 contracts were made for technical assistance, 1,382 intergovernmental personnel transfers were arranged, 35,000 state and local employees attended federal training programs, and eighteen job information centers and twelve intergovernmental examining arrangements were opened. However, it has been estimated that the level of funding available meets only 0.5 per cent of the total potential for assistance. In the words of one observer, "today, IPA is only a small remedial measure providing a modicum of relief from the growing pressure of federal influences on state and local personnel systems" (68, p. 49).
It is therefore apparent that (a) municipal personnel innovation is a serious challenge to local managers, (b) many local systems are not performing at levels prescribed in national legislation and the Model Personnel Law, (c) federal programs such as IPA are attempting to address this problem, but also (d) limitations of funds and talent are preventing this program from realistically meeting the needs expressed in the surveys of current practice. It may also be presumed that because little information is available concerning the innovation adoption and diffusion processes in these local offices, these federal programs will not be as effective as is possible. As a result, national goals such as improved governmental productivity and employment equity may not be achieved. A better understanding of the adoption and diffusion of policy innovations by municipal personnel offices (as they entail the major work of personnel offices and have a higher productivity payoff than technical innovations) could encourage improved organizational performance and fairness as well as helping to understand the broader phenomenon of social change.

With these considerations in mind, this research proposed to begin that process of learning by investigating the innovation process in municipal personnel offices. Because the topic is so broad the research can only be considered exploratory at best. Three sets of questions provide the basic framework for this study.
(a) Why are some municipal personnel offices more innovative than others? What factors seem related to their level of "innovativeness?"

(b) How do personnel innovations spread from one organization or city to another? What forces are involved in that diffusion process?

(c) What intraorganizational processes are involved in the actual adoption decisions in municipal personnel innovation?

A complete description of the research design used in answering these questions is provided in the next chapter. Basically, all cities over 25,000 in two federal regions—Regions V and VI (Chicago and Dallas respectively, N = 288)—were surveyed concerning their use of ten personnel innovations. On-site interviews were also conducted in twenty-two of the cities for more in-depth study.

Innovation Research

Before detailing the particulars of the research methodology and the specific hypotheses to be tested, one must note the contributions of previous innovation research and how this study fits into that body of literature. As was stated earlier, explicit research into the subject of innovation spans nearly forty years and a wide variety of academic disciplines. The volume and variety of such analyses are perhaps best illustrated in an exhaustive summary of the literature compiled by Everett M. Rogers and F. Floyd Shoemaker (10), in which they compiled the results of research efforts from over 1,500 books and articles.
representing eighteen distinct fields of study. This number is three times the total enumerated by Rogers in 1962 (58).

If the growth of innovation studies has been only constant over the past decade, that total is now well over 5,000.

In the words of Downs and Mohr (17, p. 700), two highly regarded scholars in the field,

innovation has emerged over the last decade as possibly the most fashionable of social science areas. . . . This popularity is not surprising. The investigations by innovation research of the salient behavior of individuals, organizations, and policies can have significant social consequences. [These studies] embeue even the most obscure piece of research with generalizability that has become rare as social science becomes increasingly specialized (17, p. 700).

Although a debt of gratitude is owed to disciplines as disparate as agriculture and anthropology, this research draws heavily from and represents a melting of two general approaches to the study of innovation—public policy analysis and organization theory.

Public Policy Innovation

The study of policy innovation sprang from a broader focus on the factors related to state variations in policy outputs or expenditures. Solomon Fabricant (21), an economist, was the first to use quantitative techniques in the search for policy determinents. His research revealed that three independent variables—per capita income, urbanization, and population density—accounted for 72 per cent of the interstate variation in expenditures for 1942. Income
was the most important factor in most policies, although its importance varied considerably across program areas.

Subsequent works by other economists appeared in the National Tax Journal in the 1960's (2, 25, 26, 67). These reports generally verified the basic conclusions of Fabricant, but by 1957 the importance of these economic variables declined to the point where only about 50 per cent of the expenditure variance was explained. In addition, much of their work was atheoretical, as the prediction of social forces, not their explanation, was of utmost concern. This phenomenon was perhaps due to the nature of their discipline.

In 1963, Dawson and Robinson (15) brought this methodology to political science in their challenge to traditional explanations of welfare expenditures. Many prominent political scientists of the period such as V.O. Key (43) and Duane Lockard (45) contended that the political characteristics of a state, particularly its level of party competition, were directly related to and in fact precipitated that state's level of welfare expenditures. Political leaders were presumably held accountable by and were responsive to the needs of the public to a higher degree in those states not dominated by one political party.

Using a simple systems model Dawson and Robinson demonstrated this effect was spurious, as the application of controls for economic and social variations eliminated any competition-policy relationship. Environmental factors
were found to be of much greater value in explaining inter-
state policy variations. Their research is significant in
policy analysis for at least two reasons: (a) it was motivated
by theoretical considerations (i.e., the rejection of the
political hypothesis) and (b) it was guided by a model of the
policy process.

Thomas Dye's *Politics, Economics and the Public* (19)
reached conclusions similar to Dawson and Robinson's research,
and firmly entrenched this systems model methodology into the
discipline. Even though Dye utilized a number of additional
variables in his analysis, about two-thirds of the variation
in state policy outputs remained unexplained. He was the
first to admit that politics may have more impact than was
then measurable, rejecting any assertions of "environmental
determinism." During the late 1960's the methodology of
policy analysis became much more refined. The aggregation
of state and local expenditure patterns and then attempts to
explain them with state political variables was soon dropped
(69). There was also a growing dissatisfaction with the
reliance upon budgetary expenditures as the sole means of
measuring dependent policy outputs (29). It was out of
this dissatisfaction that policy innovation research was
born.

Jack Walker's (76) study of state policy innovation
marked the first attempt to consider why a policy had been
initiated in the first place, rather than seeking to explain
its levels of budgetary support after adoption. After all, income, urbanization, industrialization and educational status are not themselves inputs. In systems terms such conditions may create activity which leads to the articulation of demands and supports, but these conditions should not be confused with the process. In the words of Jacob and Lipsky (41, p. 514), "social structure, political culture, political institutions and elite perceptions intervene between a given environment and the articulation of demand."

Someone must make those innovative decisions.

Walker developed an innovation score for each state based upon the legislature's average speed of adoption of eighty-eight programs covering a variety of topics. He found correlations of this score with both economic variables (particularly wealth and industrialization) and at least one political variable (apportionment). Walker also investigated the process of policy diffusion among the states by factor analyzing the matrix of pair-wise comparisons of all state innovation scores on all of the policy issues. He discovered a series of regional groupings of states responding to new programs as a unit, apparently based upon the specialized communication systems among the states.

A number of subsequent studies have utilized Walker's basic methodology, building the body of policy innovation knowledge. Gray (33) reanalyzed Walker's data on the dates
of adoption of these innovations, concluding that the patterns of diffusion and correlates of adoption vary by policy area. Her contention was further verified by Grupp and Richards (34), Rose (61), and Light (44). Yet in all these studies the impacts of bureaucracies are virtually ignored. According to Downs (16, p. xv),

quantitative research into the determinants of public policy has . . . consistently neglected to include independent variables that represent characteristics of bureaucracies, their environments, or bureaucratic politics.

Bureaucracies are responsible for both making and implementing policy in most modern governments (46, 62). The delegation of these duties to the organizational arm of government has occurred because elected officials increasingly do not have the time, information, or expertise needed to address many of today's issues. Even if they did, they would probably find it more politically expedient to avoid them for fear of alienating one group through their decisions in favor of another. As a result, bureaucracies are increasingly charged with the initiation of public policies.

Many of the most important and visible policy decisions at all levels of government involve new programs or qualitative departures from traditional operations, and these decisions are increasingly being made in a bureaucratic context. In fact, the task of innovating has become an integral part of the bureaucratic mandate (16, p. 15).

The neglect of bureaucracies in policy research is a significant lacuna, and is one aspect of this body of literature greatly in need of further study. It is
theoretically possible that the specification of policy-relevant organizational characteristics and actions may introduce a set of variables sufficiently strong to challenge the socioeconomic characteristics which have for so long dominated this field of study. The omission of this set of variables to this point has been due to a number of factors, including the costs of securing the data, a legislative bias in political science, a lack of knowledge of the subject area, and a reluctance on the part of organization theorists to specify what aspects of organizations are most policy relevant (16).

Policy innovation research is also beset with other problems as well, problems which are applicable to the larger set of output studies. First, the findings of the research efforts are often unstable, that is, there has been no cumulative verification of disconfirmation of a variable's significance. Indices such as wealth or industrialization may explain a great deal of variance in one case at one point in time, and contribute little in another case or in the same case at a later date. Secondly, unexplained variance is still a perplexing problem. As Dye (19) and Hofferbert (39, p. 39) note, two-thirds of the variance is often left unexplained by socioeconomic variables. Only rarely have $R^2$ values exceeded .4 or .5. Finally, these studies also suffer from prescriptive sterility, as the results are seldom useful to policy makers. What is needed
is a statement of relevance or intent prior to conducting the research (16, pp. 9-10).

Organizational Innovation

Although one may assert that most organizational studies are, either implicitly or explicitly, studies of organizational change, an entire subset of innovation research in this area has evolved over the past thirty-five years. These inquiries comprise a small but growing portion of the total amount of innovation research. Of Rogers and Shoemaker's 1971 research compilation, only about 17 per cent (250) deal with organizational adaptation or change. By 1975 the number had grown to nearly 375, though most of these were case studies of single organizations adopting a particular innovation.

No attempt will be made to review all the relevant research in this area or to focus upon one particular study. Unlike the study of policy innovation, no single piece of research such as Walker's stands out as a seminal work. Rather, some of the existing theories of innovation in organizations will be reviewed, which will highlight the contributions of various scholars to the understanding of organizational change. Major traditions in this research will also be described, with the concentration upon the problems which remain to be solved and their relation to this research.
Major Works

In what is still regarded as one of the best theoretical pieces on organizations to date, James March and Herbert Simon focus in part on innovation and "how the cognitive limits to rationality affect the process of organizational change and program development" (47, p. 172). The principle subject of their comments is the organizational decision to search for solutions to problems perceived in the enterprise, and is largely based upon their discussion of human rationality and their "model of adaptive motivated behavior."

Emphasizing the initiation of problem solving efforts rather than the implementation of change, March and Simon posit that organizational change or innovation is often lacking because of a basic satisfaction with existing programs. Conversely, innovation will occur when organizational performance criteria are not met and the achievements of the system are judged unsatisfactory. This dissatisfaction will precipitate a search for alternative means of correcting these perceived deficiencies—what are now often termed "performance gaps." Therefore, innovation will not occur unless these gaps are perceived by relevant decision makers and the alternative means viewed as more effective means of achieving organizational goals.

Tom Burns and G. M. Stalker (10) advance a more macro-view, concentrating upon the organization as a whole instead of the motivations of individual decision makers, and on the
implementation of organizational innovations instead of their initiation. The authors' study of Scottish electronics organizations led them to conclude that no single type of organization is most conducive to innovation. Instead, the type of external environment it faces determines the type of structure and decision-making style considered most appropriate for change. A turbulent environment requires an organic type of organization, while a mechanistic organization is best suited for a stable environment (10, pp. 119-122).

Burns and Stalker also note that resistance to change by organizational members often prevents this mechanistic-organic transformation from occurring. Authority and decision making become diffused as an organization becomes more loosely structured, thereby leading to increased opportunities for conflict and resistance. Changes perceived as threatening to organizational members' status and authority are most commonly challenged.

In a similar vein, Edward Harvey and Russell Mills (37) take a political view of organizations. They assert that organizational change often results in resistance and conflict between units of the enterprise because one unit often perceives the change or innovation will reduce its influence or alter its status. Coalitions of the various subunits are formed and bargaining takes place to reduce the conflict by tempering the effect of the change or by making the change
work to their advantage. Their findings parallel the general conclusions of researchers in small group behavior in that informal groups are highly resistant to change.

The authors also point out that the problems an organization faces and the solutions it employs in response to them vary along a continuum from routine to innovative, and that the eventual solution employed is affected by a variety of internal and contextual variables. Relevant factors include organizational size, age, competitiveness, rate of technological change, diffuseness of technology, and formalization of internal communication. There is, however, a tendency to employ routine solutions to innovation-requiring problems because they do not threaten existing relations. This trend, they assert, is particularly true in old, large, and uncompetitive organizations.

James Q. Wilson views the central aspect of any organization to be its system of incentives, which he defines as "any gratification, tangible or intangible, in exchange for which persons become members of the organization . . . , and once in the organization, contribute time, effort, or other valued resources" (78, p. 196). Any innovation can, therefore, upset this delicate balance when organizational members perceive their incentives will be adversely affected.

While other authors have inferred an innovation process, Wilson delineates three basic stages—conception, proposal, and adoption or implementation of the change. The degree of
innovation in each of these phases is, he asserts, a function of the degree of complexity of the task structure and the incentive system. For example, high levels of task structure and incentive complexity or diversity are believed conducive to improved innovation conception and proposal. But while more innovations are generated and proposed with this structural and incentive arrangement, adoption is discouraged because no one group controls the organization. The recognition of this dilemma is Wilson's major contribution to innovation theory, although he provides little guidance in dealing with it.

Relying upon the works of their predecessors, Hage and Aiken's (35) work comes closest to providing a theoretical focus for organizational innovation. Their analysis focuses upon both stages of the innovation process (as in Wilson) and specific organizational characteristics considered conducive to change. Seven relevant organizational features are delineated.

(a) Complexity is defined as the "number of occupational specialties in the organization and the degree of professionalism of each" (35, p. 33). Greater complexity is believed related to innovation and change.

(b) Centralization is defined as the concentration of power and decision-making authority into a relatively few hands. An inverse relation is anticipated between centralization and change.
(c) **Formalization** is the degree of job codification in the organization. A lack of formal rules is believed conducive to innovation.

(d) **Stratification** refers to the degree to which rewards in the organization are differentiated by levels of authority. A high degree of stratification of rewards will, they predict, lower the rate of innovation and change.

(e) **Production** is defined as the volume of output, and an indication of an emphasis on quantity versus quality. A high production emphasis is believed to suppress innovativeness.

(f) **Efficiency** refers to the "relative emphasis on the cost reduction of the product or service" of the organization (35, 50). A greater emphasis on efficiency is believed reflected in a lower innovation rate.

(g) **Job satisfaction** is the degree of morale among organizational members. High morale is expected to be related to high levels of organizational change.

Unlike Wilson, Hage and Aiken do not perceive these relationships to be contingent upon the phases of their innovation process—evaluation, initiation, implementation, and routinization. Thus by ignoring these dynamic, interactive relationships and the various stages of change, their theoretical constructs take on a somewhat static form.

In what is generally considered to be the most significant contribution to the theory of organizational change
from political science, Lawrence B. Mohr (48, p. 111) posits that organizational innovation is a "function of an interaction [emphasis added] of the motivation to innovate, the strength of obstacles against innovation, and the availability of resources for overcoming such obstacles." His data concerning innovation in ninety-three public health organizations supported this proposition, leading him to suggest and test a multiplicative or interactive model of innovation.

For example, Mohr discovered when resources are high . . ., a unit increase in health officer motivation, as measured, has about 4 1/2 times the effect upon innovation as it does when resources are low . . . . This difference in slopes suggests that there is, in fact, an interaction in the relationship such that the two independent variables, motivation and resources, may well provide an accurate multiplicative prediction of innovation (48, p. 111).

Mohr's test of this proposition using his public health data indicated the empirical observations were consistent with the hypothesized relationship. Multiplicative models explained more of the variance than simple additive models.

These authors have all made significant contributions to the study of organizational innovation, and by reviewing their work one can clearly see the progression in thought from March and Simon to Mohr. Both viewed motivation as an important construct, although Mohr was able to develop and test a multiplicative model encompassing the impetus for change and other relevant concepts. Another way to grasp the voluminous research on organizational change is by noting
the basic generic types of research that have been conducted and relating their value to the research to follow. According to Downs (17), most works in this area represent one or both of two basic schools or traditions—sociological and economic.

Major Research Traditions

The sociological approach to the study of innovation in organizations is the oldest of the two traditions, borrowing from the earlier research on individuals and technological change (66). Here, organizational characteristics are viewed as possibly contributing to innovation, and have included such factors as complexity, heterogeneity, formalization, impersonal relations, job satisfaction, organic structure, rate of environmental change, contact with informal sources, slack resources, presence of a crises, specialization, presence of a conflict-reducing mechanism, and participative decision making. Earlier studies in the sociological school had focused on the attributes of the individuals who innovate (intelligence, educational status, cosmo-politeness, imaginativeness), and these attributes are still used to some extent. However, their use in most innovation research has been seriously challenged.

This mode of analysis has a great deal of applicability to studies of organizations and public policy, but often suffers from three potentially serious problems. First, most
of the focus is upon individual or structural characteristics which facilitate innovation, not factors which motivate change. Even effortless adoption may not occur if no reason for the change is present. Thus, a greater emphasis on organizational "need" or "performance gaps" is apparent, a point first made in March and Simon's pathbreaking work (81, pp. 2, 118).

Second, these need variables must be innovation specific, as very few if any organizations possess a generalized "need" for innovation in the abstract. Particular attributes of innovations which are often considered pertinent to their adoptability include financial cost, risk, trialability, compatibility, clarity of results, complexity, and relative perceived advantage. Finally, most of the sociological school's focus has been internal to the organization, ignoring the role of the environment in influencing its affairs. (A similar criticism may be leveled at organization theory as a whole.) The context in which an innovation is considered may have a significant bearing upon its adoption, and should, therefore, be included in any competent study. In sum, while the sociological approach has brought out the importance of many variables for organizational and policy studies, large categories of variables (motivational and environmental) remain ignored, the interaction of explanatory variables neglected, and the microprocesses of adoption and implementation untouched.
The economic tradition does, however, attempt to address some of these issues, but unlike sociology, has little applicability to public policy or this study. Economics-based research in organizational innovation concentrates heavily upon the motivation to innovate, particularly profit expectation variables such as size of investment and expected gain. Unfortunately these factors have little or no direct relation to the operation of most public organizations. Neither do economic studies of innovation often focus on programmatic change, characteristics of innovative organizations, or the intra-organizational factors believed relevant to innovation. Despite these shortcomings, studies in this area can significantly enrich the student of innovation's knowledge of the factors believed to stimulate change. Warner (77, p. 439) and others hold out hope that the complimentary aspects of these two basic approaches may one day be successfully merged.

**Opportunities for Future Research**

In one sense public policy and organizational studies are very similar, for they face many of the same problems. For example, both modes of analysis suffer from an extreme instability of research findings, due largely to unresolved conceptual and methodological issues. These will be more fully addressed in the next chapter. The two disciplines are also areas which are greatly in need of further research.
and fresh thinking, as neither approach has explained a
significant portion of the innovation variance.

However, the two approaches are also quite different,
and an interesting paradox appears when one considers the
topics unaddressed by each of these fields of study. Public
policy research has largely concentrated on economic and
political characteristics external to the policy-making
institutions, ignoring apparently relevent bureaucratic
variables. Organizational research, on the other hand, has
been highly inward-looking, focusing upon individual and
structural attributes to the exclusion of the environment.

It appears that research designed to merge the strengths
of each of these approaches has the potential to add signifi-
cantly to the currently available knowledge about innovation
by testing some theoretically interesting propositions. This
study will attempt to accomplish these goals by investigating
innovation in municipal personnel systems. Both bureaucratic
and environmental variables will be employed in that investi-
gation. The research will attempt to discover factors which
both facilitate personnel change (sociological agents) and
which motivate (economic determinents).

Similar gaps in the literature appear when one considers
studies which have focused upon innovation in public organiza-
tions. While there are a number of case studies of state and
local organizational innovation, only a handful (less than ten)
of the research efforts have employed a comparative-empirical
methodology. Those that have done so have been published largely within the past five years and have predominately focused upon technological-hardware innovations. Almost no research has investigated procedural change in public sector enterprises.

These issues will also be confronted by this research. The methodology to be employed will be a combination of both comparative macroanalysis and case studies because each approach has its own particular advantages. Procedural changes in municipal personnel policy will be the primary subject of investigation, as they not only encompass the major tasks of these offices but are also the most promising areas of productivity and equity improvement. Interorganizational diffusion and the intraorganizational processes involved in the adoption of these changes will also be explored.

Summary

Change is a basic need of organizations but is often very difficult to accomplish. Public organizations seem to be particularly stable entities, despite the seemingly constant pressures for change they face and the significant practical benefits which can result from new policies and procedures. Although a great deal of research has been conducted on the subject of innovation, we still do not know
what aspects of these agencies determine their stability or adaptiveness or why many programs fail to be accepted.

Municipal personnel departments appear to be particularly relevant examples of the targets of such pressures for change, as numerous factors have combined to alter radically the functions and importance of local human resource management over the past fifteen to twenty years. This research will attempt to determine why some personnel departments are more innovative than others, how changes spread from one city to another, and how changes are adopted within municipal organizations. The manner in which these goals will be accomplished and the particular hypotheses to be tested will be detailed in the following chapter.
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CHAPTER II

METHODOLOGY

Introduction

The purpose of this research is to investigate the innovation process in municipal personnel offices by answering three basic sets of questions about that phenomenon:

(1) Why are some municipal personnel offices more innovative than others (i.e., what factors seem related to their level of innovativeness)?

(2) How do personnel innovations spread from one organization or city to another (what forces are involved in the diffusion process)?

(3) What intra-organizational processes are involved in the actual adoption of decisions in municipal personnel offices?

The methodology employed in order to try to answer these questions was a combination of selected personal interviews and a mail survey of personnel directors in all cities over 25,000 in population in two federal regions—Region V, headquartered in Chicago, and Region VI, headquartered in Dallas (N=288). The surveys were used as the primary data-gathering tool (see Appendix B), and were principally designed to provide information relative to the first two questions. The interviews (see Appendix D) supplement the surveys and were of primary value in discovering the
internal processes of innovation in municipal personnel systems.

Interval-level data were gathered concerning both the adoption of the innovations and the factors which presumably could affect their adoption. Correlational analysis was employed to test literature-based hypotheses, searching for factors strongly associated with innovation adoption. The rate and extent of innovation adoption, as well as other aspects of the spread of change (innovation leaders, correlates) were examined in a macro fashion to shed light on the diffusion process of innovations in the field of personnel administration. Finally, interviews were conducted to determine which individuals within the organization made the decisions needed for innovation adoption and how those decisions were made. Personnel directors were also asked to provide their opinions on a variety of other topics concerning personnel change.

Cities in the Chicago and Dallas federal regions were selected for both research needs and practical requirements. Many of the variables that presumably affect the municipal innovation process, both political and demographic, are distinctly different in these two regions. Since this is but an exploratory study, concentrating the research efforts on cities in the South-Southwest and the Midwest made the data collection manageable while providing a wide range of independent variable differentiation. Surveys and interviews
were directed toward the personnel director because previous research leads one to expect that the primary decisions to adopt the changes of the type being investigated are made by officers in the functional agency under consideration. Feller, Menzel, and Engle (71) found that neither the chief executive nor legislative bodies of state governments they examined were very interested in methods of agency operation. A similar assumption underlay their study of municipal innovation as well (72).

The particular methodology employed in this research represents an attempt to blend the techniques proven valuable in innovation research in other areas with the specific needs of this research and the conceptual and methodological suggestions of literally dozens of organizational and public policy scholars. Although the nature of their critiques of previous research ranges widely, most of these authors either explicitly or implicitly arrive at the same conclusion—that no single theory of innovation presently exists. Some would even go so far as to assert than one cannot exist.

Innovation Instability: The Need for Methodological Rigor

The study of innovation has a rich history and an even more promising future. Few fields of research can point to as diverse an intellectual background or can claim to deliver a more significant theoretical or practical payload
than the adoption and diffusion of change. As Downs and Mohr (57, p. 700) state, the social consequences of these investigations can "imbue even the most obscure piece of research with a generalizability that has become rare as social science becomes increasingly specialized."

Its diverse background is a mixed blessing, however, for innovation research may also be characterized as a veritable jungle of semantic confusion, conceptual disorder, and methodological malaise. Only rarely has a field of study resolved fewer issues after such great expenditures of time and effort. This situation is due at least in part to the same variety of disciplines attracted to innovation's potential fruits.

The field is still so fragmented by specialized concerns that even the dimensions of an adequate general theory are poorly demarcated. It is a conceptual cartographer's dream . . . or nightmare. The judgment is not acrimonious in intent. It is a reflection rather on the fragmented nature of any emerging field, and the enormous range of disparate elements that characterize this one (116, p. 303).

But while the variety of disciplines attracted to the field is large and the objects of their research equally diverse, the breadth of the subject itself is also a hindrance to the development of theory.

Despite the valuable work done to date, many aspects of the diffusion of innovations remain virgin research territory. Both conceptual work and empirical research cry out for attention and promise rewards in the forms of enhanced theoretical understanding of dynamic social phenomenon and of useful new knowledge (216, p. 449).
The methodologies utilized by researchers in those areas which have been investigated are equally distressing, as most are studies of single innovations or single organizations. Yin (223) identifies 140 such case studies of the diffusion of innovations in state and local government. By 1976, Feller and Menzel (72) could count only four studies, including two of their own, that were truly comparative.

Although the paucity of analyses which have been conducted in some areas is distressing, this shortcoming can and is being corrected through the gradual and natural expansion of innovation research. A more serious and pressing problem is the apparent lack of reliability of the research findings in those areas which have been well-studied.

Unfortunately the theoretical value of the research that has been done is problematic. Perhaps the most alarming characteristic of the body of empirical study of innovation is the extreme variance among its findings, what we call instability. Factors found to be important for innovation in one study are found to be considerably less important, not important at all, or even inversely important in another study. This phenomenon occurs with relentless regularity. One should expect some variation of results in social science research, but the record in the field of innovation is beyond interpretation. In spite of the large amount of energy expended the results have not been cumulative (57, p. 700).

Feller and Menzel (72, p. 9) also note the methodological uncertainty or "instability" which now exists in innovation research.

The increase in numbers of studies of diffusion has not, as in the prototypical scientific paradigm, added to a stock of knowledge, but has instead
produced a confusion of analytical perspectives, methodological approaches, and conclusions (72, p. 9).

These comments find empirical support in Rogers and Shoemaker's (1971) now-famous cumulative review of the innovation literature. Their examination of thirty-eight propositions which are believed related to innovation revealed thirty-four were supported in some studies but not in others. The remaining four propositions on which there was agreement were minor in nature and were used in only a few such analyses.

The cause of this instability, according to Downs and Mohr (57, p. 700) is a "lack of clarity on conceptual issues." In an inciteful and extremely valuable article, the authors describe what they believe to be the primary issues in need of clarification and offer their prescription for resolving these dilemmas. While not constructing a specific theory of innovation, the article does suggest how one might arrive at such a theory. It will serve as the basis of much of the methodological discussions to follow.

**Definition of Terms**

Perhaps the most basic of the conceptual issues which has yet to be resolved is the definition of the term "innovation" itself. Three basic types of definitions are most commonly offered in the literature (209, pp. 4-6), the first of which uses the term innovation to refer to the relevant attributes of the change itself. The emphasis is upon those
characteristics which make the change novel or unique and a description of that which is new. For example, Hagen (100, p. 87) asserts that an innovation is something which is substantially different from and represents an improvement over that feature it superseded. Bell (17) asserts the innovation cannot have been adopted by more than a small percentage of the relevant social system, while Robertson (173) says it must have made a significant social impact. Another classificatory scheme asserts the innovation may be a "thought, behavior, or a thing . . . [which is] qualitatively different from existing forms" (12, p. 7).

Although this researcher is less interested in the particular personnel changes than the processes involved, some comments relative to this topic are in order. Definitions of this variety provide significant clues as to the types of changes which should be investigated if "innovations" are truly the object of the research. Three characteristics seem clear: (a) the change must be new, (b) it must be important, and (c) it should represent an improvement over previous procedure (i.e., a "relative advantage"). While some may assert that the final characteristic--an "improvement"--is a normative judgment on the part of the researcher, it is more accurately a judgment of society.

The act of innovating is still heavily laden with positive value. Innovativeness, like efficiency, is a characteristic we want social organisms to possess. . . . Unlike the ideas of progress and growth, which have long since been
casualties of a new consciousness, innovation, especially when seen as more than purely technological change, is still associated with improvement (57, p. 700).

Two other genetic types of definitions concern the process of innovation rather than the characteristics of the changes themselves, but only one is appropriate in this research. In one context, innovation is considered as synonymous with invention or creativity. It is the process of producing novel configurations, concepts, or entities which had not existed before. For example, Barnett (12) claims innovation is "the invention of something new." Thompson (207, p. 2) says it is the "generation, acceptance, and implementation" of some type of change. Similar usages of the term are offered by Meyers and Marquis (137), the National Academy of Sciences (143), and Steiner (198).

Although much of the literature on creativity treats innovation in this fashion, a growing number of authors are differentiating between the two terms. O'Connell (150, p. 161) uses an interesting metaphor to illustrate that distinction: "creativity is the conception of an idea; innovation is the birth of change." Mohr (134, p. 112) similarly notes "invention implies bringing something new into being; innovation implies bringing something new into use." This equation of innovation with invention has also been gradually disappearing from the relevant literature (180), and will not be used in this research.
The final definitional category is the view of innovation as synonymous with the adoption process, and will be the meaning employed in this study. In the adoption process, the innovation becomes part of the organization's "cognitive state and behavioral repertoire" (25, p. 8). However, even within this category a definitional controversy exists concerning the manner in which a change is "new," and to whom it must be considered unique.

One school of thought considers innovation adoption to be "the first ever [emphasis added] use of a new product, service, procedure, or idea" (128, 129). Any later use is termed "imitation." Although this definition has some appeal, it severely narrows the relevant field of subjects for research. It even approaches the restrictive nature of the definitions based on inventiveness or creativity presented above, and will therefore be considered inappropriate here.

At the opposite end of the exclusionary spectrum are what appear to be the predominately portion of the adoptive definitions, those which consider innovation to include virtually any organizational change. These authors believe any change which is new to the adopting entity is an innovation:

any idea, practice or material artifact perceived to be new to the relevant unit of adoption (225, p. 10);
any program, technique, or activity perceived as new by a population group or organization (179, p. 24; 178); and

generation, acceptance and implementation of new processes, products, or services for the first time within an organizational setting (163, p. 28).

Methodologists Downs and Mohr (57, p. 701) themselves use this type of definition ("the adoption of means or ends that are new to the adopting unit"), describing it as "broad and conventional."

According to an alternative group of scholars it may be too broad. They contend the term "innovation" should be reserved for the adoption of a change which is new among similar individuals or organizations:

- the first or early use of an idea by one of a set of organizations with similar goals (16, p. 463);
- the successful introduction into an applied setting of means or ends that are new to that situation (134, p. 112); and
- [the application of a change which is] new to an organization and to the relevant environment (118, p. 478).

There is some evidence that this distinction may well make a difference. Terry N. Clark's (37) study of urban renewal success noted this definitional dichotomy, and suggests that once the newness of a proposal wears off it is no longer innovative. Adoption then becomes a function of factors other than those which explain innovation. His research led him to the conclusion that the level of
expenditures for urban renewal was positively related to the existence of a decentralized decision-making structure. However, Amos Hawley (104) had discovered a decade earlier that the opposite was in fact true. Clark reconciled his findings with those of Hawley by suggesting that the newness ("fragility") of the program was the key. Fragile issues, he argued, are not easily adopted, and thus need to be protected from opposition forces by a centralized decision-making staff.

Some concept of the innovation's "newness" is apparently needed in any such definition which will reflect the primary purpose of this research—an empirical comparison of personnel offices. After all, the final adopter of a change of procedure can hardly be termed "innovative," for risk-taking is also a component of innovation. Numerous authors have also commented on the importance of time constraints as a factor in innovation identification (82, 208, 214). Therefore, the latter set of definitions will comprise the basis of the definition used in this research.

The synthesis which may be derived from the preceding discussions, consequently, is a view of innovation as the adoption of something new (here a change in procedure) to a group of organizations with similar goals (municipal personnel offices). However, several other definitional questions remain, such as the following:
(a) At what point in the decisional process is the innovation "adopted"?

(b) At what level must the innovation be incorporated into the organization's policies?

(c) Should changes not made with the total free will of the adopting organization be considered "innovations"?

Very little guideline is offered in the literature concerning the first question. In this research, an innovation will be considered to have been adopted if a decision to accept the change has been made by a relevant decision maker in the organization.

The second question is more vexing, and has been widely discussed in the innovation literature. If an organization adopts a change only superficially, should it be considered "innovative"? Several authors have faced this dilemma by including the notion of "successful" innovation adoption. Mohr (134, p. 112) defines innovation as the "successful introduction into an applied setting of the means or ends that are new to that situation." Rowe and Boise similarly describe it as the "successful utilization" of change. In a related manner, Wilson defines innovation as a "fundamental change in a significant number of tasks." These definitions do little to answer the question at hand, however, for how does one measure "successful" introduction or utilization of a "fundamental" change in a "significant" number of tasks? Issues such as these will be considered in a later portion
of this chapter on the measurement of innovativeness, but
will not be included in the definition used here.

The notion of free choice implied in the third question
will also be excluded from the definition. However, Gawthrop
makes a particularly strong case for a non-coercive defini-
tion of innovation clearly spelling out the view of innova-
tion or self-generated change.

As used here, innovation is defined as (1) the
conscious awareness on the part of organizational
planners of the need for a new program that cannot
be satisfied by utilizing any combination of existing,
well-established programs, and (2) the ability to
satisfy that need in anticipation of a formal and
organized demand for change, coming either from
within the organization itself, or from its external
environment (81,

The later portion of Rowe and Boise's (180, p. 6) defini-
tion also includes the requirement that the change be
introduced "as a result of decisions made within that
organization." While exclusion of coercive innovation from
the definition has some intuitive appeal, doing so would
preclude analysis of many interesting personnel changes
(e.g., EEO and collective bargaining) as well as open another
measurement dilemma. Might not all innovations be considered
to have been forced upon the agency as a result of internal
or environmental pressures? In a review of such definitions,
Rowe and Boise concede it is too early to tell if either
intent or success will be included in future constructs.

The preceding overview and evaluation of the defini-
tional controversy as it applies to this research leads to
the following definition. Innovation will be used here to refer to the

   first or early decision to adopt a change in procedure by one of a set of organizations with similar goals.

This definition distinguishes between innovation and creativity, imposes a time frame and a comparative focus, equates adoption with a decisional process, and focuses upon procedural change as opposed to the adoption of a technological breakthrough.

General Methodological Issues

Although the wide variability of the definitions employed in prior innovation research is unquestionably a prime cause of the instability Downs and Mohr reported, it is hardly the sole or even the most important culprit. One of the more basic methodological problems in at least some of the innovation research is the tendency to attempt too much, that is, to try and study the entire spectrum of change rather than concentrating upon one facet of innovation. This is related to what Parsons (156, Chapter 12) refers to as change of a system as opposed to change within a system. Researchers should probably limit their analysis to one kind of change within the system, particularly to the adoption of new programs or services. As Hage and Aiken (96, p. 503) note, "this kind of change appears to be an important one albeit not the only kind because it can imply changes in techniques, rules or even goals."
Even within this category a similar limitation should occur, a limitation to programmatic innovation in only one functional area. In their effort for an all-encompassing theory of innovation, researchers have sometimes tried to comprehend all types of program changes in organizations. Walker's analysis of eighty-four programs adopted by state legislatures is a case in point. However, many studies of public policy change on the state level clearly illustrate the variability of innovation determinants and processes as one moves from one program area to another (88, 93, 124). One study of technological change in municipal government also notes this phenomenon.

The discussion thus far has indicated that the influence and consequences for innovation of the several factors examined vary within and across local service areas. . . . These findings suggest quite strongly that a theory of innovation must sweep across functional domains rather than cities. That is to say it may be more sensible to take a macro rather than a micro view of innovation, perhaps using service/functional areas as the units of analysis (72, p. 192).

It therefore appears wise to limit this study not only to procedural or policy change, but to policy change within the field of personnel administration.

Feller and Menzel's notion of micro and macro studies in the above quote is also a serious methodological issue. Macro analysis involves the formulation and testing of a model of municipal innovation adoption by operationalizing key concepts in diffusion theory, concepts such as
organizational size, slack resources, and even innovation itself. Micro studies involve open-ended interviews to determine why the entity accepted or rejected each of the innovations and to investigate other phenomena associated with the adoption process.

Most uses of the models inherent in the macro approach are subject to many of the same criticisms commonly directed at studies of the determinants of public expenditures by state and local governments.

... that in the absence of an explicit theory the vast majority of such studies are single-equation reduced from models for which no corresponding structural form exists. As a result, no causal relations can be discovered and the existing parameters between variables must be treated only as statistical regularities (49, pp. 8-10).

The inference that should be drawn from such critiques is that macro studies need to be more theoretically based upon a testable model, and that they should be supplemented with micro analyses. In the words of Feller and Menzel (72, p. 89), "the aggregate approach tends to compress individual characteristics into summary statistics in the pursuit of significant generalizations, whereas the case study method produces an emphasis on the characteristics of each particular situation." The former highlights common elements across adopting units; the latter focuses upon the differences, and provides a richness of detail and a temporal element uncommon in the macro approach. Both
techniques are useful, and should be employed in combination (16, 58, 69).

A final general issue which has plagued previous innovation research is known as "pro-innovation bias." Assuming that innovation and change are desirable objects of attention, researchers have sometimes collected data only from the adopters of change. This strategy is clearly poor methodology, for although change is an admirable quality in this society, the reasons for a lack of change are every bit as theoretically interesting and relevant as the reasons for change. Therefore, data should be collected from non-adopters as well as adopters of innovation (69, p. 14).

Each of these methodological and conceptual recommendations—the confinement of the research to one type of change in one policy area, use of a combination of theory-guided macro and micro approaches, and the collection of data from both adopters and non-adopters of change—will be followed in this study of personnel policy innovation. Many other relevant issues also confront researchers in this area, and have been incorporated into the discussion of the research design which follows.

Research Design: Determinants of Innovation

The remainder of this chapter is organized around the three questions about municipal personnel policy innovation this research intends to address. Each question is treated
in a separate section, in which pertinent methodological issues, explicit hypotheses, and relevant literature are discussed. The first set of questions addressed by this research in Chapter III is:

Why are some municipal personnel offices more innovative than others (i.e., what factors are related to the organization's level of policy innovativeness)?

Dependent Variable Operationalization

In this portion of the analysis certain factors will be correlated with the innovativeness of the personnel offices to attempt to discover relevant associations, a technique pioneered in the early 1940's by Ryan and Gross (181). However, the researcher must initially devise a reliable method of measuring the dependent variable—the innovativeness of the adopting unit—as wide variations in the operationalization of this variable have been a significant source of the instability of previous research findings. The first step in this process is the selection of the general approach to be employed.

Basic approaches.—The researcher may choose one of two basic approaches--either the "case history" or the "closed list" approach. In the former, a set of criteria for innovation are defined and all changes which meet these criteria during a set period of time are recorded. The total number of innovations enumerated by this technique
comprises a score for the adopting unit. For example, Schulman (189) defined an innovation as adopted by an organization if any one of three criteria are met—(a) line or budgetary support is provided, (b) the innovation is continued beyond two administrations, or (c) the change has lasted at least three years. Use of this approach obviously requires familiarity with the adoption process in the particular organization under study, and will not be employed in this, an exploratory study.

The second general method, the "closed list" approach, requires much less of the researcher in terms of prior knowledge, and therefore seems more appropriate in this exploratory study. A list of innovations that could have been adopted by the relevant entity is established and a determination is made concerning the number of those changes which had actually been accepted. Hage and Aiken (98) report this technique is most appropriate in studies of organizations which perform the same functions (e.g., personnel). For example, Mytinger (138) studied twenty-one new public health programs. Becker and Stafford (15) developed a list of eighteen possible innovations in the savings and loan industry. A similar design may be found in Walker's work (214). Although the use of this approach restricts what can be studied to those items included in the list of innovations, it does provide a common frame of reference to allow
one to see better the similarities and differences between various organizations (69, p. 188).

Selection of innovations.—Unfortunately, the selection of the closed-list approach opens a number of related methodological issues, not the least of which is the determination of the specific innovations comprising the list. The innovations selected, according to the discussions in the definitional portion of this chapter, must be procedural in nature, important (as they will comprise the only measure of the personnel departments' level of innovativeness), new, and should represent an improvement or "relative advantage" over previous procedure. The innovations should also be capable of being adopted by the targets of change—here, municipal personnel offices in cities over 25,000 in population in the Chicago and Dallas federal regions.

Feller and Menzel (72, p. 28) offer an additional criterion which they believe should be included—they believe that the innovations must be incompletely diffused.

. . . the choice of techniques around which questions were asked might itself be a determining factor in the responses given by agency officials. . . . The technological innovations on which our interviews were based should not be so widely adopted that no variation among agencies existed, or so infrequently adopted that we would only learn the characteristics of "early adopters."

However, since the extent to which these innovations have been adopted is unknown, the degree of adherence to this
criterion can only be determined after the data are collected.

The selection of the particular innovations to be the object of this research was made by a group of practitioners and noted experts in the field considered familiar with the topic of personnel change. This technique is not uncommon in prior closed-list designs (72, 78).

In early 1978, Alan K. Campbell, Chairman of the United States Civil Service Commission, called a meeting of personnel officials from state and local governments across the nation to discuss the topic of federal civil service reform. At this Conference on Public Personnel Management Reform, Campbell noted these officials were often on the leading edge of change, and that the federal government could often learn much from them.

When I first arrived at the Civil Service Commission last May, I detected a common presumption that there is a natural progression of policy setting that begins in Washington, moves to the State level and trickles down to local governments. Perhaps this has been true of some changes, but is not true of civil service reforms over the past few years. I have followed with considerable interest the progress in some of your States and must conclude that while Federal policy is of tremendous importance, the States (California, Oregon, Wisconsin, Florida to name a few) are in many cases charting the direction in which I believe the federal Government must move (59, p. 288).

This unique assembly of recognized personnel practitioners at the Conference on Public Personnel Management Reform served as the basis of the innovation identification
Participants were sent a self-administered survey in which they were asked to list in approximate order of importance the "procedural changes which you believe have made the greatest contribution toward improved municipal personnel administration" across a wide variety of policy areas. They were also told that cities of 25,000 or over should be capable of adopting the changes. Conference participants from municipal governments in the two federal regions under study were excluded from the panel for fear of prejudicing the results.

Additional panel members were drawn from the academic community, particularly those identified as "outstanding authorities in personnel administration" in *Teaching Public Administration in the United States* (121, pp. 6-16). All individuals listed therein were also asked to identify personnel innovations which fit the derived criteria. In all some fifty responses were received, from which ten innovations were selected for inclusion in this study (see list of innovations). Complete descriptions of each innovation are provided in Appendix A. The changes identified represent a variety of personnel-related areas, including selection, compensation, performance evaluation, motivation, equal employment opportunity, and labor-management relations. All the selection criteria (newness, importance, improvement, adoptability) appear to be well satisfied.
List of Personnel Innovations Selected

1. Validation of Employment Tests to Determine Whether They Predict Subsequent Job Performance,

2. Selection of Employees Based Upon Actual or Simulated Job Performance,

3. Assessment of Job Performance Based Upon Critical Job-Related Behaviors Rather than General Personality Traits Such as "Judgment" or "Maturity,"

4. Use of Performance Evaluations as the Primary Basis of Compensation Decisions (Merit Raises),

5. Codification of Employee Grievance Procedures to Settle Individual or Contractual Disputes,

6. Regular Provision of Training or Leave-Time for Training for Municipal Supervisors in Such Areas as General Management Practices, Equal Employment Opportunity or Collective Bargaining,

7. Use of Affirmative Action Recruitment Techniques (Focusing Recruitment Efforts on Disadvantaged Populations),

8. Periodic Employee Surveys to Determine Morale and to Derive Suggested Managerial or Technical Improvements,

9. Establishment of a Written and Publicized Affirmative Action Plan Based Upon Studies of the Current and Potential Workforce, and

10. Reorganization of Personnel Functions Into Commission (Watchdog and Appeals Only) and Personnel Office (All Other Functions).

A complete description of each change is provided in Appendix A.

Innovativeness measured.—A second problem area in need of attention within the closed-list approach is the manner in which the dependent variable is operationalized. Downs and Mohr (57, p. 709) list "three principal, interrelated
operationalizations of innovation found in the literature."
The most basic of these is simply a dichotomous adoption or non-adoption of change. The second and by far the most common measure used is a temporal indicator based upon the adopting unit’s speed of adoption of the change. The third is a measure of organizational commitment as indicated by the level at which the entity is implementing the innovation.

The reasons for the prevalence of the second measure over the others become clear when one considers the extent to which it improves measurement capability over the cruder nominal measures and the measurement difficulties inherent in the commitment variable. It is much easier to discover the date a change was made than to attempt to discern how much it is actually being used. Temporal measures of innovation are also more useful in determining the innovation diffusion processes (14, 82, 208).

However, the extent of innovation implementation is an equally important measure and should not be overlooked or confused with its temporal counterpart. An organization may adopt a change very early, but only at a superficial level. If speed of adoption were the sole measure of innovativeness such an entity would erroneously score very highly, thereby appearing much more innovative than it really is. The two measures may be interrelated only if one is willing to assume that innovations are initially employed at the same level across all potential units of adoption, and
that each unit increases its level of implementation in like manner. This condition obviously occurs only rarely if ever. It is equally unlikely that the time and commitment measures are affected by the same sets of determinants. The rapidity of organizational change may be due to a completely different set of forces than those influencing the extent of that change. Therefore, Downs and Mohr (57, p. 710) conclude that

it would be wise to conceive of the two operationalizations as two different behaviors to be explored, not because they are invariably independent of one another, but because of the need to avoid biased, muddled generalizations.

This research follows that recommendation. Personnel directors in all cities over 25,000 in each of the two federal regions were sent a mailed, self-administered survey in which they were asked whether they had adopted each of the changes identified by the panel of personnel practitioners and academicians. If the change had been adopted, they were asked to report the approximate date (month and year) the decision to adopt the change had been made and the extent to which it was being implemented on a scale of zero to ten. From this information three measures of innovativeness were derived:

(a) a temporal measure, based on the number of months that had passed from the date of the decision for change to the date the survey was mailed. Those cities which adopted changes long ago would therefore be considered more innovative than those adopting only recently;
(b) a **commitment** measure, based upon the respondent's stated level of innovation implementation. Cities which report the implementation of a change at a high level are considered more innovative than those not fully utilizing a change; and

(c) a **combined** measure, in which the temporal and commitment dimensions are simply multiplied together. By multiplying the two previous indicators together, the temporal measure is expected to dominate the product to some extent. This procedure is supported by the literature's predominate emphasis on innovation speed and the more common usage of the term "innovation" as something "new."

Although both temporal and commitment measures had been used in previous research on organizational and policy innovation, their use in this manner is believed unique. Walker (214) used a summary index score for each state in his study of policy innovation, based upon the average amount of time that had elapsed between the first state-level appearance of each of the eighty-eight programs and the state's adoption of them.

The first step was to count the total number of years that elapsed between the first and last recorded legislative enactment of the program. Each state then received a number corresponding to the percentage of time that elapsed between the first adoption and its own acceptance of the program. . . . The first state to adopt the program received a score of .000 and the last state received 1.000. If all states had not yet adopted a program, the states without the program were placed last and given a score of 1.000. The
innovation score for each state is 1.000 minus the average of the sum of the state's scores on all issues (215, p. 357).

This methodology will tap the speed of innovation dimension, but seems unduly complicated. Simply counting the number of months since the innovation's adoption is intuitively much easier to understand and yields as good or better an interval-level measure of innovativeness.

While the commitment measure admittedly depends upon the personnel director's providing an honest account of the city's policy commitment, it is used in this analysis for two reasons. First, other methods used in previous research are at least equally questionable and much more cumbersome to utilize. Frendeis (78, p. 70) used the following scale based upon the degree of consideration given to the innovation in an organization:

0--Not familiar with innovation,
1--Never considered innovation for my city,
2--I have given some private thought to it,
3--Informally discussed with city colleagues,
4--Discussed it at staff meetings,
5--Have made formal decision not to adopt,
6--Have made decision to adopt,
7--Implemented but later dropped,
8--Implemented and still under trial evaluation, and
9--Implemented and firmly accepted.

The author does not, however, indicate the validity of his measures; therefore, one has little idea whether the scores generated have any real meaning. The personnel directors' ratings are also used because they are relevant pieces of information, particularly as "secondary characteristics."
More on these characteristics will be provided when independent innovation determinants are discussed in the next section.

Although a combination measure of innovativeness is employed (speed times commitment), perhaps indicating a completely different form of organizational innovation, no attempt will be made to combine innovation scores across policy areas. Such a methodology assumes a general innovativeness trait exists, and that all the various sub-areas therein are affected by the same forces in the same manner. While the former may be true, the latter clearly is not (88, 93, 124). A more appropriate technique is to maintain the integrity of each of the innovations throughout the analyses.

In summary, the dependent variable was operationalized as follows. A closed-list design was employed, with the innovations selected by a panel of personnel practitioners and academicians according to the theoretically-based criteria of newness, importance, improvement, and adoptability. Personnel directors were asked whether their city has made a decision to adopt each of the changes, and if so, when the decision was made to adopt and their impression of its level of implementation. From these data, three measures of organizational innovativeness are derived: speed of adoption, extent of implementation, and a combined measure.
Each innovation will be analyzed separately to avoid unsubstantiable inferences.

**Independent Variable Operationalizations and Hypotheses**

These three dependent variables will be correlated with a variety of independent variables to determine whether theoretically relevant associations exist between the two general categories. Organizational and public policy innovation literature suggests numerous factors which could conceivably affect the adoption or non-adoption of particular personnel policies. Four basic categories of variables are used in this portion of the research—community environment, organizational environment, organizational characteristics, and innovation characteristics (see accompanying list).

Before discussing the derivation of each variable from the literature, a few words are in order concerning the selection of the variable operationalizations. All of the socioeconomic variables are from the 1972 and 1977 County-City Databook, and the dates in which those data are available to a large degree determined the time in which the characteristics are tapped. Political culture variables are from Richard D. Scammon's America Votes (185, 186), and are used to coincide with the available socioeconomic characteristics. These community environment variables logically precede the organizational environment organizational characteristics and innovative characteristics in terms of
List of Independent Variables

1. Community Environment

A. Socioeconomic Variables

(1) Community Size
   --city population, 1970; 1975
   --total land area, 1975

(2) Community Integration
   --per cent population change, 1960-1970
   --per cent population change, 1970-1975
   --per cent change in black population, 1960-1970
   --population per square mile, 1975
   --per cent black, 1975
   --per cent foreign born, 1975

(3) Community Wealth
   --per capital income, 1974
   --median family income, 1969
   --per cent families below poverty line, 1969
   --per cent families below 125 per cent of poverty line, 1969

(4) Community Education
   --per cent population with less than fifth-grade education, 1970
   --per cent population with at least a high school diploma, 1970

B. Political Culture Variable

Community Conservatism
   --per cent vote for Republican presidential candidate, 1968
   --per cent vote for American Independent presidential candidate, 1968
   --per cent vote for Republican presidential candidate, 1976

2. Organizational Environment

A. Extent Federal-State Aid
   --total intergovernmental revenue, 1974-1975
   --per capita intergovernmental revenue, 1974-1975
   --federal intergovernmental revenue, 1974-1975
   --per capita federal intergovernmental revenue, 1974-1975

B. Quality Federal-State Contracts
   --director's rating of quality of contacts with federal and state officials
C. Intergovernmental Cooperation
   --number of joint programs between city and other local governments
   --number of joint programs between personnel department and other cities

D. City Government Size
   --total city employment, 1976
   --number of employees served by personnel department

E. City Government Wealth
   --total general revenue, 1974-1975
   --per capita total general revenue, 1974-1975
   --per capita expenditures, 1974-1975
   --per capita debt, 1974-1975

F. Reformed Structure of City Government
   --form of government, 1975

G. Environmental Turbulence
   --director's rating of degree of turbulence in department environment in last ten years

H. Use of Consultants
   --directors' rating of extent of use of consultants in past ten years

3. Organizational Characteristics

A. Size of Department
   --number of full-time employees (excluding clerical)
   --amount of personnel department budget for past fiscal year

B. Slack Resources in Department
   --per cent of personnel budget funded by intergovernmental transfers
   --director's rating of extent to which departmental budget has kept up with inflation

C. Age of Department
   --number of years the city has had an autonomous personnel department
   --tenure of personnel director
   --age of personnel director

D. Formalization in Decision Making
   --director's rating of extent to which written rules and policies guide activities within the department (job codification)
--director's rating of extent to which people are watched to obey rules and policies (rule observation)

E. Centralization in Decision Making
--director's rating of extent to which personnel functions are carried out by the personnel department as opposed to decentralized in functional departments
--director's rating of extent to which staff members are allowed to participate in decisions concerning the adoption of new policies
--director's rating of extent to which supervisory approval is needed before actions can be taken

F. Specialization of Tasks
--number of job titles among staff members in personnel department (excluding clerical)

G. Professionalism of Department
--per cent of staff members in department with master's degree
--per cent of staff members in department director considers active in professional organizations
--per cent staff members in department attending at least one extra-organizational training session
--director's educational attainment

H. Pro-Change Values
--director's agreement with three pro-change statements

I. Rewarding Incentive System
--director's opinion of organizational incentives for change

4. Innovation Characteristics

A. Cost of innovation to adopt and implement

B. Extent to which the innovation disrupts existing policies and structures (radicalness)

C. Extent to which the innovation represents an improvement over prior policy

D. Visibility of the innovation during adoption and implementation
E. Extent to which the innovation can be tried or demonstrated on a small scale before full implementation (trialability)

F. Extent to which the innovation is mandated by government

a theoretical sequence, and are therefore justified in terms of any causal pattern.

Community environment.--Attempts to explain the diffusion of innovations often focus upon either the innovation itself or the individuals or groups which see adopting the change. Relatively little attention has been paid to the environmental factors surrounding the innovation decision. In the words of Zaltman, Duncan, and Holbek (225, p. 113): "one of the shortcomings of much of the theoretical and empirical research on organizational innovation has been the failure to clearly conceptualize the environment or the elements comprising it." Meyers and Williams (133, pp. 26-27) also urge a more outward-looking approach.

An examination must be made of the elements in the environment that lead to greater willingness to innovate [for] there is reason to believe that many of the ultimate causes of innovation are in the environment and not in organizations themselves.

The need to focus on the environment of organizations to explain their behavior adequately is hardly new or unique. Over twenty years ago Dill (55, p. 409), Thompson and McKewen (206) and others called for increased attention to the effects of the environment upon organizations. Since that
time, theoretical statements positing a relationship between an organization and its environment (28, 64, 146, 211) and empirical studies of that relationship (4, 30, 122, 197) have become commonplace. The reasons for this increased attention by organization theorists are clear. Organizations of all types are in constant interaction with their environments, receiving inputs, processing those inputs, and feeding back finished products or services. It is therefore only logical to expect that the nature of the community within which a personnel office operates will have an effect upon its operations and innovative capabilities, both as a force for change and as an obstacle to implementation.

Two basic categories of such environmental influences are used in this research: socioeconomic variables and political culture. A common finding in public policy research is that output measures (expenditure levels) are most heavily influenced by the socioeconomic environment in which they are produced (52, 61). Political variables are usually much less a factor when socioeconomic variables are held constant. Many of the studies of grants policy-making also support the importance of demographic variables in explaining system outputs (2, 3, 21, 36, 104). The theoretical relationships between innovation and such factors as environmental change, diversity, and composition are made clear by Baldridge and Burnham (11, pp. 172-173).
Environmental variability provides pervasive stimuli to the organization. In a rapidly changing environment expectations increase faster than the services offered them. A more heterogeneous environment with a varied clientele demands diverse services, so there is a greater competition for scarce resources from the more fragmented socio-economic and demographic forces. Increased uncertainty and diversity encourage the adoption of innovations. The character of the client population served determines the demand for services, the scope of activities, and the human resources to be utilized by an organization. Similarly, since many inputs in the exchange relationship may be resolved financially, the community's wealth is a major environmental variable.

Empirical results of previous research on innovation have both confirmed and denied many of these theoretical linkages. City size is perhaps the most widely researched variable, and one area in which the relationship appears relatively clear. Numerous authors have found larger cities to be more innovative than their smaller counterparts (2, 3, 22, 72, 78). Reasons advanced for this size-innovativeness link include increased resource availability, stronger need-demand pressures, and the greater diversity of the client population. One should note that in all these relationships the size-innovativeness link is indirect.

The relationship may not be equally strong across all innovations, however. Feller and Menzel (72, p. 54) found what they termed a "complex relationship between city size and the adoption of the sample technologies," as size was significantly related to only one-half of the technologies investigated. This varying level of association is quite
logical, for while small communities may exhibit an equal willingness and ability to adopt some changes, others (such as computer systems and impact attenuators on freeways) have little applicability. One hypothesis to be investigated in this research is, therefore, as follows:

Hypothesis 1: City size is positively related to personnel innovativeness.

City size is operationalized by both population measures in 1970 and 1975 and the cities' total land areas in 1975.

A second set of demographic characteristics believed related to innovativeness attempts to measure the level of "community integration," defined here as the citizens' level of affiliation with the city and each other. A low level of integration is believed to manifest itself as a high degree of community conflict, thereby lowering the amount of policy innovativeness possible. Factors believed contributing to a lack of integration include racial or ethnic diversity and high levels of community growth and in-migration (39, 165).

However, an alternative thesis is advanced by several other innovation scholars, who contend a diverse and rapidly changing community environment is conducive to innovation and innovativeness. A high growth rate in a city has been found to be positively related to organizational innovation, as it is believed to provide a benevolent environment for change (150). Feller and Menzel (72, pp. 100-101) theorized and confirmed that the rate of population increase created "new
situations" in which technologies and procedures could be utilized. Aiken and Alford's (2, pp. 863-864) study of public housing in major United States cities concludes communities which are structurally diverse are most likely to generate the resources needed for innovation and change. Because of the conflicting research findings, a somewhat neutral hypothesis is proposed:

Hypothesis 2: Community integration (low diversity and change) is systematically related to innovativeness.

Population diversity will be operationalized as per cent black and per cent foreign born in 1975 and population per square mile in 1975. Population change or mobility is viewed as the growth rate of both the community as a whole between 1960 and 1970 and 1970 and 1975, and that of the cities' black population between 1960 and 1970.

The characteristics of the individuals within the communities are also believed to be relevant independent variables, particularly their wealth and educational achievement. From the earliest policy output studies to the most recent research of innovation, environmental wealth has maintained a consistent and positive relationship with levels of governmental activity (52, 61, 110, 111, 117, 134, 191, 214). Feller and Menzel (73) found this to be true in their study of technological change in local government, and theorized that it was due to both motivational and enabling forces. Citizens in wealthy communities presumably demand
that their governments "produce a higher quality and quantity of services," thus requiring officials therein to look for new or better procedures to accomplish those ends (72, p. 101). The authors refer to this as "demand-pull" characteristic of the community. Citizen wealth also provides the financial base needed for innovation, and from which organizational slack resources are derived.

The relationship between community wealth and innovativeness is most commonly perceived as direct and comprehensive, although some researchers believe differently. Williams and Adrian (217) posit that wealthy cities are more likely to adopt "amenity" innovations (i.e., changes designed to improve already adequate performance) while "need" innovations are more likely to be adopted by cities with lower socioeconomic status to correct some specific deficiency. The relationship may also be curvilinear, as Cancian (32) found wealthy cities more innovative than poorer cities, but middle-income communities ranking lower than would be expected if a direct relationship existed. Noting these caveats, the hypothesis forwarded in this research is:

Hypothesis 3: Cities with high levels of community wealth will be more innovative than poor communities.

Wealth will be operationalized as per capita income in 1974, median family income in 1969, per cent families below the poverty line in 1969, and per cent families below 125 per cent of the poverty line in 1969.
Levels of community education are also commonly believed to be related to the innovativeness of local governments and organizations, although the true nature of that relationship is equally unclear. A highly educated citizenry is usually considered conducive to innovation, as such individuals are more likely to understand the need for change and be able to provide necessary resources (18, 43, 171, 191, 205). On the other hand, some authors contend that innovation may be less likely in more educated communities because of their usually high levels of political participation. Elected officials may worry more about the reactions of this politically active segment of society and therefore not make changes that they ordinarily would (45, 95, 104). In between these two positions is that of Mohr (134), who found education to be only a minor factor in his study of public health organizations after controls were applied. In light of the varying research findings, the direction of the education hypothesis cannot be predicted:

Hypothesis 4: The educational level of the target community will be systematically related to its level of innovativeness.

Educational attainment will be operationalized as the percent of community members with less than a fifth-grade education and the percent of those members with at least a high school diploma in 1970.

The final category of community environment variables to be used in this research is political culture. Policy
researchers have long believed that the political characteristics of the states of communities under investigation were relevant to governmental outputs, although their explanatory power is reduced to nearly zero when socioeconomic characteristics are controlled. Significant relationships have been discovered between non-output measures and such political constructs as party competition, turnout, and indices of apportionment (80). They have been particularly useful in state innovation research (194, 214). Unfortunately, these independent variables are generally unavailable in municipal research, as many local governments conduct non-partisan elections and reapportionment indicators are inapplicable.

The somewhat broader measure of political culture may, however, be used, as it has been shown to be relevant to both policy initiation and acceptance and to organizational behavior. The "public-regardingness/private-regardingness" debate which has raged in municipal elections research is perhaps the most famous example of this genre (219, 220), although proof of the validity of these constructs continue to elude researchers. Elazar's (63) categorizations of states and communities into either individualistic, moralistic, or traditionalistic cultures similarly reflects the importance political beliefs and attitudes are believed to have on policy making. Elazar's discussions lead one to expect that states and communities with an individualistic culture would be more innovative and more willing to fund innovative
ventures than the other cultures, particularly the traditionalistic category.

This thesis was substantiated by Sutton (200) in a study of state planning and development agencies. The author discovered that political culture explained 76 per cent of the spending variance, and that organizations in traditionalistic areas were more likely to adopt innovations which had an immediate effect. Agencies in individualistic states were less constrained by their culture and were able to adopt more innovations with long-range objectives. According to Sutton, these findings imply organizations are "open systems," responding to their political environments in an adaptive manner (200, p. 560).

Of relevance in this discussion is the notion from organization theory of "cultural consistency," which posits that there is a strong impetus for the adaptation of discordant cultural elements within a particular society. Organizations located in areas in which the dominant cultural value discourages innovation could, therefore, adopt this stance toward change rather than face environmental conflicts which could lead to their destruction. Environmental consonance has long been advocated by leading organization theorists (66, 122, 192, 206), and is strongly suggested by what empirical research has been conducted.

(a) Where mental hospitals were established with therapy as a major goal in communities prescribing patient custodial
care rather than rehabilitation, it was discovered that the local community values were able to impose the custodial role (65, p. 254; 89); (b) Jones (112) found cities in Utah seldom adopted the council-manager form of government, and even when the form was adopted it tended to be rejected at a later date. Jones attributed this negative reaction to the incompatibility of the values of this form of government and the values associated with the Mormon church; (c) Studies of medical care innovations often show that communities deeply steeped in the traditionalistic culture are much less likely to accept new health procedures than more modern communities (139, 166, 199); and (d) Rogers' (174) review of studies of communities where sex education had been introduced as part of the local school curriculum found those programs which were initiated in locales with norms favoring change were usually more successful.

It therefore appears obvious that the "innovativeness of the target system is inversely related to the extent to which that target system adheres to traditional norms" (178, p. 422).

Hypothesis 5: The level of conservative political philosophy evidenced in a community is inversely related to the innovativeness of the municipal personnel department.

One way in which those norms may be operationalized is by using voting returns as a surrogate for and an expression
of those underlying beliefs (2, 21, 22, 221). In this study, conservative political philosophy will be measured by the city's vote in favor of the Republican Presidential candidate in the 1968 and 1976 elections and for the American Independent Party in 1968. The 1972 campaign was not included because it is believed by experts in voting behavior to be atypical. Voting totals for city boundaries are unavailable, so the returns used are of the county within which the city is located.

These five classes of community environment variables—community size, integration (low diversity and change), wealth, education, and political culture, will be correlated with the previously described dependent variables in order to test the hypothesized innovation relationships. Other theoretically relevant community environmental hypotheses are presented in the literature, but are not tested here largely because of a lack of available data. For example, high concentration of community power is believed related to innovativeness, both positively (3, 44, 104) and negatively (10, 37). This enticing hypothesis is not tested here because no valid means of measuring community power structures has yet been determined (105).

Organizational environment.—The environmental forces considered in most policy output studies are usually limited to the general types of categories listed above as "community
environment" variables. Organization theorists, however, often bring in another category of environmental variables—characteristics which have a more direct bearing upon the operation of the entity. According to Norman (148), organizations operate in both this general environment and a "domain." The domain is the area in which the organization is in more or less constant interaction, and which has a more direct impact upon its operations. Similar descriptions are provided by Zaltman, Duncan, and Holbek (225, p. 114) and Bingham (22, p. 8). Zaltman views the organizational environment as "the totality of physical and social factors that are taken directly into consideration [emphasis added] in the decision-making behavior of individuals in the organization." To Bingham, the organizational environment represents "that environment within which the organization operates above and beyond the local community." In innovation research, it may be considered "the organized system outside of the organization which supports and encourages the use of an innovation by an organization" (69, p. 139). Nelson and Winter (147) refer to this phenomenon as the "selection environment."

The nature of this more narrowly defined environment obviously depends upon the type of organization which is being considered. For private sector enterprises it includes the companies' market and industry (1). For public organizations the prime elements include other governments
with which they interact. In this study of innovation within a particular department of local government, the organizational environment includes factors both external to the municipal government and within that government but external to the department itself. The particular variables to be investigated involve both vertical and horizontal intergovernmental contacts and the nature of the government within which the department is located.

**Intergovernmental aid** in the federal system of governments is obviously one factor that can potentially affect the innovative capabilities of local systems. Previous research on grants-in-aid policy clearly illustrates the stimulative power of external funds for local programs and tax revenue (31), although the results expected by funding agencies are not always achieved (9, 87, 91, 149, 152). Outside funding is believed to provide slack resources needed for innovation (94), and the federal government supplies the bulk of these monies (56). In fact, extra-organizational funding is believed to be the major intervening variable upsetting an inverse cost-innovativeness relationship (120).

The effect of intergovernmental aid may not be as decidedly positive as one would initially expect, however, for governmental policies have also been shown to inhibit innovation (141). Menzel (132) attempted to test the salience of a variety of intergovernmental influences,
including revenues, technical assistance, and personnel exchanges, upon the innovative capacity of local governments across technologies in four service areas. Interviews with decision makers in each of those areas revealed these intergovernmental supports were not as significant as had been commonly presumed, although their importance varied from one policy area to another. Local influences and circumstances seemed to attenuate what federal effect was apparent. This conclusion is similar to that reached by Perry and Kraemer (162) in which federal "pushers" of computer hardware did not adequately consider local influences.

Whether intergovernmental aid actually stimulates, inhibits, or has little effect upon the innovative capacity of local personnel systems is not as clear as had been presumed, although the more general federal impact on personnel management is readily apparent (193). In this research the following hypothesis will be tested:

Hypothesis 6: The amount of intergovernmental aid a city receives is positively related to its level of personnel innovativeness.

Intergovernmental aid will be operationalized as the total intergovernmental revenue received and the federal intergovernmental aid received by the city in 1974-1975, both in total and per capita amounts.

Although intergovernmental aid is a significant part of modern federalism, it is hardly the only facet pertinent to innovation. Of equal importance is the nature of those
local-state-national, or the **quality** of the relationships between officials in these governments. Many studies of the diffusion process focus on this relationship, particularly noting the importance of change-agent characteristics. According to the theoretical and empirical work conducted, these systems should be decentralized for greater effectiveness (20, 135) and should be composed of liberal, creative, unconventional outsiders with fresh perspectives (33, 42, 85, 131, 155, 196). They should also relate well with target system members, not overpowering laymen with technical jargon but able to provide assistance where needed (20, 56, 135). A recent study of municipal innovation similarly concluded that the nature of the support relationship was important.

The role of system support structures deserves greater and more systematic analysis. Our observations indicate that the establishment of personal relationships between personnel inside the user organization and personnel in the system-support structure are decisive in shaping the [innovations] that emerge. . . . The key element seems to be the development of a consensus between the system-support structure and the user agency of the key definitions of the problem and the tool (69, pp. 149-151).

The literature, therefore, implies the following hypothesis:

**Hypothesis 7:** The quality of the contacts between federal and state officials and the personnel departments is positively related to the level of innovativeness evidenced.
Personnel directors were asked to evaluate the quality of their federal and state contacts on a scale of zero to ten, thus operationalizing the "quality" measure.

It is similarly hypothesized that the level of horizontal intergovernmental relations is a factor in local government innovativeness. This assertion stems in part from the literature concerning public organizations' purportedly innate stability. Both Crawford (46) and Floyd (77) posit that the fractured structure of local governments, stemming in part from their desire for independence from each other, prevents problem-solving coordination needed for innovation. A similar position is forwarded in organization theory, as numerous authors have noted the importance of developing a coalition with other cosmopolitan organizations to supplement the skills and resources available for innovation (4, 15, 35, 67, 68, 169, 203, 210).

There is also a body of empirical studies to support these contentions. The importance of "interdependence"—the extent to which an organization is systematically related to similar organizations in the external environment—was one of the primary findings of the Aston groups (4, 5, 167). Reasons for this relation appear to stem from both improved communications and shared resources. The importance of emulation networks to the diffusion of public policy innovation is also a key theme in Walker's (214) study of state policy innovation. Therefore the following hypothesis was tested:
Hypothesis 8: The number of joint programs in both the city as a whole and the personnel department is positively related to the organization's level of innovativeness.

One way in which the degree of organizational interdependence may be operationalized is by counting the number of joint programs the city government has participated in over the past ten years. Personnel directors were asked to provide that information for both the city as a whole and their department.

Organizational factors within city government yet outside the parameters of the personnel department might also be considered part of the organizational environment. Two of these variables are substantially similar to measures used in the previous discussions of the community environment—size and wealth.

Hypothesis 9: The size of the city government will be directly related to the personnel department's level of innovativeness.

Hypothesis 10: The wealth of the city government will be directly related to the personnel department's level of innovativeness.

Size will be measured by the total city employment in 1976 and number of employees served by personnel department. Wealth, or resources available, is operationalized as the total general revenues, total revenues per capita, per capita expenditures, and per capita debt for 1974-1975.

Equally interesting is the form or structure of that government, as many of the most important studies of local
governments have concluded the decision-making processes in reformed and non-reformed cities operate by a fundamentally different set of rules. Reformed cities are believed to be more insulated from social cleavages and have a more centralized decisional structure (37, 90, 125). This more centralized structure in city-manager cities is often believed conducive to innovation (25, 45, 72, 78, 217, 219).

Even the nature of innovations adopted is believed affected by the city's form of government. Williams and Adrian (217) find city manager forms more likely to accept economic growth and the provision of amenities than traditional services or arbitrating conflicting interests. The authors posit this is due to the manager's "ethic of professionalism" which demands that they "do things." Their conclusions are not, however, without contradiction. Booms (25) finds city manager forms of government generally have less service-related expenditures (and presumably less innovations) than their mayor-council counterparts. The contradiction may be due to the manner in which the variable is conceptualized, however (29). The bulk of the available research leads one to the following hypothesis:

**Hypothesis 11:** Cities with the council-manager form of government are more innovative than either mayor-council or commission forms.

"Form of government" in this research is the form the city evidenced in 1975.
A more general characteristic of the organizational environment is the degree of instability or "turbulence" that is evidenced. Rapid rates of environmental change (market conditions, technologies, clientel needs and demands, labor market) are most often viewed as conducive to organizational innovativeness, due primarily to the stimulative effect involved. Organizations are believed to be more receptive and alert to an impetus for change in an uncertain environment (2, 3, 11, 30, 72, 134, 153, 163). Since the bulk of the theoretical and empirical works lead one to conclude change is enhanced by a turbulent environment, there is some evidence that that same instability may make innovation impossible (84). However, the hypothesis forwarded in this research is:

Hypothesis 12: The level of environmental turbulence surrounding municipal personnel offices is positively related to its level of innovativeness. Turbulence levels are operationalized by having personnel directors rate the level of environmental turbulence experienced in their city over the past ten years on a scale of zero to ten. Examples of that uncertainty which were provided to illustrate the phenomenon included group demands, wholesale changes of political leaders, and reorganizations.

One final element of the organization's immediate environment is their use of outside consultants to both introduce innovations to the enterprise and to implement such changes. The number and variety of such firms has
increased dramatically over the past ten years (private, university, federal, state, regional), and could have a major bearing upon the innovativeness of municipal government offices (157, 213). In previous technological innovation research, "vendor activity" has been hypothesized and found to be a significant portion of the adoptor's diffusion milieu (21, 71, 73). Therefore, the following hypothesis was tested:

Hypothesis 13: The extent to which consultants are used in the personnel department is positively related to its level of innovativeness.

Use of consultants was operationalized by having respondents rate on a ten-point scale the extent of their departments' use of consultants during the prior ten years.

Organizational environmental factors believed relevant to municipal personnel innovation therefore include intergovernmental grants-in-aid to the city, the extent and quality of the department's federal and state contacts, joint programs conducted with other city governments, city government size and wealth, form of government, use of consultants, and a general "turbulence" measure. All will be correlated with the three measures of innovativeness to determine if relevant intercorrelations exist.

Organizational characteristics.—Of the fifty-two propositions Rogers (174) collected in his seminal anthology of innovation diffusion research prior to 1962, none dealt
with organizational factors believed related to the adoption of change. The focus of the research conducted to that date was on the individual, either as the dependent variable ("how do women react to various types of birth control when introduced into a society?") or as the independent variable ("how fast will women with X characteristic adopt a change as opposed to those with Y characteristic?"). Relevant independent variables often include age, race, sex, income, and socioeconomic status.

In their 1971 update, Rogers and co-author Shoemaker (175) added organizational factors to their research collection, although these characteristics retained a strong individualistic flair ("what type of individuals in organizations are most likely to adopt a change?"). Recent research on innovation has taken on a strong organizational bent, however, and the reason for this change is obvious; organizations are now the major adopters of social innovations. Structural features of these entities have also been shown to be more salient factors in innovation adoption than the characteristics of the individuals which inhabit them (11, 98).

Both individual and structural qualities will be considered under the general heading "organizational characteristics" in this research. Although all relevant independent variables are not investigated, most of those considered in prior research are included.
Perhaps the most commonly studied organizational attribute is the size of the adopting unit. Large organizations are quite often considered more innovative than small organizations, and there is a sizable body of literature to substantiate that assertion (2, 3, 11, 15, 62, 102, 113, 128, 174). However, many authors believe it is not simply a large number of employees or large amount of operating funds that encourage innovation, but rather the organizational characteristics simultaneously related to both size and innovation.

For example, large organizations typically have more "slack resources" which can be applied to innovative programs. Slack is a commonly used term to refer to the difference between those resources obtained or obtainable from the environment and those required to maintain the organization (134). Large organizations typically have more of these uncommitted resources, and where that relationship holds true, they will probably be more innovative. The same phenomenon is true of professionalism and specialization. Large organizations can often afford to employ more high-level professionals across a variety of fields who may serve as an innovative force. Since the size of an organization is directly related to the number of professionals employed (154), organizational innovativeness will probably be linked to the size variable as well (5, 11). The increased number of environmental contacts and problems associated with larger size may also stimulate change (24).
Not all characteristics coincidental to the size of the adopting entity are conducive to innovativeness, however. Large organizations also tend to concentrate decision-making power in the upper reaches of the structure (23), and this high degree of centralization may inhibit change. The greater formalization in large organizations is also believed to be a negative factor for innovation (50). Mohr (134) posits that larger organizations may adopt more changes, but that the level of their implementation is often less than in smaller systems. Larger organizations want to appear more professional, he contends and will therefore adopt many innovations only symbolically.

Therefore, although large firms are expected to be more innovative, the findings of previous research suggest some significant caveats. Controls for some organizational characteristics (resources, differentiation, professionalism) may decrease the expected relationship between size and innovativeness; controls for other variables (formalization, centralization) may increase the level of association. In sum, the following hypothesis was tested:

Hypothesis 14: Organizational size is positively related to the measures of innovativeness, particularly speed of adoption.

Organizational size was measured in this research as the number of non-clerical employees in the personnel department, and the dollar amount of the department's budget for the prior fiscal year.
Another commonly-used category of independent variables believed related to organizational innovativeness is known as slack resources, defined by Cyert and March (48, pp. 278-279) as the difference between the payments required to maintain the organization and the resources obtained from the environment by the coalition... [which provide] a source of funds for innovation that would not be approved in the face of scarcity but that have strong subunit support.

As is obvious from this definition and that of Mohr in the previous section, slack resources are not simply the budgeted monies available to the adopting entity, but are more specifically "excess" dollars available.

Organizational slack determines whether or not an organization can afford to innovate. Numerous studies have demonstrated the importance of these resources to innovation, both directly (82, 91, 129, 177) and indirectly (134). Slack should be a particularly important variable in state and local governments, which are often portrayed as lacking in the "surplus energy" needed to innovate (106).

The hypothesis tested, therefore, was as follows:

Hypothesis 15: The level of slack resources available to the organization is positively related to its level of innovativeness.

Organizational slack was operationalized in two ways. First, personnel directors were asked to estimate the percentage of their total personnel budget funded by inter-governmental transfers (categorical grants, block grants,
revenue sharing). Personnel directors may consider these revenues to be excess resources, over and above the general operating revenues received (71). Directors were also asked to estimate on a ten-point scale the degree to which their budgets had kept up with inflation over the past several years. This measure was believed to indicate any slack available in operating funds.

The age of the organization under study is also believed to be a relevant factor in its innovativeness, although, like size, the relation is believed to be indirect. It is the closed, bureaucratic nature of older organizations which is believed to explain their low level of innovation receptivity, not the number of years themselves. Aiken and Alford (2, 3), Dalton (51), and Griffiths (91) suggest the impetus for organizational change often comes from outside the organization itself. Thus, the lack of infusion of new members into the organization is believed to make it less likely that external stimuli will permeate the organization's boundaries; innovation is therefore stymied.

Although the literature leads one to believe that an inverse relationship will exist between age and innovativeness (163), the opposite may also be true. Departments only recently developed may be evidence of a low level of concern for personnel management in that city. Older, more established systems could, therefore, be considered more innovative. Rapid turnover in the position of personnel
director might similarly indicate a low receptivity to personnel change in the city. Because of these equally plausible possibilities, the following hypothesis was used in this research:

Hypothesis 16: Personnel innovativeness is systematically related to the age of the department, the director, and the tenure of the director.

Three age factors are thought to be relevant: the age of the organization itself and the age and tenure of strategic organizational members. These variables will be operationalized in this research as the length of time the city has had a full-time personnel department, and the age and tenure of the personnel director.

In addition to the above constructs, three primarily internal-structural characteristics were investigated: formalization, centralization, and specialization. Each has been a frequently used independent variable in organizational innovation research. Each is also believed to exert a differential influence upon innovativeness depending upon the stage of the innovation process considered.

Formalization is defined as the "degree to which a codified body of rules, procedures, or behavior prescriptions is developed to handle decisions and work processing" (163, p. 31). Imposition of these rules is believed to increase predictability of performance, and is thereby generally believed to detract from the innovative performance of the organization because creative problem solving is discouraged
Hage and Aiken (98) present three reasons for the non-innovative effects of high formalization of rules in organizations: (a) it provides little latitude for employees to consider alternative practices; (b) the presence of a rule implies it is the best way to handle a situation; and (c) rule existence is an obstacle to the implementation of new programs, as it often necessitates a change in these rules and disturbs procedures.

A position somewhat contrary to that presented above is advocated by a number of authors. While formalization may inhibit the initiation of new programs, adoption and implementation may be encouraged by rule-guided behavior (41, 68, 134, 163, 170, 196, 225). The rigidity and formalized decision-making procedures inherent in a formalized system may be conducive to the successful incorporation of a change into its operations, but only if it is introduced to the organization and if it does not disturb existing procedures. The following hypothesis was tested:

Hypothesis 17: The degree of formalization of work activity in an organization is inversely related to the organization's level of innovativeness, particularly the speed of adoption measure.

A number of different operationalizations of the term "formalization" may be found in the related literature, some of which require an extreme amount of knowledge about the organization. Hage and Aiken (96) present what appears to be a useful yet simple dichotomy. Formalization is viewed
as both "job codification" (the extent to which written rules guide work activity) and "rule observation" (the extent to which those rules are enforced). In this research, personnel directors were asked to rate on a ten-point scale the extent to which each of these attributes of formalization exist in their organization. Since the bulk of the research concludes a negative relationship exists between formalization and innovation, the hypothesis was tested.

Traditional Weberian constructs such as centralization of authority have long been regarded by organization theorists as a hindrance to flexibility and change (38). "Organic" organizations, to use Burns and Stalker's (3) phrase, are often regarded as more innovative, and the degree of decentralization in those systems to be the prime cause of their flexibility and innovativeness (91, 134). For example, Thompson (207, 208) believes the monocratic nature of most organizations prevents novel solutions from being developed and new ideas from penetrating the organization. Innovations may be seen as a threat to existing power structures and may therefore be vetoed by top decision makers. They may have a psychological stake in the policies and eschew their modification.

Centralization also commonly means fewer perspectives are involved in decision making, as only a few standard channels of information may exist for lower members' suggestions to reach this top elite. These few paths are often
lined with opportunities for rejection (178). A number of empirical studies have verified these theoretical propositions (36, 68, 96, 97, 135, 153, 201).

As was the case with formalization, however, organizational centralization exhibits a varying relationship to innovation depending upon the stage of the innovation process considered. Centralized authority may inhibit policy initiation, but adoption and acceptance is believed aided by strong central leadership. As Wilson (218, p. 392) stated,

the adoption phase is a political activity and necessitates bargaining. When many high-power groups are engaged in the process, there is a strong tendency that there will be difficulty in reaching an accord, in which case adoption and implementation are not facilitated.

Wilson's comments have been echoed by numerous other scholars and substantiated by research results (34, 42, 68, 131, 182, 196).

In light of these comments, it was hypothesized that a variable centralization-innovation relationship would be evidenced:

Hypothesis 18: The degree of centralization of decision-making authority in the personnel department is inversely related to its level of innovativeness, particularly the speed of adoption measure.

Centralization was measured in this research in much the same manner as by Hage and Aiken (96). Personnel directors were asked to rate on a scale of zero to ten the extent to which (a) staff members are allowed to participate in decisions
concerning the adoption of new policies or other significant decisions, (b) supervisory approval is needed before employees are expected to act, and (c) personnel functions are carried out by separate departments as opposed to centralized in the personnel department. Three somewhat different indicators, therefore, were used.

The last of these basic "principles" of organization tested was specialization of task (sometimes known as differentiation or complexity). Unlike the previous constructs, specialization is believed to be conducive to change, and at times is the most strongly related of the structural factors. Specialization refers to the horizontal differentiation of the organization into multiple areas of work and particularized task structures. Bureaucratization, on the other hand, refers to the presence of multiple vertical levels of authority. Bureaucratization should not be confused with specialization as it has been found to be negatively associated with innovation and change (107).

Innovation is believed to be fostered by the multiple inputs and wide environmental exposure concomitant with a specialized organizational structure. Some authors note the absence of a single dominating professional ideology (134). Others believe the constructive conflict or cross-fertilization of ideas involved in multiple organizational sections create an innovative climate (4, 122, 207). These
ideas are consistent with the notion that creativity is fostered by group heterogeneity (74, 195).

However, some contend these virtues of specialization (conflict, lack of ideology, diverse values) will not improve the chances for adoption and implementation of organizational change, thereby lowering overall innovativeness (225). This position is in the minority among organizational scholars, though, because the number of innovations adopted in the long run will be greater in specialized organizations due to the larger number initiated. Adoption and implementation may be inhibited, but the absolute number of adoptions will be greater (4, 163).

The hypothesis tested was as follows:

Hypothesis 19: The level of specialization of tasks in the organization is positively related to its level of innovativeness.

Specialization was measured in this research as the number of non-clerical job titles among the personnel department's staff members.

One would naturally expect that the level of professionalism in an organization would also be a major determinant of its level of innovativeness. Professionals are presumably at the perimeters of their fields where innovations occur, and are also strongly oriented toward such goals as personal and occupational growth as measures of success. They are also very likely to have a strong drive to prove the need for their own programs, and will
often try to find new ways to improve organizational performance (60, pp. 267-270; 98). Maw Lin Lee (123) discovered in his study of hospital administration that innovation was less a function of the professionals' awareness of either the needs or solutions to organizational problems than their own need for status and to show that they are progressive leaders in their field.

Eveland, Rogers, and Klepper (69, p. 18) define the professionalism of the participants in their study as "the degree to which their attitudes and expectations are shaped by outside professional norms . . . which are usually incubated during formal education." Professionals presumably bring to the organization a richness of experience and self-confidence which often stimulates a fresh look at commonly accepted policies (4, 207, 218). Once part of the organization, their cosmopolitism is thought to increase the level of boundary-scanning activities and therefore the organization's sensitivity to environmental stimuli (85, 96, 97, 98, 135, 163), particularly those stimuli which are part of their professional milieu (50).

There is a much smaller body of literature that has come to a somewhat different conclusion, however. Zald and Denton (224) and Corwin (42), for example, did not find professionalism and innovativeness to be significantly correlated, but that conclusion may be a function of the type of innovation they considered—administrative or "top-down" decisions.
Changes which entail a somewhat more technological bent generally evidence a closer association with indices of professionalism.

The hypothesis tested was as follows:

Hypothesis 20: Organizational professionalism is positively associated with the level of innovativeness evidenced in the organization.

Organizational professionalism has been measured in a number of ways, perhaps the most common of which is in terms of educational attainment. Rogers and Shoemaker (175) cite 203 studies relating the early adoption of innovation to the educational level of the target population, 74 per cent of which support the relationship. Professionalism may also be evidenced by the extra-organizational associations and activities of organizational members, such as membership in professional groups and post-entry training. In this research, professionalism was measured in terms of four indicators: (a) the percentage of staff members with a master's degree in a personnel-related field; (b) the educational attainment of the personnel director; (c) the percentage of staff members attending at least one extra-organizational training session after entry; and (d) the percentage of staff members the director estimates are active members of professional organizations.

A very closely related set of variables is based on the attitudes and values of organizational leaders toward change, concepts which are a basic part of the literature on
motivation and the adoption of innovation (47, 48, 131).
As in the earlier anthropological tradition of innovation research, the use of these variables is an attempt to determine what types of individuals are most receptive to change. The effects of a positive orientation to innovation are usually believed to be both direct (acceptance of change and looking for new ideas) and indirect (creating an organizational structure and climate conducive to change), as has been demonstrated by a variety of authors (44, 56, 134).

Empirical research has strongly supported the theoretical linkages suggested in this area, as well as the salience of leader values as predictors of innovation. For example, Hage and Dewar (99) found the attitude-value explanation more powerful than any of the structural variables considered. Measurement of these concepts is difficult, however. In their study, Hage and Dewar used a battery of questions developed by Neal (145). Three of the questions in that battery were employed in this research, with personnel directors rating their level of agreement with each on a ten-point scale:

(a) "there is something refreshing about enthusiasm for change;"

(b) "if you want to get anywhere it is the policy of the system as a whole that must be changed and not just the behavior of isolated individuals;" and

(c) "I am much more strongly attracted to values such as work autonomy, peer evaluation, and professional growth than to rewards such as money, power, and status."
The following hypothesis was treated:

Hypothesis 21: Organizational innovativeness is directly related to the director's positive value orientation toward change as indicated by their agreement with pro-change concepts.

The directors' value orientation was operationalized as their level of agreement with the above statements on a ten-point scale.

A final organizational characteristic which was tested is neither structural or individualistic, but rather concerns the incentive system of the organization considering change. Organizational climates for change may be roughly dichotomized as either rewarding or punitive in nature. In a rewarding environment, the risks entailed in change are considered and the change agent is not penalized if the innovation does not meet with success. On the other hand, successes are well rewarded. A punitive environment is characterized as being slow to recognize positive change, but swift and sure in its punishment of failure (54).

Obviously, a rewarding environment is most conducive to innovation and change (7, 148, 190). One might also suspect that such an incentive system would also be prevalent in organizations with strong leadership motivations toward change. The hypothesis which was tested is as follows:

Hypothesis 22: Rewarding organizational incentive systems are positively associated with the level of innovation evidence in the organization.
In this research personnel directors were asked to indicate their approval or disapproval with the following statement on a scale of zero to ten: "successful changes of organizational procedure are seldom rewarded in this organization, but the failure of such changes is commonly penalized."

In summary, organizational characteristics such as size, slack resources, age, formalization, centralization, specialization, professionalism, leader attitudes and values, and incentive systems will be operationalized by the personnel director and correlated with the derived measures of innovativeness to attempt to discern significant relationships. Leader-defined characteristics are employed despite the possibility of bias because they are believed to be important data and because other means of determining those characteristics are either too time consuming or are equally suspect. Other organizational attributes have been included in previous research (previous innovation experience, use of venture teams, leadership styles, communication patterns, job satisfaction), but are not used in this study due to measurement difficulties.

Innovation characteristics.--A final category of variables believed related to innovation adoption is the attributes of the innovations themselves. Innovation characteristics have been used in prior research only sporadically, but now appear to be growing in popularity. Several such typologies are available. Rogers and Shoemaker
(175) divide their innovation characteristics category into relative advantage, compatibility, complexity, trialability, and observability. Another set includes task complexity, pervasiveness, communicability, specificity of evaluation, departure from current technologies, and cost (162). In this research, six attributes were investigated: cost, radicalness, trialability, improvement, visibility, and mandate. Because of the unique nature of these variables, operationalizations of each will be provided at the end of this section.

Cost is perhaps the most obvious and widely employed of these dimensions, and has the most unexpected effect. One would expect that an inverse relationship would exist between an innovation's costliness and its rate and extent of adoption. However, this is not commonly found: the relationship can best be described as erratic. One reason the cost-innovation relation is not consistent is because cost is composed of several different subcategories.

One type of cost is financial, which may include initial costs, continuing costs, and return on investment. Studies of agricultural innovations in the 1960's revealed initial cost is often not a factor, while continuing costs and the magnitude of payoff were important determinants of change (75, 76). Social costs are another type of expense, although it has generally been significantly related to innovation adoption in developing countries only (76).
Another factor which may upset the expected negative cost-adoption relationship is the presence of outside funding or other sources of income. Lambright and others (120, p. 94) found this to be the case, prompting them to state that the influence of cost on innovation decision making appears to depend on "whether the innovation can be bought with existing operating funds or whether an expenditure of capital is required." However, the effect of the presence of exterior funding sources may not be entirely positive for innovation. Another decision-making layer is added which could make adoption consensus more difficult to achieve (120). Inadequate provision for continued funding may also make implementation difficult or impossible.

These conflicting assessments of the effect of cost on the adoption of innovation provide little guidance concerning the nature of the hypothesis which should be tested. In this research, innovativeness was believed to be negatively related to innovation cost, given the budgetary crises cities so often face. Expensive changes in this area of "cut-back management" would be particularly hard pressed to find support.

Hypothesis 23: The cost of each innovation is negatively related to its rate and extent of adoption.

In an earlier portion of this research design describing the impact of political culture, the importance of a "congruence" between the organization and its environment was stressed. Equally important is the congruence between the
innovation and the organization, both in terms of its compatibility with prior operations and the pervasiveness of the consequences (75). It is generally accepted that the "more an innovation is expected to upset the status quo, the more it will be resisted by those who believe they would be disadvantaged by change" (10, 12, 27, 68, 86, 175, 196, 204, 222, 225). Although innovations should represent a departure from previous behaviors and operations (129), that departure should not be so violent as to shake the foundations of the organization.

For example, Norman (148) distinguishes between "variations" (minor changes which can be incorporated into the political system of the organization), and "reorientations," which require a major change in the structure and function of the adopting entity. Reorientations may disrupt the task system, the political system, and the cognitive state of the organization (148, p. 207; 225, p. 28). Since bureaucratic self-interest is believed to be one of the prime motivators of innovation (223) reorientations are much more likely to be resisted. The hypothesis which was tested was as follows.

Hypothesis 24: The radicalness of each innovation is negatively related to its speed and extent of adoption.

Very closely related to the degree of radicalness entailed is the extent to which the innovation may be employed on a small scale before final adoption. Two dimensions of this construct are generally delineated—
"observability" (the ability to see an innovation in action and witness the results) and "trialability" (the ability to employ a portion of an innovation before having to adopt the total package). In the former the target population is divided, while in trialability one divides the innovation. Trialability was the main focus in this research, as it has been found to be more important for early adopters of change (174).

The use of trial samples in the business promotion industry is perhaps the most obvious manifestation of this concept, where the seller is attempting to lessen the risks the consumer takes in trying a new product. There is some evidence that this concept may be highly important, perhaps more so than any other innovation attribute (76, 202). One reason trialability may be paramount (other than the diminution of the risk of failure itself) is that small-scale applications of change are usually less likely to alert and mobilize opponents of change, whereas massive transformations may stimulate strong opposition (179, p. 26). In light of the wealth of research supporting this proposition (8, 75, 103, 117), the following hypothesis was tested.

Hypothesis 25: The degree to which each of the innovations can be tried on a small scale prior to its full adoption is positively related to the speed and extent of adoption.

Three final innovation characteristics were also employed as relevant independent variables: improvement, visibility,
and governmental mandate. The degree to which an innovation represents an improvement over prior products or procedures should be strongly and positively related to its rate and extent of adoption. Research in both private sector organizations on the importance of productivity improvement characteristics clearly illustrate the saliency of this variable (72, 75). Governmental mandates should also be positively related to innovation adoption, considering the strong theoretical support in the intergovernmental literature (193). The concept has not, however, been used very frequently in innovation research.

Innovation visibility, on the other hand, may well be either positively or negatively related to organizational innovativeness. In one sense innovation may be enhanced by highly visible changes because organization leaders often desire to look dynamic and change-oriented. However, publically visible innovations may also be dangerous to organizational leaders, as opponents are given the opportunity to mobilize resistance. Planning is also much more difficult in such highly visible areas (78, p. 72).

In light of these comments, the following propositions were tested:

Hypothesis 26: The degree to which an innovation represents an improvement over prior procedures is positively related to its adoption and implementation.
Hypothesis 27: The degree to which an innovation represents a governmental mandate is positively related to its speed and extent of adoption.

Hypothesis 28: The visibility of an innovation is systematically related to its rate and extent of adoption.

The methods employed in measuring these attributes of innovations touches upon another of Downs and Mohr's (57) sources of "instability." Recognizing the potential value of innovation characteristics as explanatory variables, previous authors have included them in their research designs and have typically assigned values to these characteristics based on their own perceptions (e.g., innovation X is "extremely costly"). However by assigning values to each change in this manner the author must assume that each adopting entity views each change in the same way. This is surely not a valid assumption. The cost of innovation X may be considered low in an organization with relatively high wealth or slack resources, while poorer firms may perceive the costs to be great. In a similar vein, Rogers (174, p. 124) notes:

it matters little whether or not an innovation has a great degree of advantage over the idea it is replacing. What does matter is whether the individual perceives the relative advantage of the innovation. Likewise, it is the potential adopter's perception of the compatibility, complexity, divisibility, and communicability of the innovation that affects its rate of adoption.

According to Downs and Mohr, innovation characteristics may be either primary or secondary. Primary characteristics
are those which are perceived by all adopting units in the same way—that is, they are intrinsic to the innovation. However, "most if not all characteristics upon which one might consider basing a typology turn out to be secondary attributes of innovations" (57, p. 703). Secondary characteristics are those which may be classified by different organizations into different categories for the same innovation. Since most innovation characteristics are secondary in nature, use of a researcher-imposed characteristic would unduly suppress the explanatory value of this set of variables. A more appropriate tactic would have the adopters of changes assign the values of those innovation attributes for each innovation.

The existence of secondary-attribute typologies would appear to have implications for research design. The crucial difference between secondary and primary attributes—that any secondary attribute of an innovation may vary from organization to organization—is not necessarily a liability. It indicates that we must build the idea of statistical interaction into our models of innovation. When we recognize that different organizations classify the same innovation into different categories, and also that determinants vary in existence or strength depending upon the category into which the innovation is classified, we are by these very facts recognizing the existence of interaction. Further, the interaction may be built into our designs and used to advantage (57, p. 704).

This tactic was employed in this research. For each of the six innovation characteristics, personnel directors were asked to rate on a scale of zero to ten their perceptions of each of the ten changes. The respondents simply circled the appropriate number of the scale provided (see Appendix B).
Each city, therefore, provided sixty innovation characteristic measures. Downs and Mohr describe this technique as the "innovation-decision design," and also maintain that the same principle applies to organizational characteristics as well. They contend that the level of centralization, formalization, or specialization varies according to the innovation being adopted.

It is commonly considered to be a general property of an organization and it used to be measured in global nonspecific terminology. However, organization theorists have long since recognized that centralization varies within organizations as well as between. It is still included in analysis as though it were an organization-wide property, but it is measured by aggregating the responses to questions or observations about several different kinds of decisions—personnel, purchasing, and so forth (57, p. 705).

However, since this research is confined to procedural changes only within a particular subunit of a larger entity (city government), general rather than innovation-specific organizational attributes are used.

**Summary and a Model**

These four categories of independent variables—community environment, organizational environment, organizational characteristics, and innovation characteristics—were analyzed in relation to each of the three dependent measures of innovativeness to determine why some cities and departments are more innovative than others. First, all of the independent variable operationalizations within each of the first three
categories were factor analyzed (varimax rotation) to determine which constructs are most characteristic of that class of variables. This was also done to narrow the number of independent variables used in subsequent analyses. Variables loading highest on each of the relevant factors were selected to represent that category in a regression analysis involving the derived categorical representations and each dependent measure of innovativeness for each innovation. For example, per cent black and per capita income may load highest on one of the factors in the community environment category. Those variables, along with representatives from each of the other categories, were regressed against the rate, extent, and combined innovativeness variables for each of the ten innovations. Thirty regressions were, therefore, conducted yielding partial beta coefficients for each independent-dependent relationship. The end result indicates which independent variables are the best predictors of each innovativeness measure for each innovation (78). A summary of the expected relationships is outlined in Table I.

One problem area in earlier studies of innovation (and other areas of social research) has been the tendency of researchers to utilize statistical techniques unwarranted by the characteristics of their data. Not the least of these problems is the tendency to use tests of significance where the data do not meet the underlying assumptions of those tests (136). For example, Aiken and Alford (3) studied the
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<td>Visibility</td>
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Key: + = Positive Relation Expected, - = Negative Relation Expected, and * = Undetermined Relation.
innovativeness of all cities over 25,000 in their universe, yet applied tests of significance even though the requirements of random selection were not met.

Even though we have exhausted all the units in the universe, there is still the possibility that the observations were produced by errors of measurement. In addition, because we have not other criteria, we utilize significance tests to distinguish between negligible and appreciable correlations, although we recognize that this test, strictly speaking, is not one of statistical significance, nor does it provide assurance of substantive significance (3, p. 552).

This research did not employ tests of significance for correlation coefficients even to determine the salience of the correlations. Multiple regression will, however, be employed to attempt to assess the relative impact of the independent variables, a technique used in prior innovation research (78).

Thus far the categories of variables have been presented with little or no theoretical underpinning for their use or how they purportedly fit together in a coherent package. Although no explicit theories will be tested in this research, Figure 1 describes these linkages in a model of municipal personnel innovation. The model is very similar to that employed by Richard Bingham in his The Adoption of Innovation by Local Government (22), although Bingham did not consider the characteristics of the innovations in his research. This model suggests that the community environment independently affects innovation adoption, as well as impacting the other independent variables. From there a
Fig. 1--Model of Municipal Personnel Innovation
temporal sequence can be logically inferred, with the organizational environment affecting the characteristics of the entity and its perception of innovation characteristics, and organizational attributes affecting the perceived nature of the change.

No attempt will be made to test the causal linkages inferred in this model of innovation, but the variables employed were collected in such a manner that this mode of analysis can be attempted at a later date. A time-lag is built into the model, with community environment represented by variables of the late 1960's and early 1970's, organizational environment measures representing the early and mid-1970's, and the remainder of the independent and dependent variables collected in October, 1979 through the mail survey. The earlier data are drawn largely from the 1972 and 1977 County-City Databook.

Research Design: Innovation Diffusion

The second set of questions which are addressed by this research in Chapter IV is

how do personnel innovations spread from one organization to another (what forces are involved in the diffusion process)?

In order to answer these questions it is initially necessary to distinguish between the two terms "diffusion" and "adoption." Diffusion is the larger of the two phenomenon, and is composed of a series of adoptive decisions. According
to Eyestone (70, p. 441), "any pattern of successive adoptions . . . can be called diffusion." Feller and Menzel (72, p. 2) clearly distinguish the two terms, and their constructs served as the definitions used in this research. Adoption is "the behavior of a single adopter with respect to acquisition of either a single innovation or a group of innovations." Diffusion, on the other hand, refers to the "rate and extent of acceptance and use of innovations among a class of adopters and the process(es) by which individual adopters interact with other change agents."

The remainder of this chapter is divided in terms of these definitions. The next section will deal with the individual adopters (and non-adopters) of the personnel changes in question, focusing upon the intra-organizational decision processes involved in the act of innovating. This section on diffusion concentrates on the aggregate "class of adopters," and the manner in which innovations spread from one organization to another. Several different facets of innovation diffusion are investigated: the rate and extent of adoption for each innovation, the sources of innovation information, innovation leader characteristics, and regionalism in diffusion patterns. No explicit hypothesis will be tested.

Rate and Extent of Adoption

Innovation diffusion research had been carried out in a number of academic disciplines, including anthropology, rural
sociology, medical sociology, industry, and political science. One phenomenon common to virtually all such empirical studies has been the normal distribution of adoption frequency, or an "S"-shape curve denoting the cumulative distribution over time (40, 174). Virginia Gray (88, pp. 1175-1176) lists three reasons for this repeated finding:

(1) the time of adoption for any given case "is determined by the interplay of an infinitely large number of elements in the social milieu," thereby fitting the requirement of the normal distribution that "the value of each event is the result of the chance combination of a great many minute and relatively equal factors" (159, pp. 550, 554);

(2) the cumulative normal curve is similar to an individual's learning curve which is "s"-shaped in its cumulative form. Adoption . . . is then equivalent to a learning trial by an individual (174, p. 153); and

(3) there is an interaction effect, i.e., adopters influence those in the social system who have not yet adopted. As more persons adopt, the effect on non-adopters increases.

Basically, the curve symbolizes the slow initial spread of change, followed by a period of rapid adoption and then waning interest. Feller and Menzel's (72, p. 48) investigation of the diffusion of hard technologies in municipal governments also revealed an "S"-shaped distribution, and the authors claimed the presence of such S-shaped diffusion curves suggests that the adoption process for most technologies in municipal governments involves a pre-threshold period involving trial use, mixed reviews, and occasional discontinuances, followed by a period of accelerated adoption, cumulating in an overall pattern of usage. In this sense the
adoption process in the public sector corresponds to that described for the private sector (130, pp. 133-134; 140).

One possible reason Feller and Menzel could claim the public and private sectors evidence the same adoption process is that the subjects of adoption investigated are the same—i.e., technological innovations. Most studies of innovation diffusion in private industry are of technological change, and Feller and Menzel are investigating basically the same topic, studying such changes as computer hardware systems and freeway impact attenuators. One could reasonably question whether social innovation would follow suit, as they are very different from other types of change. For example, technological innovations: (a) are usually very clearly defined, with a record of proven effectiveness prior to dissemination; (b) have a relatively short payoff time by which the adopter can judge its operational effectiveness, and measuring that effectiveness are readily apparent, and (c) usually confine decision making to a single individual or small group. Social innovations generally have none of these characteristics: the technologies are often unclear; their evaluation demands professional insight, as criteria are usually vague and payoffs may be long in coming; and adoption decisions are made by complex organizational interactions (11).

This portion of the research investigated the rate and extent of the adoption of social innovations (personnel
policies) in order to determine whether or not the cumulative diffusion curves evidence the "S"-shape pattern prevalent in previous research. Graphic representations of the diffusion patterns were employed to clearly illustrate the configurations. Each innovation was investigated separately, in keeping with the findings of previous studies that "diffusion patterns do differ by issue area" (72, 88). Although the diffusion patterns of technological innovations in both private industry and local government and the patterns of state policies approximate normality (72, 88), the curve for municipal policy innovation has yet to be tested.

Also, investigated were the similarities and differences in those patterns across all innovations, and the effect of the characteristics of the innovations as perceived by the directors on those patterns. For example, innovations perceived as being not very difficult to adopt (low cost, non-radical) or those which are highly mandated by governmental bodies should evidence a much more rapid and complete diffusion than changes without those characteristics.

Sources of Innovation Information

Analysis of the rate and extent of municipal personnel policy diffusion can provide significant information concerning the extent to which the "S"-shape diffusion curve so prevalent in technological innovation and state policy research is also evident in this policy area. The graphic
representations of diffusion may also suggest reasons for the expected variations among the innovation patterns. However, the research can help us learn little about either the sources of information which led to those changes or the types of organizations which are likely to use a particular informational source. A different mode of analysis must be employed to derive this information.

One means of generating these data is by simply asking potential innovation adopters to assign priorities to their sources of information about changes in their field (69, 124). Personnel directors surveyed in this research were asked to rank on a scale of zero to ten the degree to which their department uses each of the following sources of information to discover new ideas: professional journals and magazines; professional meetings and conferences; federal government agencies; state government agencies; regional planning commissions or councils of governments; other cities; and individuals within their own city government. Relevant intercorrelations of these interval-level rankings were then explored with many of the community environment, organizational environment, and organizational characteristics measures in order to determine whether certain types of cities and organizations were inclined toward certain informational sources. Several such linkages are suggested in the diffusion literature, although the direction of those associations is not always clear.
For example, one general hypothesis that appears to have some support is that other cities are a particularly important source of innovation information in the field of personnel management. Light (124) found staff generalist administrators in state agencies (e.g., personnel officers) were much more likely to perceive other states as important sources of information than administrators in line agencies or social service areas, who often looked toward the national government for new ideas. If state-level results are applicable to the municipal setting, personnel directors should consider other cities to be an important innovation source.

Unfortunately, that transference may not be made quite that easily. A report to the Office of National Research and Development Assessment by the National Science Foundation (144, pp. 31-34) notes that cities and states differ widely in the needs and conditions stimulating innovation, and that local government change is probably much more heavily influenced by such environmental characteristics as population size, wealth, and urban-suburban makeup. The authors also noted that informal communication groups often exist between states and local governments, which may upset any city-city relationship presumed to exist. Discordant cues are provided in the literature, therefore, concerning the overall importance of similar subunits in innovation diffusion.
The selection of particular information sources, however, may be systematically related to the characteristics of the personnel offices. For example, cities and departments with extensive federal contacts (amounts of federal grants-in-aid per cent of personnel budget from intergovernmental transfers) can be expected to rate federal information sources highly (69, 124). The quality of those contacts may play an even more important role in their perceptions of federal sources. Katz (114) reports in his studies of medical and agricultural innovation that interpersonal relations were more important to diffusion than the simple amount of contact and information provided in both areas. Interpersonal relations acted as a legitimizing agent, greatly contributing to innovative adoption.

Community environment, organizational environment, and organizational characteristics were correlated with each of the innovation source ratings to determine whether relevant associations exist and whether the relationships are in the directions predicted in Table II. Many other expected linkages are based on the diffusion literature. For example, research in societal change suggests that target systems of high socioeconomic status are more likely to use media sources such as journals and conferences than low SES systems (172). Wealthy systems also use more sources of information than their poorer counterparts (172). Larger organizations
TABLE II
EXPECTED RELATIONS OF INDEPENDENT VARIABLES TO SOURCES OF INNOVATION INFORMATION

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Jrnls</th>
<th>Mtgs</th>
<th>Feds</th>
<th>State</th>
<th>COG</th>
<th>Other Cities</th>
<th>Own City</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Environment:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Size</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Community Integration</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Community Wealth</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Community Education</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Community Conservatism</td>
<td>*</td>
<td>*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Environment:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent Federal-State Aid</td>
<td>*</td>
<td>*</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Quality Federal-State Aid</td>
<td>*</td>
<td>*</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Intergovernmental Cooperation</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>City Government Size</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>City Government Wealth</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Reformed Structure of City Government</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Environmental Turbulence</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Use of Consultants</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Organizational Characteristics:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of Department</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Slack Resources in Department</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Age of Department</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Formalization in Decision Making</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Centralization in Decision Making</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Specialization of Tasks</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
are believed to rely on internal sources of information more heavily than smaller firms (82).

In the above relationships, community and organizational variables are used as independent variables to determine their relationship with the directors' reported usage of the informational sources. One might also view the sources as independent variables and observe their relation with the level of innovativeness evidenced in the cities. For example, a strong relationship between the reported rate of usage of journals or professional meetings and the speed of adoption of test validation would suggest that those innovation sources are conducive to rapid change in that area. The literature seems to support that inference that the mode of information contact is related to the timing of innovation, with early adopters of change relying upon the use of media sources (journals, conferences) and late adopters using face-to-face information channels (6, 53, 109, 119, 172). It is also expected that the

### TABLE II—Continued

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Jrnls</th>
<th>Mtgs</th>
<th>Feds</th>
<th>State</th>
<th>COG</th>
<th>Other Cities</th>
<th>Own City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionalism of Department</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Pro-Change Values</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Rewarding Incentive System</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Key:** + = Positive Relation Expected, - = Negative Relation Expected, and * = Undetermined Relation.
cumulative amount of source contact will be positively related to the innovativeness measures. Cities with many contacts should be more innovative than communities with few sources of information (82, 114).

Innovation Leaders

One theme either explicit or implicit in much of the research is the notion of the "innovative target system;" i.e., a naturally change-oriented adoptive unit. This entity may be an individual, an organization, a city, a state, or a society. However, since much of the research in this area points to the variability of innovation determinants across policy areas (72, 88, 124), an empirical search for innovation leaders has not commonly been undertaken; where it has been undertaken it has not generally been successful (22).

It should not be assumed that truly "innovative" target systems do not exist, however. In a re-examination of Virginia Gray's findings, Savage (183, p. 218) concluded "Gray may have been too hasty in discounting a general innovativeness trait as a variable characteristic of the states." He found over one-half of the states exhibited a considerable degree of constancy over time in their relative speed of adoption over 181 policy variables. Many studies, including Walker's (214) seminal research, indicate that some entities are more innovative than others across multiple areas, and that these leaders can play a significant role in innovation diffusion.
Johan Arnt (8), for example, attempted to analyze the "two-step flow" of information common in communication research. It is often believed that ideas flow from radio and print to the opinion leaders and from them to the less active sections of the population. Arnt tested the diffusion of a food product and found opinion leaders were more influenced by an impersonal source (here a mailed letter) than non-leaders. Leaders were found to be more active communicators, both as transmitters and receivers of word-of-mouth communications. These leaders-transmitters did not simply pass on information, but gave it their own evaluations, in messages which were apparently heeded by information recipients.

The importance of innovation leaders is also reflected by Bailey (10) in his summary and commentary concerning the works of contributors to his book on innovation. Bailey notes the role of the innovator or "pusher" or change, and states "the chances of an innovation becoming institutionalized depends, in part, on the credit of the innovator." He asserts the credit of the innovator is more important when the outcome of the anticipated change is uncertain and suggests that more study is needed to investigate what characteristics grant him or her that credit.

Since it is expected that "other cities" will be a significant source of information to personnel directors looking for new ideas, an understanding of whether consistent leaders exist, and if so who they are, could go far toward
explaining and predicting innovation diffusion. Innovation leaders were defined as cities in the top 10 per cent of innovation adopters for five or more of the innovations. Previous research on technological innovation leads one to conclude, however, that such leaders may not exist (22, 72).

These three tests—graphic analysis of diffusion curves, investigation of the sources of information, and analysis of leader characteristics—will be the focal points of Chapter IV. The results of studies such as these can be very valuable to both adopters and promoters of social change. Diffusion curves can indicate stages in the adoption process, influences common to all innovations, and factors which seem peculiar to a single change. Identification of the sources or leaders of change may help promoters of policy improvements gain their implementation. The International City Management Association's (ICMA) Innovation Project (26) is only one of many such programs to diffuse policy changes to local governments. Seed money from the National Science Foundation has also started over a dozen regional and state innovation networks nationwide; their purpose is to apply new technology to solving problems in their communities and subsequently share successes among themselves.

Research Design: Innovation Adoption

The final question this research investigates (Chapter V) is
what intra-organizational processes are involved in the actual adoption decisions in municipal personnel innovation?

As defined earlier, adoption is the "behavior of a single adopter with respect to the acquisition of either a single innovation or a group of innovations" (72, p. 2). The previous portions of this research have gathered information concerning macro-level phenomenon such as system innovativeness and the manner in which personnel policies diffuse from one organization to another. While these data are useful in one sense, they tell us nothing of the process of innovation adoption within particular organizations. Collection of this information requires a micro-level approach, what Eveland, Rogers and Klepper (69, p. 13) refer to as "ethnoscience" or an "emic" methodology (101, 151, 164).

The Need for a Process Approach

Quite a number of innovation theorists have called for a process approach to innovation in the relevant literature. Most begin with a critique of empirical studies of system innovativeness, which typically treat the innovation process as a single intervening variable (Figure 2), not as a complex set of steps and forces which change over time (83, 92).

Inputs \[\rightarrow\] Innovation \[\rightarrow\] Outputs

Fig. 2--Simplistic Model of Innovation
Problems associated with the use of this approach by itself are obvious when one examines the strength of the relationships discovered. Most correlational studies are able to account for only a small portion of the variance exhibited across the cases. This problem and a potential solution are noted by Paul (158, p. 10) in his review of fluoridation studies in the United States,

. . . the quest for diagnostic attributes of a fiscal nature, whether of communities or of personalities, is approaching a point of diminishing return, and the course of wisdom lies in directing systematic research attention to the flow of events in a series of particular campaigns.

Hage and Aiken (98) similarly criticize "one-shot" surveys,

The current state of knowledge about organizational behavior is based to a large extent on cross-sectional studies. . . . They fail to sensitize the student of organizations to the ongoing process of change in organizations. Organizations seldom stand still.

Cross-sectional or "one-shot" surveys cannot answer many questions of why certain characteristics covary with innovativeness. They are studies of innovativeness, not innovation. Perhaps the strongest suggestion for a process approach comes from Eveland, Rogers and Klepper (69, pp. 11, 13):

. . . it is essential that we develop and apply models of innovation which focus on organizational behavior, not just on characteristics of organizations at particular points in time—since it is behavior that determines performance. . . . We recommend much greater attention to the innovation process in organizations and much less to determining correlates of organizational innovativeness.
Clearly, we believe that there is a more long-term payoff both in theoretical and policy terms from knowledge of innovation processes than from a knowledge of the correlates of innovation along.

The theoretical and practical benefits of information about the innovation process Eveland, Rogers and Klepper refer to are further illustrated by Daft (50, p. 194):

First, obviously, is the knowledge gained from finding new explanations or identifying the correct explanation among several feasible alternatives. The second benefit is a practical one. Fundamental knowledge about the innovation process, especially its early stages . . . will suggest how organizations should be designed to facilitate or inhibit the flow of ideas that lead to innovation adoption.

Despite repeated calls for a process approach to organizational change by these and other authors, and the very real benefits of that research, the number of empirical comparative studies remains embarrassingly low. Most studies which address the innovation process are case studies of single innovations or single organizations.

This research on municipal personnel policy innovation attempts to study the processes involved in the adoption of these changes by using the less structured research techniques of what Eveland, Rogers, and Klepper call "ethnoscience." Upon completion of the mail survey, on-site interviews were conducted with personnel directors or their equivalents in twenty-two of the cities responding to the questionnaire. Cities were selected on the basis of both geographical
availability and their adoption or non-adoption of three of the ten innovations targeted in this research:

(a) selection of employees based on actual or simulated job performance;

(b) use of performance evaluations as the primary basis for compensation decisions; and

(c) codification of employee grievance procedures.

Cities which had adopted some but not all of the changes were the primary focus, although some cities were included which reported adopting all three. The non-random manner in which the agencies were selected for inclusion in this portion of the research precludes any assumption of generalizability to the larger population.

In cities where the change was in place, personnel directors were asked to describe the events that led to the adoption of the innovation. Although the interviews were open-ended, some structuring of the responses were provided through the following sequence of questioning:

(a) What was the situation prior to the change?

(b) How was the situation perceived as a problem in need of change?

(c) How was the solution that was adopted developed?

(d) Who made the final decision to adopt the change? How was that decision made?

Where the change was not adopted, personnel directors were asked to provide possible reasons for non-adoption.
Process Models in the Literature

Although the paucity of empirical research in this area precludes the presentation of formal hypotheses concerning the innovation process evidenced in municipal personnel offices, a number of process models are forwarded in the theoretical literature which are, as Zaltman, Duncan, and Holbek (225, p. 52) recommend, "composed of a set of stages or phases ordered along the temporal dimensions of their anticipated sequence."

Models are "sets of symbols, of concepts abstracted from the real world, which are organized together to represent a problem . . ." (69, p. 61). They are "used to organize one's observations about the outside world," and as such are never "true" or "false" but rather more or less useful for insights and hypotheses. Process models, where time is a factor, are more difficult to develop and interpret than static models, but are the only variety appropriate to understand behavior.

Most studies using models of innovation have incorporated a series of steps or stages characterizing the process. Rogers (174) used five steps in 1962, but revised that to four in his 1971 compendium with Shoemaker (175). Many of these models draw heavily from individual-based studies of change. Zaltman, Duncan and Holbek (225) identify twelve models in their review of the literature--seven individual based and five organizational based. Most begin with a "felt need" for change as a pre-condition for innovation.
For example, Edgar Schein (188, p. 99), a psychologist, delineates several different actions in his "adaptive-coping" cycle of organizational change:

(a) sensing a change in the internal or external environment;

(b) importing the relevant information about the change to those parts of the organization which can act on it;

(c) changing production and conversion processes inside the organization according to the information received;

(d) stabilizing internal changes while reducing or managing undesired by-products;

(e) exporting new products and services more in keeping with changed environmental demands; and

(f) obtaining feedback on the success of the change by further sensing the environment and the integration of the internal environment.

In fact, one way in which the models of innovation adoption may be organized is by the level of analysis used--individual, organizational or extraorganizational. Individual-based models are also exemplified in Knight's (118, pp. 486-490) research, in which he delineates three phases of adoption: recognition of a problem, a search process, and a problem-solution phase in which the innovation is accepted. The author says the starting point is the individual desire to innovate, although he is unable to clearly differentiate between the processes used by innovators and non-innovators. Generally, though, Knight says they do differ in the way they view the problem--the
non-adopters see them in terms of existing categories, with solutions confined to existing approaches. Innovators may tend to develop new problem concepts and thus will search for new solutions in new ways.

Uterbeck (212, pp. 78-81) presents a three-stage model which characterizes the organizational genre, with varying mixes of creativity and rationality: idea generation, problem solving, and implementation. Idea generation is a creative, proposal-development phase, relying on a synthesis of need recognition and technical prowess to meet those perceived needs. Problem solving is largely a rational process in which sub-problems, goals, priorities, alternatives, and evaluations are identified. The end result is innovation, solving the problem created by the need. Implementation is even more rational, involving an engineering of change acceptance in the various organizational sub-units.

Clark's (36) combined-process model may be the most extensive statement on the innovation process yet developed, and is an example of the extra-organizational design. Here, innovation may occur either within or outside the adopting entity. Outside the organization, the innovation may occur through the progressive development of professional activities. Inside, the change may develop as a result of organizational characteristics such as its level of specialization. The two processes may occur separately or
concurrently. Clark uses his model in a university setting, but says it applies to other organizations as well.

Many of the models are also "two-stage" designs or derivations thereof: (a) an initiation phase in which the organization becomes aware of an innovation and decides to adopt it, and; (b) an implementation phase in which the organization puts the innovation to use and eventually institutionalizes the change. Normal (148), for example, terms the phases "initiation" (idea formulation leading to the decision to adopt or continue with the change) and "realization" (the major implementation phase culminating in an evaluation of the innovation's effectiveness). Derivations on this dichotomy are offered by Yin (223)—"prior state, initiation, implementation, and routinization"—and Berman and McLaughlin (19)—"support, implementation, incorporation."

One of the more elaborate of these initiation-implementation models is offered by Zaltman, Duncan, and Holbek (225). The initiation phase is divided into three substages the first of which is "knowledge-awareness." In this obvious first step, the adopter notes the existence and applicability of the innovation to the adopting unit. However, Rogers and Shoemaker (175, p. 106) note one of the critical issues unresolved in this portion of the adoption process:

... research does not provide a clear answer to this question of whether awareness of a need or awareness of an innovation (that creates a need) comes first. The need for some innovations, such as a pesticide to treat a crop pest, probably
comes first. But for other ideas, the innovation may create the need.

The second substage of initiation is "attitude formation," which is composed of at least two dimensions: (a) openness, or whether the adopter is willing to consider the innovation and (b) potential, or whether they believe the innovation can be of value. "Innovation dissonance" may occur when the individual's attitude toward the change and the actions required by the organization (acceptance or rejection) are not coterminous. Rogers and Shoemaker (175, p. 311) report this dissonance may be reduced over time by:

1. Individuals changing their attitudes to make them consonant with the behavior demanded by the organization or (if the change is adopted),
2. Discontinuance of the innovation, misuse of the innovation, or circumvention of the adoption edict to make their organizational behavior consonant with their attitudes.

The final initiation sub-phase is the "decision" to adopt or reject the change, in which all the previous information is evaluated. This sub-phase is heavily dependent upon the processing of information about the change and how the organization will be affected, so adequate communication processes are crucial.

The final phase, implementation, involves the actual utilization of the innovation as the members of the organization perform their tasks, and may be divided into "initial" and "continued-sustained" implementation. The
former entails the first attempt to use the organization, often on a trial basis (13, 170). If the trial is successful, sustained implementation will be more likely. Some intervention theorists and practitioners present what they believe are steps or phases involved therein (126, 187), although most are case studies with little generalizability.

Eveland, Rogers, and Klepper (69) look unfavorably upon two-stage models such as these, however. First of all, they believe such dichotomies imply that only two classes of decisions are made in the organization, and that they are sequential and linear. No notice is taken that there may be important interrelationships at work. Second, they generally focus on organization-wide measures of structure, yet innovation adoption may be made by a small facet of the total system, even one person. The model they offer as an alternative is based on four propositions:

(a) the plural character of innovations;

(b) a view of the innovation process as the specification of operational change characteristics;

(c) a tool-use (or "what-how") distinction as the major specification in the process; and

(d) the utility of variation in the innovation itself.

Five stages are involved in their process model, each of which entails a particular set of decisions and behaviors leading to the specification of the innovation for that organization.
Agenda Setting—in which problems are defined and commonly recognized;

Matching—in which problems from the agenda are brought together with possible solutions within the organizational unit. The primary concern is not how the change got to them (diffusion), but rather the internal match of the problem with the solution;

Redefining—in which the primary attributes and values of the innovation are defined in terms relevant to the members of the organization. This specification process reduces the ability of organizational members to define the innovation differently, and tries to achieve some "critical mass" of agreement among the participants;

Structuring—in which participants fit the innovation within the structure of the adopting unit through a series of recognizable changes. The number of actors involved may range from a single person to all organizational members; and

Interconnecting—in which the organizational subunit adopting the change defines its relationship with the rest of the organization and reduces conflict-producing ambiguities.

Eveland, Rogers and Klepper report the above process is largely sequential, although the speed of change may vary considerably and there may be some degree of backtracking. The process is complete only when the participants no longer view the innovation as "new," but as a normal part of operations (routinization or institutionalization).

The authors attempt to test their model through examination of a computer processing innovation in local government. They report that such factors as professionalism, system supports, innovativeness, accountability, resources, and communication may impact this process, each of which is
more or less important depending on the particular innovation phase in occurrence. Professionalism is most important in the early stages of matching and redefining, while resources and communication are particularly relevant to structuring and interconnecting.

Additional process models in the literature could be provided (16, 79, 163, 196, 207, 218), but their contribution to this discussion would be negligible. None of these constructs appear to be significantly better than the others or more testable in terms of firm hypotheses. They are outlined here mainly to indicate the diversity of approaches available and the thoughts of important scholars in the field. One suggestion which may be gleaned from all these suggested approaches, however, is a concentration upon the middle stages of the process. The early phases are often creative acts, while the latter are administrative. The middle stages entail the actual process of adopting, where members of the organization consider whether a change is desirable or not, and is the least well documented yet most critical step (184). The entire process, however, should not be neglected.

Data for this portion of the research on personnel innovation were collected and analyzed with these process models in mind (see Appendix D). No attempt was made to directly apply any one of the models suggested, although the literature leads one to investigate the factors which
precipitated the change, the manner in which the need for change was perceived, the development of the particular solution employed, the actual decision to adopt, the factors believed important to effective implementation. With regard to this last point, personnel directors were asked if any outside assistance was used to implement the change, whether resistance was evidenced by either lower-level employees or political leaders (groups often believed resistant to change), and whether the change was modified to meet unique organizational requirements.

**Barriers to Adoption**

Organizational scholars have frequently noted significant barriers to the adoption of changes in both governmental and other types of organization. For example, Hayes and Rasmussen note innovation may not occur for several reasons: lack of resources for and a low credibility of change in the organization; lack of guidance concerning how change can occur; and the inability to effectively implement the program. They also cite opposition by important groups and individuals as a barrier that must be overcome. "As a general rule, innovation in government does not command any great support, and can produce considerable opposition" (106, p. 10).

A similar and extremely interesting thesis is forwarded by Kelley (115)—that organizational elites must be "seduced" in order for an innovative venture to succeed. Kelley takes the position that governments are not only organizations,
but that all organizations are also governments (161). His perspective is strongly political, and says that decision making is less likely to be rational than the reflection of the interests of the dominant coalition.

Innovations, in order to find support among the organizational elites, must be perceived as essentially conservative. That is, the innovation must be cloaked in appropriate symbolism, that appears to fit into the predictability of the elite mind-sets. . . . The innovation must not appear to be a challenge to the existing value system, but rather an extension of it (115, pp. 68-69).

These comments, therefore, indicate that local government elites (chief executives, council members, department heads) may act as a significant barrier to change. Conversely, the importance of an innovation facilitator or "champion" is also commonly perceived as important to adoption (69, p. 102).

Griffiths (91) also notes factors he believed act as barriers to change in his study of federally funded projects to treat juvenile delinquency: (a) failure to define precisely how the project was to be integrated into the task environment; (b) staffing with people not inclined to support the change; (c) inadequate provision for continued funding after federal monies run out; and (d) interference with other programs. In what is perhaps the most extensive empirical treatment of the facilitators and inhibitors of change, Feller and Menzel (72) delineate and test five factors they believe are associated with the adoption of technological innovations:
(a) the need of the organization to improve productivity and the attendant budget squeeze;

(b) the prestige associated with the adoption of change, particularly early adoption;

(c) the availability of information needed to assess the innovation and the capability of in-house units to adequately process that information;

(d) the pressures of legislation both within and outside the local environment; and

(e) the attitudes of various actors involved in spreading the change and adopting it.

All of these potential barriers to innovation were incorporated into the research design on the innovation process, although the lack of prior empirical studies in this area prevent solid hypotheses from being presented and tested. In keeping with the open-ended nature of this research, personnel directors were asked to delineate the factors they believed inhibit personnel change. In addition to this general question, the focus of attention was also placed on the receivers and senders of change. Directors were asked to enumerate characteristics of local personnel offices they believed are important to adoption and to describe the techniques and characteristics of effective change promoters. These responses were analyzed in relation to the previous literature-based propositions.

Intergovernmental Personnel Act

Drawing on the final portion of the interviews, the last section of this chapter deals with the perceptions of local
personnel directors toward the Intergovernmental Personnel Act (IPA) programs administered by the Office of Personnel Management. Signed by the president in January, 1971, the program was instituted "to reinforce the federal system by strengthening the management and training of state and local government personnel" (142, p. 1). Tools employed in this improvement process include direct and indirect grants to local governments, provision of technical assistance and training, and intergovernmental mobility assignments. IPA grants are often referred to as "seed money" from which it is expected personnel innovation will flower and grow.

In a comprehensive review of IPA grant programs in 1976 by the National Academy of Public Administration, the investigating panel made several substantive recommendations concerning program administration and design. Some of the problem areas noted in the report were the extent of paperwork involved in the application procedure, the low (1:4) federal match of local funds in those grants, funding of standard personnel activities such as pay classification plans instead of innovative projects, and the lack of dissemination of project results of special public significance (142, pp. vii-xii). With these caveats, however, the program was generally given high marks for flexible administration.

Personnel directors interviewed in this portion of the research were queried in many of these areas of concern in
order to attempt to confirm or deny the basic conclusions of the report. Directors were asked whether their city had any contact with the IPA program, the nature of that contact if any, and their evaluation of the program's administration and success. They were also asked whether they received any IPA publications designed to disseminate the results of innovative programs in other cities and, if so, their comments concerning those publications.

Data Reporting

The data from this portion of the research are reported as a series of case studies, although some generalizations relative to the adoption process, barriers to adoption, and the IPA programs have been made. The case studies as used here are somewhat unique to the adoption literature, as they focus not solely on a single entity or a single innovation, but on the behaviors of several cities with respect to three distinct changes. Interview data were recorded on interview schedules and later transferred to summary record sheets. Coding of the responses required the use of the researcher's judgment at times due to the open-ended nature of the data-gathering instrument. Pre-coding was not possible because of uncertainty regarding the key dimensions of the innovation process, the lack of empirical tests of innovation models, and the "emic" nature of the methodology employed.
Summary

This chapter basically details the methodology employed in answering the three basic questions about municipal personnel innovation that this research intends to address in the next three chapters. In doing so, the chapter has reviewed a portion of the relevant literature on organizational and public policy innovation. The data were collected by a mail survey of all cities over 25,000 in two federal regions and by personal interviews with personnel directors in twenty-two of these cities.

In Chapter III, the factors associated with municipal personnel innovativeness are examined by correlating four categories of independent variables (community environment, organizational characteristics, organizational environment, and innovation characteristics) with three measures of organizational innovativeness (speed of adoption, extent of implementation, and a combined measure). Unique means of measuring the innovativeness of the departments are developed and used in this research for the first time. Within each of the four categories of independent variables explicit hypotheses are presented and tested by the strength of correlational coefficients evidenced, both with and without controls for exogenous variables.

Chapter IV investigates the diffusion of the innovations from one city to another. The rate and extent of the diffusion is graphically illustrated for each of the changes
in order to determine whether the S-shaped diffusion curve found in other innovation research will be evidenced here as well. Also investigated is the effect of perceived innovation characteristics on the pattern of diffusion depicted on the graphs. Sources of innovations and innovation leaders comprise the last portion of the analysis in Chapter IV, the results of which may prove very valuable to promoters of social change.

The final portion of this research concerns the intra-organizational adoption process which occurs within the municipal personnel departments, and is presented in Chapter V. Although the need for a process approach is well-documented in the literature, few empirical studies have been conducted. Three of the ten innovations analyzed in the previous section of the study are examined in detail to discern the conditions which led to the change, the manner in which the change is introduced to the organization, and the factors associated with the decision itself. Barriers to change as perceived by the personnel directors are delineated, as well as their impressions of the Intergovernmental Personnel Act programs designed to stimulate change.

Innovation is defined as "the first or early decision to adopt a change in procedure by one of a set of organizations with similar goals." This definition is best suited to the purposes of this research, as it distinguishes between innovation and creativity, implies a time frame and a
comparative focus, equates adoption with a decisional process, and concentrates on procedural change as opposed to a technological adoption. Throughout this research, great care has been taken to avoid the pitfalls delineated by innovation scholars such as Downs and Mohr (57). As a result, the research should add valid and reliable information to the body of organizational innovation research and provide needed information concerning the processes of personnel policy change.
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CHAPTER III

DETERMINANTS OF INNOVATIVENESS

This chapter discusses the following set of questions:

Why are some municipal personnel offices more innovative than others (i.e., what factors seem related to their level of innovativeness)?

Three measures of organizational innovativeness for each change are used in this research: (a) speed of innovation adoption, based on the number of months that had passed between the city's date of adoption of the change and the data the survey was mailed; (b) the extent of innovation adoption, based on the directors' opinion of their cities' level of change implementation; and (c) a combined measure of innovativeness, formed by multiplying the speed and extent measures. Factors believed related to these indices of innovativeness fall into four general categories: (a) community environment (e.g., community size, wealth, education, and political conservatism); (b) organizational environment (e.g., local government size, form, and wealth, federal assistance, and use of consultants); (c) organizational characteristics (e.g., organizational size and wealth, staff professionalism, and director attitudes) and (d) innovation characteristics (e.g., cost, radicalness, and trialability).
All cities over 25,000 in population within federal service regions V and VI (Chicago and Dallas, respectively) were asked to provide information concerning both their adoption and use of ten selected personnel innovations (Appendix A) and characteristics of their own departments. A total of 288 cities were surveyed by mail, of which 146 responded (a 52 per cent response rate). A copy of the questionnaire used is provided in Appendix B. Fifteen of the questionnaires had to be rejected due to incomplete data (most often failure to include the name of the city responding), so that a total of 131 usable surveys were received. This rate of return compares favorably with a baseline study conducted by the Office of Personnel Management and the Council of State Governments in 1977-1978. Their response rate for the 2,100 cities over 2,500 contacted nationwide was only 14 per cent (16).

Prior to the data analysis of the factors related to municipal personnel innovativeness, the first part of the chapter presents univariate frequencies of selected independent variables and an overview of the adoption of the innovations to provide the reader with some background or contextual information. These frequencies will also serve as a relevant preliminary to the subsequent analysis, perhaps helping to explain why expected associations are (and are not) borne out by the data.
Characteristics of Communities, Environments, and Organizations

Tables III through V present univariate frequencies of selected independent variables in the community environment, organizational environment and organizational characteristics categories, respectively. The reader should realize that the data in these tables describe the cities and organizations responding to the survey, not necessarily the characteristics of all cities of this size or even all cities in the two federal regions surveyed. A larger percentage of the cities over 50,000 responded than did cities of smaller size. However, one can see from the population distribution in Table III that the largest proportion of the cities included in the survey are less than 50,000 in population. The median-size city had 48,484 inhabitants in 1970; 49,031 in 1975. Smaller cities (25,000 to 50,000 in population) are, therefore, adequately represented in this research.

While the distribution of the values of the other variables in Table III needs little elaboration, the reader should note the variety of community types represented. Cities vary widely in their racial composition, educational levels, and wealth. As a result of this wide variation, the variables should clearly demonstrate whether the presumed relationships between these operationalizations and the innovativeness measures actually exist. The political culture variables indicate a close approximation of national
### TABLE III

**CATEGORICAL FREQUENCIES FOR SELECTED COMMUNITY ENVIRONMENT VARIABLES (PER CENT CITIES SURVEYED)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Total Population, 1970</strong></td>
<td></td>
</tr>
<tr>
<td>Less than 50,000</td>
<td>53.4</td>
</tr>
<tr>
<td>50,000-75,000</td>
<td>14.5</td>
</tr>
<tr>
<td>75,000-150,000</td>
<td>11.5</td>
</tr>
<tr>
<td>Greater than 150,000</td>
<td>20.6</td>
</tr>
<tr>
<td><strong>B. Black, 1970</strong></td>
<td></td>
</tr>
<tr>
<td>Less than 2%</td>
<td>36.2</td>
</tr>
<tr>
<td>2-5%</td>
<td>13.0</td>
</tr>
<tr>
<td>5-10%</td>
<td>15.3</td>
</tr>
<tr>
<td>Greater than 20%</td>
<td>19.8</td>
</tr>
<tr>
<td><strong>C. High School Graduates, 1970</strong></td>
<td></td>
</tr>
<tr>
<td>Less than 35%</td>
<td>2.5</td>
</tr>
<tr>
<td>35-50%</td>
<td>26.7</td>
</tr>
<tr>
<td>50-65%</td>
<td>45.8</td>
</tr>
<tr>
<td>Greater than 65%</td>
<td>25.2</td>
</tr>
<tr>
<td><strong>D. Families Below Poverty Level, 1969</strong></td>
<td></td>
</tr>
<tr>
<td>Less than 5%</td>
<td>25.2</td>
</tr>
<tr>
<td>5-10%</td>
<td>35.1</td>
</tr>
<tr>
<td>10-15%</td>
<td>20.6</td>
</tr>
<tr>
<td>Greater than 15%</td>
<td>19.1</td>
</tr>
<tr>
<td><strong>E. Presidential Vote, 1968</strong></td>
<td></td>
</tr>
<tr>
<td>Republican</td>
<td>43.3</td>
</tr>
<tr>
<td>Democratic</td>
<td>39.1</td>
</tr>
<tr>
<td>American Independent</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>F. Presidential Vote, 1976</strong></td>
<td></td>
</tr>
<tr>
<td>Republican</td>
<td>50.5</td>
</tr>
<tr>
<td>Democratic</td>
<td>49.5</td>
</tr>
</tbody>
</table>

Voting trends, albeit slightly skewed in the Republican-conservative direction.

Organizational environment frequencies (Table IV) also indicate the diversity of city types represented in this
TABLE IV
CATEGORICAL FREQUENCIES FOR SELECTED ORGANIZATIONAL ENVIRONMENT VARIABLES (PER CENT CITIES SURVEYED)

<table>
<thead>
<tr>
<th>Category</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Form of Government, 1975</td>
<td></td>
</tr>
<tr>
<td>Council-Manager</td>
<td>56.5</td>
</tr>
<tr>
<td>Commission</td>
<td>4.6</td>
</tr>
<tr>
<td>Mayor-Council</td>
<td>38.9</td>
</tr>
<tr>
<td>B. Total General Revenue ($), 1974-1975</td>
<td></td>
</tr>
<tr>
<td>Less than 500,000</td>
<td>19.8</td>
</tr>
<tr>
<td>500,000 to 1,000,000</td>
<td>28.2</td>
</tr>
<tr>
<td>1,000,000 to 2,500,000</td>
<td>25.2</td>
</tr>
<tr>
<td>More than 2,500,000</td>
<td>26.7</td>
</tr>
<tr>
<td>C. Total Intergovernmental Revenue ($), 1974-1975</td>
<td></td>
</tr>
<tr>
<td>Less than 10,000</td>
<td>18.3</td>
</tr>
<tr>
<td>10,000 to 25,000</td>
<td>27.5</td>
</tr>
<tr>
<td>25,000 to 50,000</td>
<td>18.3</td>
</tr>
<tr>
<td>50,000 to 250,000</td>
<td>19.8</td>
</tr>
<tr>
<td>More than 250,000</td>
<td>16.0</td>
</tr>
<tr>
<td>D. Number of City Employees, 1976</td>
<td></td>
</tr>
<tr>
<td>Less than 250</td>
<td>19.8</td>
</tr>
<tr>
<td>250 to 500</td>
<td>21.4</td>
</tr>
<tr>
<td>500 to 1,000</td>
<td>24.4</td>
</tr>
<tr>
<td>More than 1,000</td>
<td>29.0</td>
</tr>
<tr>
<td>E. Number of Joint Programs with Other Cities in Past Ten Years</td>
<td>Per Cent</td>
</tr>
<tr>
<td>None</td>
<td>25.0</td>
</tr>
<tr>
<td>1 to 10</td>
<td>40.9</td>
</tr>
<tr>
<td>10 to 50</td>
<td>29.5</td>
</tr>
<tr>
<td>50 to 100</td>
<td>3.4</td>
</tr>
<tr>
<td>More than 100</td>
<td>1.1</td>
</tr>
</tbody>
</table>

research. Most of the cities have council-manager forms of government, a structure particularly pronounced in the southwestern federal region (18). Very few of the cities have the commission form (4.6 per cent), and slightly more
than one-third are mayor-council cities. City government size, wealth, and intergovernmental contacts (both vertical and horizontal) are fairly evenly disbursed across each variable category. Again, the goal of achieving a diversity of types in order to more clearly reveal independent-dependent variable relationships appears to have been met.

Perhaps the more interesting of these frequency distributions are in Table V, characteristics of the organizations (personnel offices) themselves. These data have not been presented in any format heretofore, and are drawn exclusively from the mail surveys. The size of the cities' professional personnel staffs range widely, but almost one-third of the cities report having only one person in charge of directing these offices. Five cities (3.8 per cent of the total) report no full-time staff members at all. The lack of permanent staff members in these offices in part reflects the number of smaller cities in the sample, but also seems to indicate a lack of priority concerning the personnel function itself. This assertion is further borne out by the data concerning the age of the personnel departments. Over one-half of the cities had no personnel department prior to 1970, the median age of the office for all cities being 9.6 years. Clearly, personnel management has not been of prime concern for a very long period of time.

The distribution of the variables concerning the personnel directors themselves are equally interesting. A sizeable
<table>
<thead>
<tr>
<th></th>
<th>A. Size of Personnel Staffs (Excluding Clerical), 1979</th>
<th>B. Size of Personnel Budgets ($), 1979</th>
<th>C. Percentage of Personnel Staff Described as &quot;Professional&quot; by Personnel Directors, 1979</th>
<th>D. College Education (Years) of Personnel Directors, 1979</th>
<th>E. Age (Years) of Personnel Directors, 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
</tr>
<tr>
<td>None</td>
<td>3.8</td>
<td>6.6</td>
<td>13.3</td>
<td>6.5</td>
<td>0.8</td>
</tr>
<tr>
<td>1</td>
<td>29.2</td>
<td>30.0</td>
<td>5.0</td>
<td>35.0</td>
<td>12.4</td>
</tr>
<tr>
<td>2 to 3</td>
<td>32.3</td>
<td>28.3</td>
<td>32.5</td>
<td>40.7</td>
<td>43.0</td>
</tr>
<tr>
<td>4 to 5</td>
<td>10.0</td>
<td>22.5</td>
<td>49.2</td>
<td>17.9</td>
<td>22.3</td>
</tr>
<tr>
<td>6 to 20</td>
<td>14.6</td>
<td></td>
<td></td>
<td></td>
<td>21.5</td>
</tr>
<tr>
<td>More than 20</td>
<td>10.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 10,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 to 50,000</td>
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<tr>
<td>50,000 to 100,000</td>
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<tr>
<td>100,000 to 500,000</td>
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<tr>
<td>More than 500,000</td>
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<td></td>
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<tr>
<td>Zero</td>
<td></td>
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<td>1 to 10</td>
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<tr>
<td>10 to 50</td>
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<td>50 to 100</td>
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<tr>
<td>None</td>
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<td></td>
</tr>
<tr>
<td>1 to 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 to 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 or More</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 to 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 to 39</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>40 to 49</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 50</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE V—Continued

F. Tenure (Years) of Personnel Directors, 1979

<table>
<thead>
<tr>
<th>Tenure Range</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or Less</td>
<td>28.0</td>
</tr>
<tr>
<td>2 to 3</td>
<td>33.6</td>
</tr>
<tr>
<td>4 to 10</td>
<td>27.2</td>
</tr>
<tr>
<td>More than 10</td>
<td>11.2</td>
</tr>
</tbody>
</table>

proportion of the directors are in their thirties, with the median age being 37.2 years. Turnover in these positions appears to be quite high, for in over one-fourth of the cities the directors have held their positions for one year or less. The median tenure for the personnel directors surveyed is 2.8 years. Although the reasons for this rapid turnover are unclear, subsequent interviews with directors in twenty-two of the cities suggest two possibilities. First, personnel directors in a number of these communities are paid relatively low wages in comparison with personnel positions in similar-sized organizations in the private sector. There is, therefore, a strong economic pull away from the public sector to these businesses which can compensate skilled personnel specialists at a much higher rate. Second, personnel management positions are also often stepping stones to higher administrative positions within local governments, particularly general city management. Personnel directors may serve several years in the personnel department then move on to more diverse and financially rewarding positions within the organization.
Finally, the educational levels and professionalism of these directors and their staffs depicted in Table V appear to be quite high. Only 6.5 per cent of the directors have never been to college, while nearly 60 per cent had at least some graduate training. Almost one-half of the directors contacted also rate most members of their staff as active members of professional associations.

Innovation Adoption and Implementation

Tables VI through XV present the first display of the data in this research—the adoption rates of each of the personnel charges, their speed and extent of adoption, and the perceptions of the directors concerning these innovations across six descriptive dimensions. (The data are presented in ten separate tables for reader clarity and are treated in greater detail in subsequent tables. For a review and a complete discussion of each of these innovations, see Appendix A.) Looking solely at the "per cent adopting" measure for all ten innovations, the reader can see that all of the changes have been adopted by at least one-fifth of the cities surveyed, although none have been adopted by all communities. The first four innovations (Tables VI, VII, VIII, and IX) have been adopted by slightly more than half of the cities contacted. Codification of grievance procedures (Table X) and supervisory training (Table XI) have been adopted by approximately two-thirds of the communities.
TABLE VI

SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 1: TEST VALIDATION

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for</th>
<th>All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>6.7</td>
<td>6.5</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.4</td>
<td>3.9</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Trialability</td>
<td>5.6</td>
<td>5.4</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>7.6</td>
<td>7.6</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>2.2</td>
<td>2.3</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Mandate</td>
<td>8.2</td>
<td>8.9</td>
<td>4.8</td>
<td></td>
</tr>
</tbody>
</table>

Per Cent Adopting = 52.7, Median Months Since Adoption = 37.3, and Median Level of Implementation on Ten-Point Scale = 5.2.

Over 80 per cent of the directors reported their cities have implemented affirmative action recruitment (Table XII) and affirmative action plans (Table XIV). The innovations adopted by the least number of cities are employee surveys (Table XIII) and reorganization of the commission and staff department functions (Table XV). Feller and Menzel's (9, p. 28) recommendation that each change in this type of analysis be incompletely diffused is, therefore, well met.

Examination of the speed and extent of innovation adoption measures for each of the changes also reveals some relevant dimensions and suggests some interesting conclusions.
TABLE VII

SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 2: JOB PERFORMANCE SELECTION

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>4.6</td>
<td>4.2</td>
<td>5.5</td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.6</td>
<td>3.7</td>
<td>6.6</td>
</tr>
<tr>
<td>Trialability</td>
<td>7.0</td>
<td>7.6</td>
<td>5.3</td>
</tr>
<tr>
<td>Improvement</td>
<td>7.6</td>
<td>7.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Visibility</td>
<td>3.5</td>
<td>4.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Mandate</td>
<td>2.9</td>
<td>4.7</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 52.7, Median Months Since Adoption = 28.4, and Median Level of Implementation on Ten-Point Scale = 5.4.

For example, most of the changes have been adopted by a majority of the cities within the three-year period prior to the completion of the survey. Only grievance procedure codification was adopted by most of the cities more than five years before the survey was mailed. It appears, therefore, that the changes are not only incompletely diffused, but are in the state of flux at this time. Conducting the survey one year later would probably yield greatly different innovation adoption results.
TABLE VIII
SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 3: CRITICAL BEHAVIOR ASSESSMENT

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>4.1</td>
<td>3.8</td>
<td>4.9</td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.8</td>
<td>4.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Trialability</td>
<td>7.2</td>
<td>7.7</td>
<td>5.5</td>
</tr>
<tr>
<td>Improvement</td>
<td>8.0</td>
<td>8.2</td>
<td>7.3</td>
</tr>
<tr>
<td>Visibility</td>
<td>2.8</td>
<td>3.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Mandate</td>
<td>2.8</td>
<td>3.3</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 55.0, Median Months Since Adoption = 25.3, and Median Level of Implementation on Ten-Point Scale = 5.8.

The level of innovation implementation also varies depending upon the change under consideration. A plurality of the changes are at some mid-level of implementation within these personnel systems (five to six on a ten-point scale), although the range of median scores extends from 3.3 for grievance procedure codification to 8.1 for department reorganization. These rankings make some intuitive sense, as it is virtually impossible to reorganize a department at some intermediate level, yet quite logical to codify grievance procedures for a small segment of an organization's workforce.
### TABLE IX

**SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 4: COMPENSATION BASED ON EVALUATIONS**

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>4.1</td>
<td>3.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Radicalness</td>
<td>5.8</td>
<td>5.2</td>
<td>7.3</td>
</tr>
<tr>
<td>Trialability</td>
<td>6.5</td>
<td>6.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Improvement</td>
<td>7.8</td>
<td>7.9</td>
<td>7.5</td>
</tr>
<tr>
<td>Visibility</td>
<td>2.1</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Mandate</td>
<td>1.2</td>
<td>2.1</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 52.7, Median Months Since Adoption = 28.0, and Median Level of Implementation on Ten-Point Scale = 7.5.

One theoretical contention of Downs and Mohr (6) which appears to be substantiated by the data is their hypothesis that the speed and extent of adoption measures are not necessarily related. In other words, innovations adopted by a number of cities some time ago need not be implemented at high levels. For example, grievance procedure codification has been adopted by nearly two-thirds of the cities responding to the survey, and the median number of months since adoption is 73.3 or over six years prior to the mailing of the questionnaire. This innovation, however, is
## TABLE X

**SPEED AND EXTENT OF ADOPTION AND DIRECTORS’ RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 5: GRIEVANCE PROCEDURE CODIFICATION**

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for</th>
<th>All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td></td>
<td>3.3</td>
<td>3.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Radicalness</td>
<td></td>
<td>3.5</td>
<td>3.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Trialability</td>
<td></td>
<td>6.6</td>
<td>6.7</td>
<td>6.2</td>
</tr>
<tr>
<td>Improvement</td>
<td></td>
<td>7.2</td>
<td>7.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Visibility</td>
<td></td>
<td>2.5</td>
<td>2.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Mandate</td>
<td></td>
<td>4.5</td>
<td>4.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 64.1, Median Months Since Adoption = 73.3, and Median Level of Implementation on Ten-Point Scale = 3.3.

implemented at the lowest level of all the ten changes (3.3 on a ten-point scale). The inverse argument is equally true. Of those few cities adopting employee surveys as a means of determining employee suggestions and morale (22.9 per cent of the total number of cities surveyed), most report a relatively high level of implementation (5.3 on a scale of ten). A somewhat recently diffused change such as compensation based on evaluations (median months since adoption = 28.0) is reportedly implemented at a very high level (7.5 on a scale of ten). Therefore, no consistent
TABLE XI
SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 6: SUPERVISORY TRAINING

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Cities</td>
</tr>
<tr>
<td>Cost</td>
<td>6.3</td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.4</td>
</tr>
<tr>
<td>Trialability</td>
<td>7.1</td>
</tr>
<tr>
<td>Improvement</td>
<td>7.7</td>
</tr>
<tr>
<td>Visibility</td>
<td>2.8</td>
</tr>
<tr>
<td>Mandate</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 69.5, Median Months Since Adoption = 48.0, and Median Level of Implementation on Ten-Point Scale = 6.1.

relationship between the speed or extent of adoption measures of innovativeness is anticipated.

Co-Variation of Innovation Characteristics and Innovation Adoption

As noted in the previous chapter, innovation characteristics are increasingly viewed by prominent innovation scholars as important determinants of the adoption and implementation of change. They are also among the few independent variables which can be altered to produce greater policy acceptance. Costs can be lowered or offset,
TABLE XII

SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING
OF INNOVATION CHARACTERISTICS FOR INNOVATION 7:
AFFIRMATIVE ACTION RECRUITMENT

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Cities</td>
</tr>
<tr>
<td>Cost</td>
<td>5.3</td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.8</td>
</tr>
<tr>
<td>Trialability</td>
<td>6.3</td>
</tr>
<tr>
<td>Improvement</td>
<td>6.9</td>
</tr>
<tr>
<td>Visibility</td>
<td>6.7</td>
</tr>
<tr>
<td>Mandate</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 81.7, Median Months Since Adoption = 51.8, and Median Level of Implementation on Ten-Point Scale = 7.4.

trialability improved, and visibility increased or decreased. It therefore seems prudent to pay particularly close attention to the relationship of these variables to innovation adoption. The aggregate responses in Tables VI through XV reveal several highly relevant pieces of information in this regard.

Median perceived innovation characteristics for all cities indicate the general perceptions of municipal personnel directors toward these ten changes in terms of six relevant dimensions. Comparison of those ratings across
TABLE XIII
SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING
OF INNOVATION CHARACTERISTICS FOR INNOVATION 8:
EMPLOYEE SURVEYS

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>5.0</td>
<td>4.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Radicalness</td>
<td>4.6</td>
<td>3.3</td>
<td>5.4</td>
</tr>
<tr>
<td>Trialability</td>
<td>6.9</td>
<td>7.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Improvement</td>
<td>6.4</td>
<td>6.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Visibility</td>
<td>2.9</td>
<td>2.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Mandate</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 22.9, Median Months Since Adoption = 30.5, and Median Level of Implementation on Ten-Point Scale = 5.3.

innovations reveals which of the changes are considered most costly, most radical, and so on. The median change characteristics indicate the following summary observations based on all of the directors' perceptions:

(a) The most costly innovations are test validation (6.7 on a scale of ten) and supervisory training (6.3);

(b) The most radical (i.e., disruptive of existing personnel practices and structures) changes are personnel-civil service reorganizations (6.0), compensation based on performance evaluations (5.8), and affirmative action plans (5.8);
TABLE XIV

SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 9: AFFIRMATIVE ACTION PLANS

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopters</th>
<th>Non-Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>5.3</td>
<td>5.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Radicalness</td>
<td>5.8</td>
<td>5.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Trialability</td>
<td>5.0</td>
<td>5.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Improvement</td>
<td>6.5</td>
<td>6.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Visibility</td>
<td>6.1</td>
<td>6.1</td>
<td>8.0</td>
</tr>
<tr>
<td>Mandate</td>
<td>8.9</td>
<td>9.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 82.4, Median Months Since Adoption = 46.3, and Median Level of Implementation on Ten-Point Scale = 7.6.

(c) The innovations believed most conducive to trial on a limited basis before adoption are evaluations of employee performance based on critical behaviors (7.2), provision of supervisory training (7.1) and selection based on simulated job performance (7.0);

(d) Critical behavior-based evaluations (8.0), compensation based on performance evaluations (7.8), and supervisory training (7.7) are believed to represent the greatest improvements over prior procedures;
### TABLE XV

**SPEED AND EXTENT OF ADOPTION AND DIRECTORS' RATING OF INNOVATION CHARACTERISTICS FOR INNOVATION 10: CIVIL SERVICE COMMISSION—PERSONNEL DEPARTMENT REORGANIZATION**

<table>
<thead>
<tr>
<th>Innovation Characteristic</th>
<th>Directors' Rating of Innovation Characteristics on Ten-Point Scale for All Cities</th>
<th>Adopter</th>
<th>Non-Adopter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>5.3</td>
<td>5.1</td>
<td>6.0</td>
</tr>
<tr>
<td>Radicalness</td>
<td>6.0</td>
<td>4.9</td>
<td>7.4</td>
</tr>
<tr>
<td>Trialability</td>
<td>3.4</td>
<td>4.7</td>
<td>2.5</td>
</tr>
<tr>
<td>Improvement</td>
<td>5.8</td>
<td>7.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Visibility</td>
<td>5.1</td>
<td>5.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Mandate</td>
<td>2.1</td>
<td>5.1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Per Cent Adopting = 37.4, Median Months Since Adoption = 59.0, and Median Level of Implementation on Ten-Point Scale = 8.1.

(e) The most visible of the changes according to the personnel directors are affirmative action plans (6.7) and affirmative action recruitment (6.1); and

(f) Those changes believed to carry the heaviest governmental mandates are affirmative action plans (8.9), affirmative action recruitment (8.4), and test validation (8.2).

These scores represent median values for each of the change characteristics. The actual values assigned by the directors included every point on the ten-point scale. Personnel
directors failed to agree on the characteristics of any of the innovations, indicating a wide variety of change perceptions by those administrators charged with policy implementation.

In most cases, however, these median-value perceptions are highly predictable. Test validations have been known to cost users hundreds of thousands of dollars, although competent studies may be conducted at a greatly reduced cost. Reorganization of personnel functions away from the civil service commission to the personnel department will undoubtedly disrupt many established procedures and power relationships. However, some of the ratings are not nearly so obvious. For example, supervisory training is considered very costly, yet is also believed to be both amenable to trial on a small scale and is viewed as a marked improvement over previous procedure. It would seem logical that the cost of that training would not be great if the task is easily divisible. Also, much monetary and technical assistance is available through Intergovernmental Personnel Act (IPA) grants and training programs that can provide that education and guidance.

Although these marginal totals are interesting and informative to some degree, they are not nearly as useful to the purpose of this section as are comparisons of the innovation characteristics ratings of adopters and non-adopters. Such comparisons should indicate the nature of
the relationships between innovation characteristics and innovation adoptions. For example, adopters of the first change rated the cost of test validation at 6.5 on a scale of ten; non-adopters gave it a score of 6.8 (Table VII). It therefore appears that the perceived high cost of validation is inversely related to change. Non-adopters of test validation are also more likely to view the change as a radical departure from existing procedure than adopters of the change (5.3 versus 3.9). A complete tabulation of those effects is presented in Table XVI. Those innovation characteristics on which adopters and non-adopters differ by more than two points are noted with an asterisk (*). No significance tests are conducted in the comparison of these two groups as the data do not meet the requirements of such techniques, particularly the requirement of random selection.

Looking first at the rows in Table XVI (each characteristic separately across all innovations), one immediately notices the overall lack of consistency in the apparent effect of most change characteristics on adoption. Only "improvement" and "mandate" exhibit a constant and positive relation with adoption. Visibility is perhaps the most unstable of the innovation characteristics, having what appears to be a positive association with adoption in six of the changes and a negative association with the other four. This fluctuation in the apparent effect of the perceived innovation characteristics across innovations
### TABLE XVI

**SUMMARY OF RELATIONS OF INNOVATION CHARACTERISTICS WITH ADOPTION ACROSS ALL TEN PERSONNEL INNOVATIONS**

<table>
<thead>
<tr>
<th>Innovation Characteristics</th>
<th>Test Validation</th>
<th>Job Performance</th>
<th>Critical Assess</th>
<th>Evaluation Comp</th>
<th>Codification</th>
<th>Training</th>
<th>AA Recruitment</th>
<th>Employee Survey</th>
<th>AA Plan</th>
<th>Reorganization</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Radicalness</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Trialability</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Improvement</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Visibility</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Mandate</td>
<td>+</td>
<td>+</td>
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<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Key:** + = positive relation with adoption, - = negative relation with adoption, * = difference between adopters and non-adopters of two or more points on a scale of ten.
seems to support the contention of Downs and Mohr and others (6, 11, 12, 13) that the factors affecting innovation adoption vary according to the change being investigated. A characteristic evidences an apparent positive relationship with change in some cases, and a negative association in others.

Overall, however, the hypotheses concerning the relationships between innovation characteristics and innovativeness appear to be substantiated by this analysis. (For a summary of the hypotheses in Chapter II, see Appendix C.) "Cost" and "radicalness" seem to have a negative correlation with change, while "trialability," "improvement," and "mandate" are positively associated with innovation adoption. As mentioned earlier, "improvement" and "mandate" are the only characteristics which maintain a consistent relation to change (positive) across all ten innovations, and in several instances are perceived quite differently by innovation adopters and non-adopters. In six of the ten innovations, adopters and non-adopters differ in their perceptions of the innovation "mandate" by more than two points. Non-adopters are, in all cases but one, more likely to view the changes as "radical," and often at a substantially different level than their counterparts having adopted the change. Interestingly, only in the "cost" category, one which should and does to a large extent exhibit a negative relationship with adoption, is there no instance in which the perceptions
of adopters and non-adopters differ by more than two points on the scale of ten.

Another way of viewing the data in Table XVI is to examine the innovation characteristics on which there appears to be the greatest degree of disagreement between innovation adopters and non-adopters for each of the ten changes. In the first change (test validation), adopters' and non-adopters' perceptions of the innovation diverge most strongly on whether the change is mandated by governmental authorities. Adopters view validation as strongly mandated (median score of 8.9 on a scale of ten), while non-adopters generally do not view the change as a required policy (4.8 on the ten-point scale). This could explain the widespread lack of validity checks despite governmental urgings and criticisms of public testing systems (4, 5, 15). Adopters and non-adopters also differ strongly across a number of innovation characteristic categories in the second change, selection of employees based on actual or simulated job performance. Perceptions of innovation radicalness, trialability, visibility, and mandate differ by at least two points. In all ten innovations, perceptions of radicalness, trialability, and mandate comprise thirteen of the fifteen of these two-point or better differences.

Although these data indicate some interesting trends based on the actual perceptions of personnel directors, their importance should not be overemphasized. Aggregate
measures such as these cannot disclose which adopters or non-adopters gave which responses, and as a result, one cannot determine what factors are related to the three innovativeness measures. The remainder of this chapter is concerned with this topic. These data do, however, indicate that policy makers interested in having these particular innovations adopted by municipal personnel offices in these geographic areas should probably describe these changes as low in cost and radicalness, as representing marked improvements over prior policies, and as capable of being tried on a small scale before final adoption. They should similarly emphasize all applicable legal mandates.

Association of Independent Variables with Measures of Innovativeness: The Direction of the Relationships

Although the preceding discussion of the independent and dependent variable frequencies is valuable in terms of suggesting many interesting hypotheses, it does little toward answering the central research question of this chapter: "what factors are related to municipal personnel innovativeness?" In order to begin to formally test the hypotheses presented in Chapter II concerning innovativeness, correlation coefficients (Pearson's r) were calculated for the relationships between each independent variable and each of the three measures of innovativeness for all ten personnel changes. Because of the size of the matrix generated (over
3,600 coefficients), all of the results are not reported here. However, very few of the values of r exceeded the 0.25 level, indicating a general lack of association between most of the independent and dependent variables. Those coefficients representing a stronger association will be examined in a subsequent portion of this chapter.

One way in which the expected relationships can be tested, however, is by examining the directions of the coefficients available and determining whether they correspond to the directions predicted in the list in Chapter II (see Appendix C). In order to present these data in the space available, a summary table (Table XVII) was developed noting the predominate direction of the relationships across all ten changes for each of the independent variable operationalizations and each of the three measures of innovativeness. If the direction of the relationship (positive or negative) was consistent across seven of the ten changes, that direction is represented in the chart. If less than seven positive or negative coefficients were present in the matrix, no direction is indicated (*). Each symbol in the table, therefore, represents the predominate direction of the coefficients across ten personnel changes.

Community Environment

Looking first at the community environment variables in Table XVII, the reader can see that only slightly more than
## TABLE XVII

**RELATIONS OF INDEPENDENT VARIABLE OPERATIONALIZATIONS TO INNOVATIVENESS MEASURES FOR ALL TEN PERSONNEL INNOVATIONS**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Community Environment</strong></td>
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<td></td>
</tr>
<tr>
<td>Community Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Area, 1975</td>
<td>+</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Total Population, 1975</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Total Population, 1970</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Community Integration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population/Square Mile, 1975</td>
<td>*</td>
<td>-</td>
<td>*</td>
</tr>
<tr>
<td>Per Cent Black, 1970</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Per Cent Black Change, 1960-1970</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Per Cent Foreign, 1970</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-1975</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Per Cent Population Change, 1960-1970</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Community Wealth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Capita Income, 1974</td>
<td>+</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Median Family Income, 1969</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>*</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Per Cent Families Below 125% Poverty, 1969</td>
<td>*</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Community Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Cent Less Five Years, 1970</td>
<td>*</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Per Cent High School Grad., 1970</td>
<td>+</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Community Converatism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1968</td>
<td>+</td>
<td>-</td>
<td>*</td>
</tr>
<tr>
<td>Per Cent AIP Pres. Vote, 1968</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Organizational Environment</strong></td>
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<tr>
<td>Extent Federal/State Aid</td>
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<tr>
<td>Total Intergovernmental Aid, 1974-1975</td>
<td>*</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Federal Intergovernmental Aid, 1974-1975</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Per Capita Intergovernmental Aid, 1974-1975</td>
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<td>*</td>
<td>-</td>
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<tr>
<td>Per Capita Federal Aid, 1974-1975</td>
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<td>+</td>
<td>+</td>
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<tr>
<td>Quality Federal/State Contracts</td>
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<tr>
<td>Director's Rating of Contracts</td>
<td>+</td>
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TABLE XVII—Continued

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<tr>
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<tr>
<td><strong>Intergovernmental Cooperation</strong></td>
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<tr>
<td>Number Joint Programs, City</td>
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<td>+</td>
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<tr>
<td>Number Joint Programs, Personnel</td>
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<tr>
<td><strong>City Government Size</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Number City Employees, 1976</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Number Employees Served by Personnel</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>City Government Wealth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total General Revenue, 1974-1975</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Per Capita Debt, 1974-1975</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Per Capita Expenditures, 1974-1975</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Total General Revenue Per Capita, 1974-1975</td>
<td>+</td>
<td>+</td>
<td>*</td>
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<tr>
<td><strong>Reformed Structure of City Government</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Use of City Manager Form, 1975</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td><strong>Environmental Turbulence</strong></td>
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<td></td>
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<tr>
<td>Director's Rating of Turbulence</td>
<td>*</td>
<td>+</td>
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<tr>
<td><strong>Use of Consultants</strong></td>
<td></td>
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</tr>
<tr>
<td>Director's Rating of Use of Consultants</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td><strong>Organizational Characteristics</strong></td>
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</tr>
<tr>
<td><strong>Size of Department</strong></td>
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<td></td>
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<tr>
<td>Size of Personnel Staff</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Personnel Budget, Past Fiscal Year</td>
<td>+</td>
<td>+</td>
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<tr>
<td><strong>Slack Resources in Department</strong></td>
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<tr>
<td>Director's Rating of Budget/Inflation Match</td>
<td>*</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>Per Cent Budget from Feds</td>
<td>*</td>
<td>-</td>
<td>*</td>
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<tr>
<td>Budget Per Staff Member</td>
<td>*</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Budget Per Employee Served</td>
<td>*</td>
<td>+</td>
<td>*</td>
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<tr>
<td><strong>Age of Department</strong></td>
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<tr>
<td>Years City Has Had Personnel Dept.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Age of Personnel Director</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Tenure of Personnel Department</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td><strong>Formalization in Decision Making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule Guidance</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Employees Watched</td>
<td>+</td>
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TABLE XVII—Continued

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<thead>
<tr>
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<tbody>
<tr>
<td>Lack of Centralization in Decision Making</td>
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<tr>
<td>Staff Participation in Decision Making</td>
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<tr>
<td>Supervisory Approval Needed in Decisions</td>
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<td>Centralization of Personnel Function</td>
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<tr>
<td>Specialization of Tasks</td>
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<tr>
<td>Number of Job Titles in Department</td>
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<tr>
<td>Professionalism of Department</td>
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<tr>
<td>Per Cent Staff with Master's</td>
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<tr>
<td>Per Cent Staff &quot;Professional&quot;</td>
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<tr>
<td>Per Cent Staff with Training</td>
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<tr>
<td>Years of College by Director</td>
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<tr>
<td>Pro-Change Values</td>
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<tr>
<td>Need for Change</td>
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<tr>
<td>Need for System-Wide Change</td>
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<tr>
<td>Professional Value Orientation</td>
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<tr>
<td>Rewarding Incentive System</td>
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<tr>
<td>Director's Rating of Incentives for Change</td>
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<tr>
<td>Innovation Characteristics</td>
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<tr>
<td>Cost</td>
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<tr>
<td>Radicalness</td>
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<td>Trialability</td>
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<tr>
<td>Improvement</td>
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<td>Visibility</td>
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<tr>
<td>Mandate</td>
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Key: + = positive relation across at least seven innovations, - = negative relation across at least seven innovations, and * = inconsistent relation.
one-half of the relationships are consistent across seven or more of the innovations. Of the fifty-four relationships depicted, twenty-two are inconsistent. Only the population measures, the per cent foreign, and the per cent Republican Presidential vote in 1976 are consistently related to municipal personnel innovativeness across all three measures of change.

Generally, however, the predicted directions of the relationships in this category of variables in Chapter II are substantiated by the data. Measures of city size are, by-and-large, positively related to the speed of adoption, implementation, and combined measures of innovativeness. Where a consistent relationship exists between wealth or education and innovativeness, the direction is as predicted (positive). As the literature leads one to expect, most measures of political conservatism are negatively related to innovativeness. Most measures of community integration are inconsistently related to innovation adoption, although high levels of foreign-born residents in the community do seem to be positively associated with innovation, and population change measures are inversely related to policy change across at least seven of the innovations under consideration.

Organizational Environment

Within the class of variables entitled organizational environment, the expected relationships are again general
upheld. Measures of city government size, wealth, reformed structure, quality of federal-state contacts, and intergovernmental cooperation are consistently and positively related to all three innovativeness measures as predicted. The directors' rating of the level of environmental turbulence in their area is, as expected, positively related to the level of change implementation, but evidences an inconsistent relationship within the other dependent variable categories. Use of consultants is also inconsistently related to change across all three dependent variables, although it was predicted in Chapter II that their use would improve the speed and implementation of innovation.

The real surprise in this section, however, is the lack of consistency in the federal-state aid category. Despite the fact that the two measures of total intergovernmental aid are positively related in some instances, federal aid evidences an infrequent positive association with innovation adoption. In fact, per capita federal aid is negatively related to the speed of adoption and the combined innovativeness measures. One would normally expect that those communities with large amounts of federal assistance would be more likely to adopt changes rapidly, particularly changes which are often incorporated into federal policy statements. Federal assistance should, but apparently does not, improve both the cities' awareness of those policies and their ability to pay for them. Interestingly, however, the
directors' ratings of the quality of their federal and state contacts are consistently and positively related to municipal personnel innovativeness.

**Organizational Characteristics**

Within the organizational characteristics category, some expected relationships are borne out by the data while others clearly are not. As predicted in Chapter II, departmental size, professionalism, and a change-conducive incentive system are positively and consistently related to the innovativeness constructs. However, the other variables are either inconsistently associated with the three measures of innovativeness or are the inverse of what was predicted in Chapter II.

For example, the amount of slack resources available to the department was expected, on the basis of prior research, to be conducive to the adoption and implementation of personnel change. However, the data indicate an inconsistent relationship at best, with the percentage of the personnel budget from intergovernmental sources negatively related to the level of change implementation. Most of the other relationships on this section are inconsistent across the ten personnel changes. The predicted positive relation between innovation and specialization also failed to appear, with the number of job titles inversely related to both the speed and combined innovativeness measures.
The direction of the relationship between indices of departmental age and measures of innovativeness was not predicted in Chapter II due to the conflicting cues provided in the literature. Conceivably, the age of the department could have either a positive or negative effect on change. However, all of the age variable operationalizations are consistently and positively related to municipal personnel innovativeness. Apparently, cities with established personnel departments headed by more mature directors with some degree of experience in that position are more innovative than communities with the opposite characteristics.

The level of association for the organizational formalism and centralization measures are perhaps most interesting of all the relationships in this section. In Chapter II, it was predicted that formalism or rule adherence would be negatively associated with the speed of change, but may be somewhat conducive to change implementation after introduction to the organization. The data indicate, however, that organizational formalization is consistently and positively related to all measures of innovativeness, leading to the surprising implication that rule guidance and enforcement may encourage change.

A paradox seems to exist among the measures of centralization. Whereas the exclusion of staff members from significant decision making and required supervisory approval prior to action is inversely related to change (as expected),
centralization of the personnel function itself in the department appears positively related to change across all innovativeness measures. Apparently, intra-departmental decentralization of authority encourages the adoption of new ideas, but city government-wide decentralization of the personnel function to the line departments reduces the innovative capacity of the city.

Innovation Characteristics

The final set of independent variables in Table XVII, innovation characteristics, generally behave as predicted in the previous chapter. The cost and radicalness of the change as perceived by the personnel directors are negatively associated with the innovativeness constructs across most of the ten changes investigated. Governmentally mandated changes and innovations believed conducive to trial on a limited basis are positively related to the indices of speed and extent of adoption, but are inconsistently associated with the combined innovativeness indicator. Changes believed to represent a marked improvement over previous policy do not seem to be adopted any more quickly than innovations not scoring as high on this trait, although the other innovativeness indicators are positively related to the improvement measure. As expected, the visibility of the innovation is positively related to adoption for some of the changes and negatively related for others.
In summary, the data in Table XVII indicate support for some of the hypotheses in Chapter II, and disconfirm the expected relations in other areas. On the basis of the direction of the relationships depicted in this analysis, it appears that the more innovative cities and organizations have the following characteristics: large size (city, organization, and department); political liberalism, or at least a Democratic voting propensity in the community; good federal and state relations, but not necessarily large amounts of funds transfers; high levels of inter-city cooperation in joint projects; reformed structure of city government; high levels of community and organizational wealth; established personnel departments with stable direction; high levels of rule formalization; centralized personnel functions in a staff department; opportunities for staff participation in decision making in major policies; professional staff members in the department; and an incentive system conducive to change. Innovations perceived as low in cost and radicalness, high in trialability, representing a substantial improvement over prior procedure and strongly mandated by governmental authorities are more likely to be adopted and implemented.

Association of Independent Variables with Measures of Innovativeness: Strength of the Relationships

As noted previously, the strength of the relationships discovered in the correlational analysis between the
independent variables and the measures of innovativeness are not very strong. Table XVIII presents the Pearson correlation coefficients (r) between the dependent variables and the independent variables most strongly associated with the measures of change. Those coefficients of 0.25 or better are reported, although no formal tests of significance were performed to establish that cut-off level. The data do not meet the necessary conditions for such tests, notably the requirement of a random sample. This level of association was chosen because of its use in other innovation research, and it appeared to be a fairly convenient break point in the data.

As one can see from the table, the innovation most consistently related to the independent variables presented is test validation, particularly the speed of adoption measure. Eleven of the eighteen independent variables are associated with this measure of innovativeness at or beyond the 0.25 level, most notably the "size of personnel staff" and "years with department" variables. The data indicate that test validation is adopted most quickly in large cities with sizable city governments and departments, a well-established personnel department, and a department that is well-financed both by general and intergovernmental revenues. Cities with larger numbers of intergovernmental joint programs and which perceive test validation as governmentally mandated are also more likely to adopt the change quickly.
<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Independent Variables</th>
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<tbody>
<tr>
<td></td>
<td>Population, 1970</td>
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<tr>
<td>1. Test Validation</td>
<td>A .36</td>
</tr>
<tr>
<td>2. Job Performance</td>
<td>A .36</td>
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<tr>
<td>3. Critical Assess</td>
<td>A .36</td>
</tr>
<tr>
<td>4. Evaluation Comp</td>
<td>A .36</td>
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<td>Dependent Variables</td>
<td>Independent Variables</td>
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<tr>
<td>---------------------</td>
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</tr>
<tr>
<td>Total General Revenue</td>
<td>Intergovernmental Revenue</td>
</tr>
<tr>
<td>City Employment</td>
<td># Employees Served</td>
</tr>
<tr>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>5. Codification</td>
<td>A</td>
</tr>
<tr>
<td>6. Training</td>
<td>A</td>
</tr>
<tr>
<td>7. AA Recruitment</td>
<td>A</td>
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</table>

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<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Independent Variables</th>
</tr>
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<tr>
<td>Total General Revenue</td>
<td>Intergovernmental Revenue</td>
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<tr>
<td>City Employment</td>
<td># Employees Served</td>
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<tr>
<td># Joint Programs-City</td>
<td>Rule Guidance</td>
</tr>
<tr>
<td>Budget Per Staff Member</td>
<td>Personnel Budget</td>
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<tr>
<td>Size of Personnel Staff</td>
<td>Years With Department</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>Trialability of Innovation</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>Mandate of Innovation</td>
</tr>
</tbody>
</table>

| 8. Employee Survey | C | . | . | . | . | . | . | . | . | . | . |
| 9. AA Plan        | A | . | . | . | . | . | . | . | . | . | . |
|                  | ABC | . | . | . | . | . | . | . | . | . | . |
|                  | . | . | . | . | . | . | . | . | . | . | . |
| 10. Reorganization| A | . | . | . | . | . | . | . | . | . | . |
|                  | ABC | . | . | . | . | . | . | . | . | . | . |

Key: A = Speed of Adoption Measure, B = Extent of Implementation Measure, and C = Combined Measure.
The other innovations evidence only occasional strong relations with the independent variables. A few of the relationships do, however, bear mentioning. For example, cities which perceive the use of actual or simulated job performance tests as amenable to trial on a limited basis prior to adoption apparently adopt the change earlier than cities which do not view the innovation in that manner. The level of implementation of the change appears to be highest in cities which view the change as non-radical yet highly mandated.

Assessment of job performance on the basis of critical behaviors ("critical assess" in the chart) is similarly associated with the director's view of its characteristics. Implementation of this change is positively related to both its perceived trialability and level of improvement, and negatively related to its radicalness. Early adoption of this change (speed of adoption) is most common in large departments, while older departments score highest on the combined innovativeness measure.

Of all the independent variables found to have a sizable level of association with the dependent measures of innovativeness, the number of years the city has had a personnel department appears most consistently related to personnel change. The longer an established department has existed, the more likely it is to have quickly adopted or implemented test validation, critical behavior-based job
assessment, supervisory training programs, affirmative action recruitment, and employee surveys. Its nearest competitor among the independent variables is the innovation characteristic "radicalness." In four of the changes the directors' perceptions of the innovations' radicalness are negatively related to their speed of adoption, extent of implementation, or both (actual or simulated job performance selection, critical behavior job assessment, compensation based on performance evaluation, and employee surveys).

Partial correlation coefficients (partials) were also calculated in order to test whether the relationships indicated by the simple correlation coefficients accurately depict the nature and degree of association between the independent and dependent variables. Partials indicate the amount of variation in the dependent variable explained by one independent variable with other variables held constant. The analysis revealed that most of the relations indicated by the simple coefficients are genuine.

Control variables were selected with the model of innovation adoption in mind; all controls are temporally prior to or simultaneous with the independent variables examined (10). Variables were also selected which could disclose a spurious relation between the independent and dependent variable, not simply developmental linkages (2, pp. 123-125). In most cases the introduction of the control produced little significant change in the level of associated presented in
Table XVIII. For example, the speed of adoption of test validation evidences a fairly strong positive relationship with the size of the community adopting the change \((r = 0.36)\). Controls for the per cent black, per cent high school graduates, and per cent below the poverty level in the community have virtually no effect on this size-innovation correlation.

Most of the other independent variables also evidence the same stable relationship after the introduction of controls. The relatively strong association between the size of the personnel staff and the speed of adoption of test validation \((r = 0.43)\) is not affected by any of the measures of community or environmental wealth. The equally strong correlation between the speed of change in innovation number ten (reorganization) and the perception of innovation mandate also remains constant despite controls for the tenure and education of the director and the organizational incentive climate. In virtually every case where controls did change the relationship, a developmental relationship is suspected. For example, the level of association between the size of the personnel staff and the speed of adoption for test validation was reduced by over one-half by controlling for city size. Since city size is a theoretical and empirical determinant of the size of the personnel staff needed, this diminution of the relationship is to be expected and is unimportant in terms of this research.
Table XIX summarizes the correlational data presented thus far in light of the hypotheses in Chapter II. The direction of the correlation coefficients are generally in the direction predicted on the basis of prior research, although the strength of those associations and their consistency across measures of innovativeness are not very great. If the direction of the hypotheses were the sole consideration in any acceptance or rejection of the hypotheses presented, twelve would probably be rejected outright. Two variables (departmental formalism and specialization) are consistently related to innovativeness in a direction opposite of what was predicted in Chapter II. The associations of ten other variables do not evidence a consistent coefficient direction in at least seven of the innovations (community integration, wealth, education, intergovernmental aid, environmental turbulence, use of consultants, slack resources, departmental centralization, directors' values toward change, and innovation visibility).

On the other hand, ten of the variables in Table XIX are consistently related to all measures of innovativeness for all variable operationalizations within that category (e.g., all measures of city government wealth) in the predicted direction. Of these, seven also evidence at least one sizable measure of association ($r \geq 0.25$) with a dependent variable (number of joint programs, size of city government, wealth of city government, reformed structure of city
TABLE XIX  
SUMMARY OF CORRELATIONAL ANALYSIS OF INDEPENDENT AND DEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Size</td>
<td>+</td>
<td>+</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Community Integration</td>
<td>+</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Wealth</td>
<td>+</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Education</td>
<td>±</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Conservatism</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent Fed-State Aid</td>
<td>+</td>
<td>±</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Quality Fed-State Contacts</td>
<td>+</td>
<td>+</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Intergovernmental Cooperation</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Size City Government</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Wealth City Government</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Reformed City Government</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Environmental Turbulence</td>
<td>+</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Consultants</td>
<td>+</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of Department</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Slack Resources</td>
<td>+</td>
<td>±</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Department Age</td>
<td>±</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Formalization in Decision Making</td>
<td>-</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Centralization in Decision Making</td>
<td>-</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialization of Task</td>
<td>+</td>
<td>-</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Professionalism of Dept.</td>
<td>+</td>
<td>±</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Pro-Change Values</td>
<td>+</td>
<td>±</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive System</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>-</td>
<td>-</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>±</td>
<td>±</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>+</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Key: + = positive relation, - = negative relation, and + = inconsistent relation.  A = Direction Predicted by Hypotheses, B = Direction Indicated by the Data, C = Direction Consistent in All Operationalizations (*), and D = Strong Relation in at Least One Operationalization (*).
Factors Producing Variations In Innovativeness

The preceding portions of the analysis in this chapter have focused on the direction and strength of the associations between the independent variables believed relevant to municipal personnel innovation and the innovativeness of the personnel departments themselves. This section goes one step further than the discovery of simple covariance by investigating the factors which are believed to produce changes in a city's level of innovativeness. Multiple regression analysis is used in achieving this goal.

Regression analysis is one method of describing the association between two variables, particularly the specific function relating the dependent variable (Y) with the independent variable (x). Beta coefficients in the regression equation denote the standardized number of units change in Y for every standard unit change in x. Since these are *partial* beta coefficients in multiple regression
equations, they indicate that relationship while holding constant all other possible influences in the equation. The partialling process more clearly indicates the true nature of the dependent-independent variable relationship.

Partial beta coefficients are somewhat similar to the previously used partial correlation coefficients, which measure the amount of variation in the dependent variable explained by one independent variable after all other relevant independent variables are controlled. The beta weights, on the other hand, indicate how much change in the dependent variable is produced by a standardized change in one of the independent variables when the others are controlled. This type of analysis allows the researcher to determine which of the possible innovation influences are most important to adoption and implementation of personnel change.

The specific methodology employed is as follows. Each of the independent and dependent variables used are correlated in a matrix of correlation coefficients through the OSIRIS III software package MDC. MDC, or "missing data correlation," computes matrices of Pearson product-moment correlation coefficients for all pairs of input variables. The resultant matrix is used as input into the Osiris program REGRESSN, or standard linear regression. This program computes a variety of regression statistics, including the standardized
regression coefficient beta reported in a subsequent portion of this chapter.

**Selection of Independent Variables**

However, since any of the over 120 independent variables used in this research could conceivably affect personnel innovativeness, some means of determining the most relevant independent variables had to be devised prior to the regression analysis. Examination of partial beta coefficients of an independent variable and a dependent measure of innovativeness while holding constant 119 other variables would reveal very little about the true nature of the relationship which may exist. The partial beta coefficient would probably be reduced to near zero because of the extreme number of control variables introduced.

A factor analysis was, therefore, performed on the matrix of independent variable intercorrelations for the first three categories of indicators: community environment, organizational environment, and organizational characteristics. Innovation characteristics were not included in this analysis because no dimensionality was expected in this category, and also because the variables are specific to each of the selected innovations. Unlike the other variable categories, innovation characteristics were collected with regard to each of the changes investigated (sixty characteristics per city), so factor analysis is inappropriate here.
A varimax orthogonal rotation was performed for greater conceptual clarity. In orthogonal rotation, the factor axes are ninety degrees from each other and therefore should be statistically independent of each other. Factor analysis has been used on several other occasions in innovation research (3, 17).

With the imposition of Kaiser's criterion (eigen values greater than unity), the factor analysis produced twelve distinct independent variable factors. Table XX presents the factor loadings for the twelve variables chosen to represent those dimensions. Each variable loaded highest on one of the factors and that variable was, therefore, selected for use in the regression equation as the representative of that factor (rather than use some abstract factor score). For example, the variable that loads highest on Factor 1 is "City Population, 1970;" in Factor 2 the variable is "Per Cent Families Below Poverty, 1969;" Factor 3 is best represented by "Form of Government, 1975." In sum, the sixty variables that comprised the operationalizations of the concepts in the three independent variable categories are now reduced to twelve variables. These are combined with the innovation characteristics for each change and used in the regression equations.

The Data

Tables XXI through XXX present the partial beta coefficients from the regression equations for each of the
### TABLE XX

FACTOR LOADINGS OF INDEPENDENT VARIABLES USED IN REGRESSION ANALYSIS

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>City Population, 1970</td>
<td>.98</td>
</tr>
<tr>
<td>Per Cent Foreign, 1970</td>
<td>.00</td>
</tr>
<tr>
<td>Per Cent Pop. Change, 1970-1975</td>
<td>-.04</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>.04</td>
</tr>
<tr>
<td>Per Cent Republican Vote, 1976</td>
<td>-.04</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>-.17</td>
</tr>
<tr>
<td>General Revenue per Capita, 1974-1975</td>
<td>.27</td>
</tr>
<tr>
<td>Employees Watched</td>
<td>-.10</td>
</tr>
<tr>
<td>Per Cent Department Professionals</td>
<td>-.18</td>
</tr>
<tr>
<td>Number of Job Titles</td>
<td>.07</td>
</tr>
<tr>
<td>Years Director</td>
<td>.11</td>
</tr>
<tr>
<td>Personnel Budget per Staff</td>
<td>.12</td>
</tr>
</tbody>
</table>
independent and dependent variables in each of the ten innovations. Table XXI presents the data for the adoption of test validations in these cities. The speed of adoption seems most affected by the size of the city and the innovation's perceived radicalness. The larger the community and the less the director perceives the change as upsetting existing work patterns, the greater the speed of innovation adoption. A similar phenomenon exists with regard to the extent of implementation and the combined measure of innovativeness. Of some importance to the extent of implementation of this change are innovation visibility and mandate, both of which evidence a positive influence on change.

In the second innovation (Table XXII), selection of employees based on actual or simulated job performance, city size does not appear to be a significant factor in adoption of the change. Instead, the innovation's perceived characteristics (with the exception of cost) are apparently the primary motivators of change in the three dependent variables. The director's impression of the change as radical is again negatively related to the adoption of the change, particularly its implementation on a wide scale. Implementation is also enhanced by a perception of the change as mandated by governmental authorities. The speed of adoption is, however, enhanced by a perception of trialability. Directors viewing the change as amenable to trial on a limited basis prior to
### TABLE XXI

**FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 1—TEST VALIDATION**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population of Community, 1970</td>
<td>0.39</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>-.01</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-.11</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-.05</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-.15</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>.15</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>.03</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>.12</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>.09</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>.10</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>.15</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-.03</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>-.01</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-.27</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>-.19</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>.13</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>.08</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>.15</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.41</td>
</tr>
</tbody>
</table>
### TABLE XXII

**FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 2—JOB PERFORMANCE SELECTION**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population of Community, 1970</td>
<td>0.03</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>0.06</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>0.07</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-0.15</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-0.12</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>0.03</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>-0.01</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>-0.01</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>-0.05</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-0.04</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>0.04</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>0.03</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>0.03</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-0.15</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>0.32</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>-0.24</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>0.18</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>0.23</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.27</td>
</tr>
</tbody>
</table>
full adoption are apparently more willing to accept the risks of early adoption than are directors who do not perceive the innovation in those terms.

No beta coefficients of any size are exhibited in Table XXIII, the assessment of job performance on the basis of critical job behaviors. The only independent variables evidencing a relationship of any size at all are the years the directors have been at their position and the perceived radicalness of the innovation. Directors with longer tenure and those who view the change as not very different from previous policy in terms of its disruptiveness are more likely to adopt the change.

A similar lack of association is evident in several of the subsequent tables as well (Tables XXIV through XXVII). The directors' evaluation of the professionalism of their staffs is modestly related to the speed and combined measures of adoption of Innovation 4, compensation based on performance evaluations. Directors with long tenure and those who perceive the change as non-radical are also somewhat more likely to adopt the change quickly and to fully implement the innovation. The perception of grievance procedure codification (Innovation 5) as non-radical is also mildly associated with personnel change. In Innovation 6 (supervisory training in management, equal employment opportunity, and labor-management relations), city size again resurfaces as a relevant variable in conjunction with
TABLE XXIII

FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 3--CRITICAL BEHAVIOR ASSESSMENT

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population of Community, 1970</td>
<td>0.16</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>.00</td>
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<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-.03</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-.10</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-.07</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>-.00</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>.04</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>.11</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>.09</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-.04</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>.25</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-.09</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>.01</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-.23</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>.17</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>.06</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>.07</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>.12</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.24</td>
</tr>
</tbody>
</table>
TABLE XXIV
FACTORs RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 4—COMPENSATION BASED ON EVALUATIONS

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population of Community, 1970</td>
<td>0.11</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>0.01</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-0.01</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-0.09</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>0.09</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>0.21</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>0.03</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>0.18</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>0.25</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-0.05</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>0.23</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-0.12</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>-0.05</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-0.25</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>-0.06</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>-0.12</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>0.04</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>0.02</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.31</td>
</tr>
</tbody>
</table>
### TABLE XXV

FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 5—GRIEVANCE PROCEDURE CODIFICATION

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population of Community, 1970</td>
<td>0.03</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>-0.12</td>
<td>-0.03</td>
<td>-0.06</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>0.00</td>
<td>0.11</td>
<td>0.02</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>0.01</td>
<td>0.09</td>
<td>-0.05</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>0.05</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>0.06</td>
<td>0.16</td>
<td>0.15</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>0.09</td>
<td>0.05</td>
<td>0.12</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>0.11</td>
<td>0.14</td>
<td>0.06</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>0.09</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>0.00</td>
<td>0.03</td>
<td>-0.01</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>0.11</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>0.08</td>
<td>0.13</td>
<td>0.11</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>0.20</td>
<td>0.19</td>
<td>0.22</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-0.23</td>
<td>-0.13</td>
<td>-0.26</td>
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<tr>
<td>Trialability of Innovation</td>
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<td>0.06</td>
<td>-0.02</td>
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<tr>
<td>Improvement of Innovation</td>
<td>0.11</td>
<td>0.33</td>
<td>0.20</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>0.18</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>-0.07</td>
<td>0.15</td>
<td>-0.10</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.14</td>
<td>0.20</td>
<td>0.16</td>
</tr>
</tbody>
</table>
the speed of innovation adoption and the combined measure, but little else seems to affect innovativeness. Director tenure and innovation radicalness do, however, make their now-common appearances as respective positive and negative impacts on innovativeness. The speed of innovativeness for affirmative action recruitment (Innovation 7) is apparently most significantly determined by the size of the city, with large communities adopting a change in procedure more quickly than smaller locales. Innovation implementation is apparently affected most by form of government (reformed) and the innovation's perceived trialability.

The use of employee surveys (Innovation 8) is most rapidly adopted in cities with council-manager forms of government rather than in mayor-council or commission cities. However, the major influence on this change appears to be its perceived radicalness, the -0.50 partial beta coefficient is by far the largest encountered to this point, and is the strongest of the coefficients in the analysis. Cities with directors who view the use of employee surveys as a radical departure from prior procedure are evidently much less likely to have adopted the change quickly or to have fully implemented it than cities with the opposite characteristics. Implementation is also more complete in cities in which the director perceives the change as strongly mandated by governmental authorities.
TABLE XXVI
FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 6—SUPERVISORY TRAINING

<table>
<thead>
<tr>
<th>Independent Variables</th>
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</tr>
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<tbody>
<tr>
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<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>Ext. 0.17</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>Com. 0.31</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td></td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td></td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td></td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>Spd. 0.33</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>Ext. 0.12</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>Com. 0.04</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td></td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td></td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td></td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td></td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td></td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td></td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td></td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td></td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td></td>
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<tr>
<td>R²</td>
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<td></td>
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<td>0.35</td>
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TABLE XXVII

FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA
COEFFICIENTS FOR INNOVATION 7--AFFIRMATIVE
ACTION RECRUITMENT

<table>
<thead>
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<tbody>
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<tr>
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<td>-.03</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-.05</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-.10</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-.10</td>
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<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
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</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>.06</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
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</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-.04</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>.19</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-.15</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>.03</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-.13</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>.07</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>.04</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>-.08</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>.06</td>
</tr>
<tr>
<td>R²</td>
<td>0.18</td>
</tr>
</tbody>
</table>
In Innovation 9, the establishment of an affirmative action plan, the relationships between the selected independent variables and the dependent measures of innovativeness are again fairly modest, although in some cases they are quite surprising. For example, the perceived radicalness of the change is again moderately related to the speed of innovation adoption but here the direction of the relationship is positive. Cities in which directors view the use of affirmative action plans as upsetting the standard operating procedures of the department are more likely to adopt the change than in those cities where such plans are viewed as non-radical. This is the only instance in which innovation radicalness is directly related to either the speed of adoption or implementation measures, and may be due to a desire on the part of some directors to be a leader in this area of equal employment opportunity.

Another interesting facet of this innovation is the effect of the visibility of the change on the speed and extent of adoption. Apparently, the more visible affirmative action plans are perceived by the director, the less likely the change will be adopted by the city. This is not unusual, however, for highly visible affirmative action plans compete with goals and timetables for minority employment can generate considerable resistance from majority employees adversely affected by such changes.
TABLE XXVIII

FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 8--EMPLOYEE SURVEYS

<table>
<thead>
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<tr>
<td>Per Cent Foreign Born, 1970</td>
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<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-0.11</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-0.01</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-0.01</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>0.30</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
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</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>-0.04</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
<td>0.14</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-0.07</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>0.01</td>
</tr>
<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-0.20</td>
</tr>
<tr>
<td>Cost of Innovation</td>
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<tr>
<td>Radicalness of Innovation</td>
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<tr>
<td>Trialability of Innovation</td>
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</tr>
<tr>
<td>Improvement of Innovation</td>
<td>0.04</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>-0.18</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>0.14</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.31</td>
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</tbody>
</table>
TABLE XXIX

FACTORS RELATED TO INNOVATIVENESS: PARTIAL BETA COEFFICIENTS FOR INNOVATION 9—AFFIRMATIVE ACTION PLANS

<table>
<thead>
<tr>
<th>Independent Variables</th>
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<th>Com</th>
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<td>0.01</td>
<td>0.16</td>
</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>-0.05</td>
<td>-0.02</td>
<td>-0.10</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>-0.06</td>
<td>0.05</td>
<td>-0.04</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>0.05</td>
<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>Per Cent Republican Pres. Vote, 1976</td>
<td>-0.12</td>
<td>-0.07</td>
<td>-0.14</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>0.09</td>
<td>0.06</td>
<td>0.03</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>0.06</td>
<td>0.14</td>
<td>0.10</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
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<td>0.00</td>
<td>0.03</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
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<td>0.18</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-0.08</td>
<td>-0.02</td>
<td>-0.07</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
<td>0.16</td>
<td>0.27</td>
<td>0.25</td>
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<tr>
<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-0.04</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>0.15</td>
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<tr>
<td>Radicalness of Innovation</td>
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</tr>
<tr>
<td>Trialability of Innovation</td>
<td>0.09</td>
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<td>0.11</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>0.10</td>
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<td>0.12</td>
</tr>
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<td>-0.35</td>
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<td>Mandate of Innovation</td>
<td>0.14</td>
<td>0.19</td>
<td>0.08</td>
</tr>
</tbody>
</table>

R²                                               0.29 0.26 0.31
The final innovation, reorganization of personnel department and civil service commission functions, is apparently most affected by community size and the perception of a governmental mandate. Larger communities seem to have made this change somewhat earlier than their smaller-sized counterparts, although the greatest influence seems to be the directors' impressions of its degree of mandate. All three measures of innovativeness, particularly the speed of adoption indicator, are most strongly affected by the personnel directors' perceptions. Although one may not initially consider this change as one which is highly mandated, particularly in comparison to some of the other equal employment innovations considered, state and local governments often legislate such reorganizations into their enabling legislation or charters. Although personnel reorganization was not rated as highly mandated by most respondents in Table XV (2.1 on a scale of ten), the difference between adopters and non-adopters was greater for this change than for any other (5.1 versus 0.3). A logical conclusion which may be reached, therefore, is that state and local mandates are more salient to adoption decisions than are federal requirements. This conclusion was also reached by Feller and Menzel (9) in their study of municipal adoption of technological innovations.
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tr>
<td>Total Population of Community, 1970</td>
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</tr>
<tr>
<td>Per Cent Foreign Born, 1970</td>
<td>-.01</td>
<td>.16</td>
<td>.01</td>
</tr>
<tr>
<td>Per Cent Population Change, 1970-75</td>
<td>.06</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>Per Cent Families Below Poverty, 1969</td>
<td>-.04</td>
<td>-.08</td>
<td>-.04</td>
</tr>
<tr>
<td>Form of Government, 1975</td>
<td>.01</td>
<td>.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Total Gen. Revenue per Capita, 1974-75</td>
<td>-.02</td>
<td>-.04</td>
<td>-.03</td>
</tr>
<tr>
<td>Extent Employees Watched to Obey Rules</td>
<td>.16</td>
<td>-.06</td>
<td>.09</td>
</tr>
<tr>
<td>Per Cent Dept. Described as Active Pros.</td>
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<td>.13</td>
<td>.08</td>
</tr>
<tr>
<td>Number of Job Titles Among Staff</td>
<td>-.06</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Years Director Has Been at Position</td>
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<td>.01</td>
<td>.07</td>
</tr>
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<td>Personnel Budget Per Staff Member in Dept.</td>
<td>-.18</td>
<td>-.24</td>
<td>-.18</td>
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<tr>
<td>Cost of Innovation</td>
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<td>.10</td>
<td>.12</td>
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<tr>
<td>Radicalness of Innovation</td>
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<td>-.41</td>
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<tr>
<td>Trialability of Innovation</td>
<td>-.05</td>
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<td>Improvement of Innovation</td>
<td>.01</td>
<td>.25</td>
<td>.04</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
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<td>.10</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>.49</td>
<td>.33</td>
<td>.43</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.38</td>
<td>0.48</td>
<td>0.29</td>
</tr>
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</table>
Implications

Reviewing the data presented in Tables XXI through XXX, the overriding characteristic of the partial beta coefficients presented is their general lack of strength. Despite occasional high levels of association between the measures of innovativeness and the size of community or innovation characteristics measures, the variables selected through factor analysis as best representing the potential influencers of change exhibit a near-uniform lack of relationship to the dependent variables. This fact is further borne out by the coefficients of determination ($R^2$) printed at the bottom of each table. None of the coefficients exceed 0.50, indicating that even in the best of circumstances over one-half of the variance is left unexplained by the combined association of all the variables. In several of the thirty dependent variables the coefficient of determination dips as low as 0.14; in other words, over 85 per cent of the variance is left unexplained. One is tempted to conclude, therefore, that factors consistently related to municipal personnel innovativeness simply do not exist.

However, closer inspection of the tables reveals some of the independent variables when taken by themselves do seem to have a fairly sizable effect (beta over 0.25) on the innovativeness measures in several of the innovations. For example, innovation "radicalness" evidences at least a 0.25 level of association in twelve of the thirty innovativeness
measures across eight of the ten innovations. Its impact on innovativeness is most pronounced on Innovation 7, Employee Surveys, with beta coefficients ranging up to 0.50. It therefore seems logical to conclude that since the perception of radicalness is a key to both the speed and extent of innovation adoption in at least these changes, policy makers could take steps to make them less disruptive of existing procedures and structures. Dissemination of not only the policies, but ways in which they can be smoothly implemented could go far toward making these changes appear less radical. As Table XIII and Tables XXI through XXX show, innovation radicalness is negatively associated with the speed of adoption and the extent of implementation for all but one of the ten innovations considered.

A second independent variable that repeatedly appears to have a noticable effect on change is the length of time the personnel director has held that position. As stated earlier, the median tenure of personnel directors in the 131 cities contacted is 2.8 years (Table V). This variable is positively related with the speed and extent of adoption in all ten innovations, and evidences a partial beta coefficient of over 0.25 in seven of the thirty dependent measures of innovativeness. Since retaining qualified personnel directors seems to be modestly associated with the adoption of innovation, all other factors held constant, steps to lower director turnover would very likely improve municipal
innovativeness. Conversations with several of the directors in the follow-up interviews conducted after the survey indicated low pay and poor relations with the chief executive are two of the primary reasons for the termination of employment. One director interviewed confided he was looking for another job at the time. In that instance, the reason for his job dissatisfaction was money; the director was paid virtually one-half the salary of the personnel director in a large manufacturing company in his community with only one-half as many employees as the city.

Two other independent variables are also often strongly related to innovation adoption: city size and the innovation characteristic "mandate." While little can be done about the size of a city and its innovativeness, this research serves to confirm the findings in numerous other studies. Size does seem related to innovativeness even when other presumably relevant variables are held constant. To reiterate, the size of the community is a representative of all the other size variables that loaded highly on that axis in the factor analysis, including total general revenue, city employment, and size of personnel staff and budget.

The impression of an innovation mandate, however, can and should be made more forcefully. Personnel directors who perceived the innovation as mandated by governmental authorities are, in every instance, more likely to serve in cities which have adopted the change (Table XVI). In seven
of the thirty dependent variables the "mandate" beta coefficients exceeds 0.25. Its impact on innovation seems particularly acute where state or local legislation is suspected to act as the prime motivator (reorganization of the personnel function). Since local mandates are apparently most relevant, the passage of local legislation and its promotion through local channels would seem to be most appropriate to rapid and complete diffusion of personnel policy changes.

Therefore, several of the factors considered related to innovativeness evidence a consistent relation to change across a number of innovations. Several other independent variables are also moderately related to change in a more limited number of cases. For example, the per cent of the department described as active professionals by the personnel director, a rough measure of professionalism, is positively associated with the speed of innovation adoption in all ten innovations considered in this research. The strength of that association is strongest in what is perhaps the most controversial and potentially the most important of the changes—compensation based upon performance evaluations. The innovation characteristics "improvement" and "trialability" also evidence consistent positive relations to change and a strong association (over 0.25 beta) in at least one of the innovations. From these data certain policy decisions can be made: efforts to continue to improve the professionalism
of the department can be redoubled; potential fruits of
certain changes could be made more emphatically; the ability
to experiment with an innovation on a small scale could be stressed.

Summary and Conclusions

This chapter has investigated a number of hypotheses presented in Chapter II concerning the relationship between three measures of municipal personnel innovativeness and four classes of relevant independent variables for cities over 25,000 in population in two federal service regions. Univariate frequency distributions of the community environment, organizational environment, and organizational characteristics of the 131 cities selected for analysis indicate the cities represent a wide range of sizes and types of communities, particularly those smaller communities (25,000 to 50,000 in population) commonly overlooked in such studies. The frequencies also present data previously unavailable concerning the characteristics of municipal personnel offices in the two federal regions. For example: (a) nearly one-third of the cities have only one full-time personnel staff member; (b) most cities' personnel offices are less than ten years old, and (c) the median tenure of the directors in those cities with an office is only 2.8 years.

Tables VI through XV indicate the adoption rate and the speed and extent of innovation adoption for the ten personnel changes serving as the subjects of this research. They
also indicate the perceptions of the personnel directors concerning the characteristics of these changes in terms of six dimensions suggested by the literature: cost, radicalness, trialability, improvement, visibility, and mandate. The ratings by adopters and non-adopters differ significantly on many of the attributes, indicating their presumed effect on innovation adoption (Table XVI).

A correlational analysis was also conducted to determine whether the direction and strength of the coefficients evidenced were as predicted in the previous chapter. The level of association between the independent and dependent variables is quite low overall for most of the variable operationalizations, although those relationships of any size are largely unaltered after other relevant variables are held constant. The directions of the coefficients in the main support the hypotheses presented in Chapter II, with city size, wealth, liberalism, professionalism and such innovation characteristics as low cost and radicalness and high trialability, improvement, and mandate all positively related to the measures of policy change.

The subsequent regression analysis indicates certain variables, particularly the innovation characteristics radicalness and mandate, city size, and the length of time the city has had a personnel department, produce sizable variations in the dependent measures of innovativeness. These results imply that policy administrators or professional
organizations wishing to diffuse managerial innovations such as these would do well to emphasize those characteristics which are seemingly central factors in personnel innovativeness: non-radicalness, governmental mandates (particularly local governments), and a well-established personnel department. Other factors which may be emphasized include partial implementation or demonstration projects (trialability) and improved staff professionalism.

These suggestions make a great deal of intuitive sense and find strong support in the organizational decision-making literature. For example, the notion of risk in decision making occupies a central position in explanations of bureaucratic action and inaction (1, 14). Risk increases when the decision makers have little information upon which to base their opinions and judgments and when the consequences of failure are severe. Innovation trial before full acceptance can allow the decision maker to assess the applicability of the change to the situation at hand. Ease of fit with existing procedures in other areas after adoption (non-radicalness) will also make the project more likely to succeed, and thus more amenable to adoption and implementation.

The central finding of this chapter, however, is that the various indicators of community and organizational characteristics are only very weakly related to the measures of personnel innovation. Although prior research in other disciplines leads one to expect strong relationships would
be evidenced throughout the ten innovations, the data provide only mild support for those propositions mentioned above. This lack of association is also characteristic of other studies recently conducted in municipal government, however, leading one to suspect that the use of macro-level quantitative analysis may not be as appropriate to the investigation of organizational innovation as are other techniques detailed in Chapters IV and V.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

INNOVATION DIFFUSION

This chapter addresses the following question:

How do personnel innovations spread from one city to another (i.e., what forces are involved in the process of innovation diffusion)?

Diffusion is defined as the "rate and extent of acceptance and use of innovations among a class of adopters and the process[es] by which individual adopters interact with other change agents" (5, p. 2). Following the structure of this definition, the chapter first discusses the "rate and extent" of innovation adoption, using graphic illustrations of the adoption of each change considered in this research. Of particular interest are the similarities and differences both among the ten innovations and between these changes and their more technological counterparts. Previous studies in a number of disciplines suggest the presence of an "S"-shape cumulative adoption pattern.

The second portion of the diffusion definition ("the process[es] by which individual adopters interact with other change agents") is the subject of the remainder of this chapter, and is investigated in several ways. Personnel directors were asked to rate on a scale of zero-to-ten the degree to which they use a number of potential sources of
information about personnel changes. The sources considered are professional journals and magazines, professional meetings and conferences, federal agencies, state agencies, councils of governments or regional planning commissions, other cities, and individuals within their own cities. Univariate scores derived for each city on these measures are initially analyzed to determine the general informational preferences of the directors in the cities surveyed. The ratings are then used in an analysis of their associations with community environment, organizational environment, and organizational characteristic variables used in Chapter III. Their association with the three measures of innovativeness in that chapter (speed of adoption, extent of implementation, and a combined measure) is also explored. Such analyses should indicate whether particular types of cities and organizations are likely to use certain informational sources and whether the use of any of these sources is conducive to the adoption of any of the innovations studied.

The final portion of this chapter attempts to discover innovation "leaders" (i.e., cities which tend to be among the earliest and most extensive adopters of many of the changes) and to determine whether communities with certain characteristics are more likely to achieve that leadership status. Identification of these leaders may greatly aid
public and private organizations involved in the spread of change to local governments (1, 2, 12).

Rate and Extent of Innovation Diffusion

Previous research concerning the diffusion of innovations in such disciplines as anthropology, business, and political science has consistently revealed an "S"-shape cumulative diffusion pattern, representing a normal frequency distribution of innovation adoption over time (3, 8). The curve, as depicted in Figure 3, illustrates a process of discovery and trial by a few adopters at the beginning of the adoption period, followed by a period of rapid and widespread adoption, and finally a third period of declining interest and acceptance.

One possible reason why this pattern of diffusion is common to analyses in a number of seemingly disparate disciplines is that the researchers are often actually focusing on the same phenomenon—technological innovations. Anthropologists frequently study the adoption of a new medical breakthrough or method of birth control in a society; analysts in business often focus upon the diffusion of a new product or piece of machinery. Even those studies concentrating upon change in municipal governments have commonly investigated the adoption of such hardware items as new firehoses or freeway impact attenuators (5). The present study of the adoption of procedural policy change in
Fig. 5--Cumulative pattern of diffusion for Innovation 2: Job performance selection.
Fig. 6--Cumulative pattern of diffusion for Innovation 3: Critical behavior assessment.
Fig. 7—Cumulative pattern of diffusion for Innovation 4: Compensation based on evaluations.
Fig. 9--Cumulative pattern of diffusion for Innovation 6: Supervisory training.
Fig. 10—Cumulative pattern of diffusion for Innovation 7: Affirmative action recruitment.
Fig. 11--Cumulative pattern of diffusion for Innovation 8: Employee surveys.
municipal personnel offices does not follow this established pattern, however, and as a result may evidence a different diffusion configuration.

Figures 4 through 13 graphically illustrate the rate and extent of diffusion for each of the ten innovations selected as the subject of this research. (For more information on each of these changes see Appendix A.) Before one discusses the implications of these ten graphs, a few descriptive comments are in order. The vertical dimension represents the cumulative extent of innovation adoption, while the amount of time elapsed since adoption is indicated by the horizontal measure. As one can see, not all of the innovations begin at zero on the cumulative adoption scale, as the focus of attention is confined to thirteen years prior to the conduct of the mail survey (1967-1979). However, only one of the innovations (codification of grievance procedures) had been adopted by more than ten of the cities prior to that time period, so the problem is not considered serious. The time dimension represents the cumulative number of months that had passed between the adoption decision and the date the survey was mailed (October 1979). Therefore, the zero on the horizontal scale represents that date.

As is apparent from even a cursory analysis of the figures, none of the adoption patterns approximate the "S"-shape portrayed in Figure 3. Although a few of the graphs
have the expected slow buildup period, none of the innovations show any signs of leveling off; the rates of adoption remain constant in virtually all of the graphs. For example, in Figure 4 (the diffusion pattern for test validation), the rate of growth in innovation acceptance has been relatively constant since the first city adopted the change. This constancy of the rate of innovation adoption exists regardless of whether the change has been adopted by almost all the cities (Figures 10 and 12) or by virtually none (Figure 11). Innovations which have been adopted by about the same number of cities in these regions (e.g., Innovations 1-4 or 7 and 9) also seem to be adopted in about the same manner. Although in some of the changes there has been a somewhat longer history of adoption than in others, the slope of the adoption line is similar, indicating a similar rate of adoption.

The differences in the patterns of adoption across innovations may also be attributable at least in part to their characteristics as perceived by the directors. Innovations believed to be relatively easy to adopt (for example, low in both cost and radicalness) and highly mandated by governmental authorities evidence a much more rapid rate of diffusion than their more difficult and less legally defined counterparts. Governmental mandates appear to have a particularly pronounced effect on adoption. For example, the diffusion slope (the change in adoption divided by the change
in time) of the innovation the personnel directors rated as most highly mandated (affirmative action plan) is quite dramatic, with 108 cities adopting the change in only 126 months (slope = 0.89). Non-mandated changes such as employee surveys, on the other hand, are much less quickly diffused. Only thirty cities have adopted the use of surveys since the first change some 108 months before the survey was mailed (slope = 0.27). Of course the ease of adoption and mandate characteristics may, and often do, work at cross purposes. A review of Tables VI through XV in Chapter III indicates none of the innovations are rated as easily adopted across all the innovation characteristics (low cost, radicalness, high trialability and improvement) while considered highly mandated by governmental authorities.

One other facet of these figures bears mentioning, namely the point at which the changes seem either to begin or to rapidly accelerate their rate of change. Looking across all the changes, one sees that the adoption of each seems to begin in earnest about 100 months prior to October 1979. In some of the innovations (e.g., test validation and employee surveys), the first city did not adopt the change until about that time. In another innovation (supervisory training), the number of cities having adopted the change doubled in only a few months. One hundred months prior to the mailing of the survey in October 1979 corresponds with about mid-1971. This phenomenal acceleration in
the rate of diffusion of these changes seems quite logical, however, when one considers some of the events of that time period.

Several factors could, either separately or in concert, account for the rapid increase in the levels of adoption of these innovations, most of which are mentioned by Raymond A. Shapek (10) and are discussed in full in Chapter I. First of all, the shift in emphasis to state and municipal government for service delivery in the late 1960s and early 1970s greatly increased the size and duties of the local personnel office, adding also to its need for change from existing procedures. This shift in emphasis was accompanied by additional federal and state dollars, along with some rather explicit conditions for their expenditure. Numerous personnel systems may have been revamped as a result of these pressures and the additional funds received. Specific legislation dealing with such innovation-related areas as equal employment opportunity, merit protection, and labor-management relations was also passed about this time by both national and state legislatures. Not the least of these laws was the 1972 Equal Employment Opportunity Act, which made state and local governments subject to the provisions of Title VII of the 1964 Civil Rights Act for the first time.

In a similar vein, the other branches of government were getting involved in the equal employment controversy
at a higher level by the early 1970s than had earlier been the case. The Equal Employment Opportunity Commission (EEOC) had, by 1970, issued two sets of guidelines on employee selection and promotion and was vigorously (and publicly) enforcing those requirements. Executive Order 11246 created the Office of Federal Contract Compliance (OFCC), which was empowered to suspend federal contracts with any contractor or subcontractor found in violation of their employment guidelines, and to require the development of a workable affirmative action plan. The Supreme Court also handed down a landmark decision in the 1971 case Griggs v Duke Power Company (401 US 424), which required the use of validity checks where discriminatory effects of selection were detected. These federal actions, along with concomitant moves by state and local governments, surely provided a strong impetus for personnel change.

Professional organizations were also in the forefront of these movements for change and were active at about the time these particular innovations seem to have begun in earnest. The National Civil Service League, for example, developed their sixth Model Public Personnel Administration Law in 1970, the first update since 1953. Among the provisions of the law were many of the items comprising the focus of this research: test validation, affirmative action plans, and personnel office reorganization.
As one summarizes the data presented by Figures 4 through 13, two points seem obvious. First, the pattern of diffusion evidenced by these ten innovations does not conform to the traditional "S"-shape pattern common in studies of technological change. It may be, however, that the incomplete diffusion of some of these changes prevents the true diffusion patterns from emerging. For example, once the use of actual or simulated job performance tests are adopted by more cities than the slightly more than 50 per cent now using this technique, the pattern of diffusion may conform to the "S"-shape configuration. However, those changes which have been adopted by over 80 per cent of the cities responding to the survey (affirmative action recruitment and plans) evidence no greater conformity to the traditional pattern. Two equally plausible explanations are, therefore, possible. On one hand, the lack of an "S"-shape diffusion curve may be a manifestation of the "snapshot" or unitemporal character of the research; data collected five years later may reveal the suspected configuration. Alternatively, the diffusion curves for procedural changes such as these may not follow the traditional pattern of trial, followed by rapid acceptance, then waning interest like their technological counterparts.

Second, a number of events in the late 1960s and early 1970s seem to have initiated a wide range of personnel changes in municipal governments. Even areas not directly
related to moves for equal employment opportunity and improved labor-management relations were apparently initiated (employee surveys) or took a dramatic upswing (supervisory training) as a result of the variety of forces for change. The next section of this chapter explores some of the vehicles by which the ideas for these changes may have traveled to these municipal governments.

Factors Affecting Innovation Diffusion: Sources of Information

The preceding discussion of the patterns of innovation diffusion is instructive in that it suggests a number of potential macro-level influences on the rate of diffusion of the ten personnel innovations, but it does not address the equally provocative question of how the ideas for change originated. This aspect of the diffusion definition ("the process[es] by which individual adopters interact with other change agents") has been investigated in a number of ways in prior innovation research (2, 6, 12). Perhaps the most direct means of discovering that process of change and interaction is by simply asking the adopters and potential adopters what sources of information are used when they are looking for new ideas (4, 7). In this research, personnel directors were asked to rate on a scale of zero to ten the "degree to which . . . (each of the listed sources of personnel innovation) . . . is used by your department to discover new ideas."
The Data

Table XXXI presents both the median ratings of the seven sources of information used in this research by the 131 personnel directors surveyed and a percentage breakdown of their responses on the ten-point scale. As is immediately apparent from the median ratings, the directors gave vastly different ratings to the potential innovation sources. Two general groups are evident: one highly rated (professional meetings and conferences, journals and magazines, other cities and individuals within their own city) and one rated quite low (federal agencies, state agencies, and councils of government).

The percentage breakdown of the ratings even more clearly illustrates the directors' distaste for information from federal, state and regional points of dissemination. Nearly one-third placed their federal and state counterparts in the lowest category, and nearly one-half rated councils of governments between zero and two on the ten-point scale. (Many of these ratings were, in fact, zero.) These findings are somewhat different from those of the Office of Personnel Management (OPM) and the Council of State Governments in a baseline study conducted in 1979. Their survey of 101 cities over 2,500 in population nationwide revealed that federal agencies (particularly OPM, the Equal Employment Opportunity Commission, the Department of Labor, the Department of Health, Education and Welfare, and
<table>
<thead>
<tr>
<th>Source</th>
<th>Median Ratings on Ten-Point Scale</th>
<th>Percentage Breakdown of Ratings on Ten-Point Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journals/Magazines</td>
<td>7.0</td>
<td>5.4   16.0 19.1 35.9 21.4</td>
</tr>
<tr>
<td>Professional Meetings</td>
<td>7.3</td>
<td>6.1   13.8 14.5 37.4 25.0</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>3.9</td>
<td>32.8  22.1 25.2 11.4 3.8</td>
</tr>
<tr>
<td>State Agencies</td>
<td>3.5</td>
<td>32.9  31.3 18.3 9.1  6.2</td>
</tr>
<tr>
<td>Councils of Government</td>
<td>2.5</td>
<td>48.1  17.6 15.3 12.2  6.9</td>
</tr>
<tr>
<td>Other Cities</td>
<td>6.8</td>
<td>7.7   18.3 18.3 31.3 22.1</td>
</tr>
<tr>
<td>Individuals Within Own City</td>
<td>6.3</td>
<td>8.4   13.0 29.8 30.6 16.1</td>
</tr>
</tbody>
</table>
the Treasury Department) were "the entities from which the sampled cities would most like to be able to receive technical assistance and training" (11). The discrepancy may be due to the different population studied and the nature of the statement itself. While cities may be looking in other directions than federal agencies, they "would like to receive" that information and assistance from the national government.

Reasons for the rankings provided were clarified during the subsequent interviews with personnel directors in twenty-two of the cities. Directors rating federal and state agencies and councils of governments very low on the scale were asked why they were unlikely or unwilling to use these sources. The sharpest criticisms by far were directed toward councils of governments by directors in both federal regions. Officials in Wisconsin and Louisiana stated councils of governments "don't do anything" or "spend more time justifying their position" than providing any real service to member cities. Several other directors noted that regional agencies are often uninterested in personnel management. Directors in both Oklahoma and Texas rated these councils on the low end of the scale because they play a "low-key" role in personnel, having no innovative ideas and not searching out agencies in need of help. They reportedly are much more willing to work on such visible areas as water resources and highway construction projects.
Federal and state agencies were also heavily criticized for providing either the wrong kind of help (federal agencies) or virtually none at all (state agencies). One director in Louisiana reported receiving only "lip service" from OPM. An Illinois director said federal agencies cannot provide quick, accurate, and up-to-date answers to his questions. The major professional organization in the field (the International Personnel Management Association) was identified as capable of performing that task. Several other personnel officials interviewed believe that federal authorities are too aloof and are unaware of what first-line managers need; one Wisconsin director suggested increased personnel interchange as a possible solution. Another common theme in the responses was that uniform "solutions" are often suggested or made into policy for situations that are often quite dissimilar. A more "contingency-based" policy, reflecting the particular requirements of the locality was suggested.

The most common criticism of state agencies as a source of information was that they are not available. Many of the states included in the survey have no central personnel agency to which these localities can turn for assistance. In these states, personnel officers are found only in divisions of major state departments, and, according to one director, are comparable with assistant division heads in
his city in terms of expertise and compensation. They are hardly sterling sources of innovation information.

These comments should not be considered indicative of all directors or all cities surveyed. Several states apparently have quality state personnel offices. Some directors had high praise for their local councils of government and satisfying contacts with federal agencies. Their commendation does not alter the fact, however, that federal, state, and regional offices were rated only one-half as important to the development of new ideas as other sources (meetings, journals, other cities, and individuals within their own city).

Finally, it appears that the hypothesis in Chapter II concerning the expected propensity of municipal personnel officers to look toward other cities is refuted. Although previous studies of state administrators conclude staff generalists (e.g. personnel officials) look predominantly toward other states for new ideas (7), municipal directors surveyed in this research appear more inclined to consider journals and professional meetings above consultations with other cities. City-to-city contacts are, however, much more highly rated than federal, state or regional initiatives.

Correlates of Source Ratings: Innovation Sources as Dependent Variables

Of even greater interest than the raw scores themselves are the factors that seem to be related to the use of a
particular source in innovation information. The directors' ratings of the seven possible points of innovation dissemination were correlated (Pearson's r) with the descriptive characteristics of the communities for three of the variable categories used in Chapter III: community environment, organizational environment, and organizational characteristics. This type of analysis should reveal whether certain types of cities or organizations are more likely to select a particular information source.

The correlation matrix of each source rating with each variable operationalization is not presented, but revealed that only very weak relationships exist between the two sets of variables. None of the coefficients were above the 0.30 level and only four of the over 400 coefficients examined exceeded the 0.25 level of association. Therefore, no particular types of cities or departments are extremely likely to select a particular source of personnel innovation information.

The correlation coefficients indicate whether the community and organizational characteristics covary with the innovation source ratings. In order to determine the effect of the independent variables on the dependent ratings, multiple regression must be employed. Each of the innovation sources was regressed against the independent variables selected through factor analysis as representative of the community environment, organizational environment and
organizational characteristic categories (see Chapter II). The analysis indicated none of the partial betas were over the 0.30 level; in fact, most were below 0.10. The innovation source rating variance best explained by the twelve independent variables (use of journals or magazines) is only very weakly accounted for ($R^2 = 0.18$). Therefore, it may be reiterated that community and departmental variables do not seem to be strongly related to any of the sources of innovation information.

Certain relationships do appear, however, when one examines the direction of the correlation coefficients across all operationalizations. Although the strength of the coefficients is too weak to reach indisputable conclusions, consistency in the signs of the coefficients may be an indication of the directional tendency of that construct. Table XXXII presents these data based upon the positive or negative relationship evidenced for each operationalization used in the three variable categories. Only if all variable operationalizations (e.g., all measures of city size of integration) are in one direction is that direction noted in the table. Inconsistent directional relationships across operationalizations are noted by an asterisk (*).

Comparison of this table and Table II in Chapter II indicates less than one-half of the predicted directions are borne out by the data. For example, it was expected that
### TABLE XXXII

**DIRECTION OF RELATIONSHIPS OF INDEPENDENT VARIABLES AND SOURCES OF PERSONNEL INNOVATION INFORMATION**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Journals</th>
<th>Professional Meetings</th>
<th>Federal Agencies</th>
<th>State Agencies</th>
<th>Councils of Government</th>
<th>Other Cities</th>
<th>Individuals Within City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Size</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Community Integration</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Community Wealth</td>
<td>-</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Community Education</td>
<td>-</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>-</td>
<td>+</td>
<td>*</td>
</tr>
<tr>
<td>Community Conservatism</td>
<td>*</td>
<td>-</td>
<td>*</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Intergovermental Aid</td>
<td>+</td>
<td>*</td>
<td>+</td>
<td>*</td>
<td>+</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Quality Intergov. Relations</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Joint Programs</td>
<td>+</td>
<td>*</td>
<td>+</td>
<td>*</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Size City Government</td>
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<td>+</td>
<td>-</td>
<td>+</td>
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<td>+</td>
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</table>
### TABLE XXXII--Continued

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Sources of Personnel Innovation Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Journals</td>
</tr>
<tr>
<td>Wealth City Government</td>
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<tr>
<td>Reformed Structure</td>
<td>+</td>
</tr>
<tr>
<td>Environmental Turbulence</td>
<td>+</td>
</tr>
<tr>
<td>Use of Consultants</td>
<td>+</td>
</tr>
<tr>
<td>Size of Department</td>
<td>*</td>
</tr>
<tr>
<td>Slack Resources</td>
<td>*</td>
</tr>
<tr>
<td>Department Age</td>
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</tr>
<tr>
<td>Formalization of Department</td>
<td>+</td>
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<tr>
<td>Centralization of Department</td>
<td>*</td>
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<tr>
<td>Specialization of Department</td>
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290
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Sources of Personnel Innovation Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Journals</td>
</tr>
<tr>
<td>Professionalism of Department</td>
<td></td>
</tr>
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<td>Director Values Toward Change</td>
<td></td>
</tr>
<tr>
<td>Rewarding Incentive System</td>
<td>-</td>
</tr>
</tbody>
</table>

Key: + = positive relation across all independent variable operationalizations, - = negative relation across all independent variable operationalizations, and * = inconsistent relation.
the socioeconomic status of the community would be positively related to its use of media sources such as journals or professional meetings. The data indicate, however, that community wealth and education measures are negatively related to the use of journals across all operationalizations. The coefficients for wealth are quite strong in comparison to others evidenced; all are over the 0.20 level and three of the four measures of wealth (median family income, per cent family below poverty, 1969, and per cent families below 125 per cent poverty, 1969) are at or beyond the 0.25 level of association in the direction opposite what was predicted.

The absence of association for some of the expected relationships should not obscure the fact that several of the predictions are borne out by the data. For example, it was hypothesized in Chapter II that communities receiving large amounts of federal assistance would be more favorably oriented toward federal agencies as an informational source than cities receiving lesser amounts of money. As Table XXXII indicates, a positive relationship was, in fact, evidenced across all measures of federal assistance (total and per capita intergovernmental revenues and total and per capita federal funds transfers). The quality of those relationships is even more strongly related to the rating of federal agencies (r = 0.24). It was also expected that large departments would be more willing to rely on their own
staff for ideas than would smaller organizations. This hypothesis was similarly supported by the positive relation of "individuals within own city" with all measures of organizational size (community, city government, and department).

As mentioned above, the quality of federal and state agency contacts is positively associated with the cities' ratings of federal agencies as a source of innovation information. The quality of those relations evidences an even stronger relationship with the rating for councils of government. This relationship is not unexpected, for many of the cities' contacts could easily be through their regional participation. Another variable strongly related with the council of government rating is the cities' participation in joint projects with other cities, particularly those involving their personnel offices ($r = 0.30$). As city governments cooperate with one another, the rating of councils of government increases proportionately. Councils of governments have long been known to encourage this type of cooperation in such areas as the recruitment, selection, and training of fire and police officers (8).

In summary, the characteristics of the communities and organizations included in this research are not strongly associated with any of the sources of personnel innovation information ratings. None of the relationships exceed the 0.30 level of association (Pearson's $r$) and only 1 per cent
are stronger than the 0.25 level. Many of the hypothesized
directions in Chapter II are disconfirmed by the data,
although several interesting associations are revealed.
Reading down each column in Table XXXII, one can determine
which independent variables are consistently (although
weakly) associated with the various sources of information.

**Correlates of Source Ratings: Innovation**

**Sources as Independent Variables**

In a previous section of this chapter, the directors' ratings of the sources of innovation information were corre-
lated with selected characteristics of the communities and personnel offices to determine whether certain types of
cities or organizations are more likely to use a particular source than cities with the opposite characteristics. The
data indicated few sizable relationships. This portion of the chapter will attempt to assess the nature of the
relationships between the source ratings and the innovative-
ness measures used in Chapter III—speed of adoption, extent of implementation, and a combined measure. An analysis of this sort should indicate whether a city's rating of a par-
ticular source of innovation information is related to any of its innovativeness characteristics. If, for example, a city's rating of federal agencies is strongly and positively related to its speed of adoption for the first innovation (test validation), one could reasonably assume that
innovation source may have some effect on the adoption of that innovation.

Table XXXIII presents the data matrix for this set of correlations. As is immediately apparent, the coefficients are again very weak. Of the 210 correlation coefficients presented, only four are over the 0.25 level of association. On the basis of these data, one may justifiably conclude that the source ratings have little effect on the innovativeness of the personnel offices surveyed. In only a few instances is there some measure of covariation worth mentioning. Directors' ratings of journals as a source of information are positively related to the use of critical behavior-based job assessment methods and the codification of grievance procedures. Codification is also positively related to the rating for professional meetings. Finally, the rating for councils of governments evidences a positive association with the speed of adoption and combined measures for actual or simulated job performance selection and critical behavior-based performance assessment.

As in the earlier section of this chapter dealing with the effects of community and organizational characteristics on the source ratings, multiple regression was employed to determine whether any of the ratings had an effect on the measures of personnel innovativeness. The analysis again was somewhat disappointing. Of the 210 beta coefficients examined, only 12 are over 0.20 and only 1 exceeds 0.30.
<table>
<thead>
<tr>
<th>Information Sources</th>
<th>City Within Own Individuals</th>
<th>Other Cities</th>
<th>Government Councils of Agencies</th>
<th>State Agencies</th>
<th>Federal Agencies</th>
<th>Meetings</th>
<th>Professional Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.02</td>
<td>0.05</td>
<td>0.01</td>
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<td>0.03</td>
<td>0.05</td>
<td>0.12</td>
<td>0.13</td>
<td>0.15</td>
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<tr>
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<td>0.08</td>
<td>0.08</td>
<td>0.06</td>
<td>0.10</td>
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<td>0.12</td>
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<td>0.05</td>
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<td>0.11</td>
<td>0.06</td>
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<td>0.13</td>
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<td>0.14</td>
<td>0.06</td>
<td>0.13</td>
<td>0.14</td>
<td>0.14</td>
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</tr>
</tbody>
</table>

TABLE XXXIII
CORRELATION COEFFICIENTS OF DIRECTORS’ RATINGS OF INFORMATION SOURCES AND DEPENDENT MEASURES OF INNOVATIVENESS

1. Test Validation
2. Job Performance
3. Critical Assess
<table>
<thead>
<tr>
<th></th>
<th>Information Sources</th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Journals</td>
<td>Professional Meetings</td>
<td>Federal Agencies</td>
<td>State Agencies</td>
<td>Councils of Government</td>
<td>Other Cities</td>
<td>Individuals Within Own City</td>
<td></td>
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*Key: A = speed of adoption measure, B = extent of implementation measure, and C = combined measure.
Some interesting effects are indicated by the data, however. For example, the partial beta coefficients between the "state agencies" rating and the innovativeness constructs are almost always negative. In other words, the more often a director reported using state agencies for information concerning personnel changes, the less likely that city would have adopted most of these innovations. This relationship is particularly true with regard to the first change, test validation.

Although the strength of the correlations evidenced in Table XXXIII is not outstanding, the direction of the coefficients is generally as expected in Chapter II. Table XXXIV summarizes the data in the previous table; if the direction of the relationships between the source of information rating and the innovativeness measure was consistent across at least seven of the innovations, that direction was recorded for that pair of variables. As the reader can see, virtually all sources of information are positively related to change. This finding supports the hypothesis in Chapter II that cities with high ratings on all measures of innovation information would be more innovative than cities with a lower cumulative informational score. Apparently, cities with multiple and extensive information contacts are more innovative than cities using relatively few sources of information.
TABLE XXXIV

PREDOMINATE DIRECTION OF RELATIONSHIPS OF SOURCES OF INNOVATION INFORMATION AND MEASURES OF INNOVATIVENESS ACROSS ALL TEN PERSONNEL INNOVATIONS

<table>
<thead>
<tr>
<th>Source</th>
<th>Speed</th>
<th>Extent</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journals</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Professional Meetings</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Federal Agencies</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>State Agencies</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Councils of Government</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Other Cities</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Individuals Within Own City</td>
<td>+</td>
<td>*</td>
<td>+</td>
</tr>
</tbody>
</table>

Key: + = positive relation in seven or more innovations, - = negative relation in seven or more innovations, and * = inconsistent relation.

Innovation Leaders

Thus far this chapter has reported the data concerning the rate and extent of innovation adoption, concluding that these ten innovations do not conform to the traditional "S"-shape diffusion pattern evident in much prior research. The researcher has also discovered that all the innovations undertook a dramatic rise in usage about 1971-1972, perhaps due to the strides in equal employment opportunity and labor-management relations occurring about that time. The previous sections have focused upon the sources of innovation
information, discovering few relationships to either com-
munity and organizational characteristics or the cities' 
innovativeness scores.

One of the sources investigated--other cities--has 
either implicitly or explicitly been the subject of numerous 
innovation studies in the past. Researchers have often 
tried to determine what constitutes the "innovative target 
system"; i.e., the individual, organization, or societal 
group that tends to adapt to its rapidly changing environ-
ment. One means of identifying this system is to determine 
those characteristics most conducive to innovation (as was 
attempted in Chapter III) and then seek out that system with 
the optimal combination of those characteristics. A more 
direct method of determining innovation leaders is to simply 
examine the innovation scores of all subjects and determine 
which are consistently among the most innovative or highest 
scorers across a number of different changes. Several 
studies have noted the existence of innovation leaders and 
their potential importance to diffusion research (1, 2, 12).

In this research, innovation leaders are defined as 
cities in the top 10 per cent of innovation adopters for 
five or more of the innovations. Innovation scores (speed 
of adoption and extent of implementation) for each of the 
131 cities were examined and the top thirteen cities for each 
measure were identified. The result of the rankings for all 
ten changes indicate only seven cities meet the leadership
criteria for either of the measures of innovativeness. Table XXXV presents those cities, as well as selected characteristics of the communities and departments. Although confidentiality was guaranteed in the survey, all cities in the table granted permission for their names to be used in this portion of the research.

One can clearly see that the cities have few common characteristics. Some are very large cities, while others are quite small. The larger cities have long-established departments, while the units in the smaller cities tend to be more recently established. In one case, no personnel department per se exists at all (Galesburg, Illinois). Personnel duties are handled by the assistant city manager in that city; he has held that position for nine years. The cities do, however, tend to have low turnover in the personnel director's position. The median tenure for all directors was about two and one-half years; the median tenure for directors in these leader cities is nine years. Continuity of direction may, therefore, be a crucial factor in leadership. This one characteristic aside, however, no generalizable leader characteristics can be discerned.

These cities are "leaders" in the sense that they tend to adopt innovations more quickly and implement the changes more thoroughly than other communities responding to the survey. A more theoretically interesting question for diffusion research, however, is whether they are also looked
<table>
<thead>
<tr>
<th>Name of City</th>
<th>Population (1975)</th>
<th>Years With Personnel Department</th>
<th>Size of Personnel Staff</th>
<th>Tenure (Yrs) of Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbus, OH</td>
<td>535,610</td>
<td>60</td>
<td>22</td>
<td>4.5</td>
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<tr>
<td>Galesburg, IL</td>
<td>34,891</td>
<td>0</td>
<td>(1)*</td>
<td>(9)*</td>
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<tr>
<td>Harlingen, TX</td>
<td>40,423</td>
<td>3</td>
<td>2</td>
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<td>Madison, WI</td>
<td>168,196</td>
<td>30</td>
<td>7</td>
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<tr>
<td>Milwaukee, WI</td>
<td>665,796</td>
<td>81</td>
<td>40</td>
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<td>Port Arthur, TX</td>
<td>53,557</td>
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<tr>
<td>Stillwater, OK</td>
<td>33,870</td>
<td>8</td>
<td>1</td>
<td>7</td>
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*An assistant city manager is responsible for the personnel function in this city.
upon as leaders by their peers. In other words, do all other cities tend to consult with them when looking for new ideas in personnel management? The final question on the survey asked the directors to name the specific cities they are most likely to consult when seeking information and opinions for changes in procedure. The responses indicate the cities in the forefront of these changes are not often sought after as information sources. Of the 124 cities outside the leadership group, only nine named any of the leader cities. Milwaukee received six votes, Columbus three, and Madison and Stillwater one each. All the votes came from cities in the same state or in an adjoining state.

The lists of cities likely to be consulted also indicated two other points concerning the informational networks among these personnel officers. First, virtually all of the directors responding to the question (88.9 per cent) listed cities predominately within their own states. Secondly, over half (53.1 per cent) consult only with directors in cities of their own size. Some directors listed no names, writing instead "all cities our size" or "all other class-two cities" (a city-classification system) in the space provided. Therefore, it appears that at least within the field of personnel management, municipal officials either do not seek the advice of individuals in highly innovative cities or do not have the means of identifying those innovation
leaders in order to communicate with them. Instead, personnel directors in the cities surveyed apparently focus on municipalities with characteristics (and presumably problems) similar to their own.

Summary and Conclusions

This chapter describes the attempt to determine how personnel innovations spread from one city to another by investigating the diffusion process. The rate and extent of innovation adoption is illustrated in a series of graphs depicting the cumulative adoption pattern for each of the ten personnel changes studied in this research. The patterns do not appear to currently conform to the previously discovered "S"-shape pattern evidenced in prior research focusing upon technological innovations. It may be, therefore, that procedural policy changes such as these exhibit a more constant rate of change. More research is needed to confirm or deny this hypothesis.

The shapes of the diffusion curves do, however, evidence a similar phenomenon in all ten changes. Each innovation either begins or makes a dramatic increase in its rate of adoption about 1971-1972. This increase in adoption rates could be due to the activities of federal, state, and local governments and professional organizations urging such changes during this period.
Innovation diffusion was also investigated by having directors rate various potential sources of information on a ten-point scale. The data indicate directors are much more likely to use journals, professional meetings, other cities, and individuals within their own city than federal agencies, state agencies or councils of governments. Subsequent interviews revealed most directors believe these latter sources either have little applicable information to offer (federal agencies) or currently perform few personnel-related functions (state agencies and councils of governments). Correlation and regression analysis involving these scores and both descriptive variables of the cities and their innovativeness measures revealed few strong relationships. The predicted directions of the coefficients were, however, supported by the data, particularly with regard to the innovativeness measures.

Finally, cities in the forefront of at least half the changes were identified as innovation "leaders." Only seven such leaders were discovered, the characteristics of those communities and departments varying widely. They did, however, tend to retain personnel directors for a significantly longer period of time than non-leader cities. Cities which are looked to for consultation when looking for new ideas in personnel are generally not these leader cities, however. Instead, directors appear to confer with officials in similar size municipalities within their own states.
The implications of these findings for policy makers and diffusion theorists are somewhat mixed. The failure of the diffusion patterns to adhere to the previously discovered "S"-shape curve seems to call for additional work focusing upon the diffusion of other procedural policies to determine whether they too evidence a constant rate of adoption. An apparent lack of strong association between community or departmental characteristics and the source ratings implies no particular type of organization is likely to use any of the modes of dissemination listed. It does appear from the directions of the coefficients that cities receiving sizable amounts of federal assistance and reporting good relationships with federal and state authorities are more likely to look to both federal agencies and councils of governments. Directors in poorer communities seem to use journals and professional meetings more often than officials in wealthy cities.

Correlation and regression analysis also indicate none of the sources of innovation information have a particularly strong effect on the measures of innovativeness. Interestingly, however, state agency contacts seem to depress innovativeness across virtually all of the innovations considered. On the basis of these data one might recommend that city personnel officials stay away from state agencies if they wish to adopt new ideas. All other sources seem to have a positive effect on change.
Finally, the analysis of the apparent innovation leaders indicate few cities fall into this category (as was expected based upon prior research) and that those which do are generally not the focal points of diffusion. Instead, personnel directors seem to be looking toward cities with which they can relate and which presumably experience similar problems. Attempts at policy dissemination should, therefore, be directed toward these similar groups of cities which tend to interact frequently within state borders for maximum dissemination effectiveness. The next chapter discusses what happens to that information once it is received by the potential adopter.
CHAPTER BIBLIOGRAPHY


This chapter addresses the following question:

what intra-organizational processes are involved in the actual adoption decisions in municipal personnel innovation?

Innovation adoption is defined as "the behavior of a single adopter with respect to the acquisition of either a single innovation or a group of innovations" (5, p. 2). This chapter is somewhat different from the preceding segments in that it reflects an "emic" or micro-level approach in order to determine the particular sub-processes involved in adoption of the innovations studied in this research (4, p. 13). Such analysis goes beyond the quantitatively based survey data to understand better the process of adoption over time; a one-shot survey cannot tap this temporal dimension. Whereas the previous chapters have attempted to discover the correlates of municipal innovativeness and diffusion, this chapter should help the reader understand why certain covariations seem to exist.

Personnel directors or their equivalents were interviewed by the researcher in twenty-two cities across six states (Texas, Oklahoma, Arkansas, Louisiana, Illinois, and Wisconsin). The cities were selected in a non-random
fashion, with geographic proximity and survey responses as the primary considerations for inclusion in the interviews. Cities which had adopted some but not all of the innovations were predominately the target of this research, for while the process of adoption is a relevant consideration, the reasons for non-adoption are equally interesting and important. Because the cities were not selected at random, generalization of the findings to other cities in the two federal regions or cities in other areas is not possible. The data should, however, contribute toward an understanding of the adoption process. Personnel directors were guaranteed confidentiality, so the cities selected for the interviews are not named.

Three of the ten innovations are singled out for in-depth study: the use of actual or simulated job performance selection techniques, compensation based upon performance evaluations, and codification of employee grievance procedures. These changes seem to touch upon a variety of personnel functions (selection, performance appraisal, labor-management relations) and each was at some mid-level of diffusion at the time of the survey. Personnel directors were asked a number of questions about how each change was adopted and about their departments as well as their opinions concerning aids and impediments to innovation in municipal personnel offices. The interviews were conducted between December 7, 1979 and January 28, 1980. Each averaged one and one-half hours in length.
The Departments

The departments selected for in-depth analysis represent a wide variety of sizes and organizational configurations. One city established its personnel office some eighty-five years ago; another has yet to assign personnel duties to an autonomous department, preferring instead to assign those duties to an assistant city manager. In several cities, the current personnel director has held that position for over twenty-five years; other communities have experienced extremely rapid turnover in the director's position. One director in a fairly large city in Louisiana had been at his position only ten months at the time of the interview.

The process by which the departments evolved to their current status is equally varied, although some general trends are apparent. Personnel departments established at least fifteen years ago are seen most often in very populous communities, leading one to suspect that the unit was given departmental status because of the number of employees in the city and the need for accurate record keeping. Those departments created since the early 1960's were reportedly established as a result of expansion of the personnel function since that time. Prior to the creation of the department, those tasks were often carried out by the line departments (e.g., streets, sanitation, or water) or by employees in the office of the city secretary, the city manager, or the municipal finance officer. According to the personnel director in one city in the Midwest, personnel duties "were
handled out of the bottom drawer of the city clerk's office" prior to their achievement of departmental status. Increased pressures in such areas as equal employment opportunity, labor-management relations, and performance appraisal were reportedly the primary reasons for reform.

Several cities also reportedly established personnel departments as part of a general reorganization of city government, sometimes in reaction to corruption, patronage, and nepotism prevalent in municipal employment. The most common reorganizations entailed changes in the form of city government from either a commission or strong mayor-council form to a council-manager system. Under the commission form, all elected commissioners were responsible for personnel duties within their administrative area, so either no central personnel office existed or an office handled personnel duties for only a small portion of city employees. In one major city in Louisiana this situation existed for twenty-five years; the personnel office did very little until the city charter was changed to give the director broader management authority under a strong mayor-council form of government.

At least three other cities reportedly had a personnel office in name only at some time during their development. In two municipalities, the personnel office was formally established, essentially reorganized out of existence, and then brought back to departmental status a few years later.
According to one director, that city's department was demoted because certain individuals in the department "fell out of favor" with the city manager. In two other communities, political corruption seems to explain a lack of activity by the personnel departments. One city in Illinois had a clear case of patronage until at least 1969; the city's eighteen aldermen dispensed political favors in the form of municipal employment to loyal supporters without regard for the qualifications of these individuals. The city had no established classification plan, pay scales, or any other facets of a modern personnel system until an ordinance was passed in 1969 creating a merit system with a civil service commission. Patronage continued to some extent, however, even after the commission was established.

One point that was made repeatedly during the interviews was that the personnel function has been a low priority item in many of these communities in the past, and in some cases continues to suffer from a lack of attention. In the words of one director, personnel management is often the "poor step-child" in municipal administration. This impression was at least in part substantiable by the geographic positioning of the personnel offices in many of the cities and of the level of staffing in those offices. In many of the cities the personnel department is located in the basement of the city hall annex, or is confined to a small office in the corner of the municipal building. A city of 60,000 may have
only one person in charge of personnel services for several hundred employees.

The structure of the offices and the nature of the duties performed are fairly standard throughout the cities visited. The director is usually appointed by the chief administrative officer (city manager, city administrator, or mayor) and serves at his pleasure, although at times the director is also confirmed by the council. The personnel function is most often accorded departmental status, and encompasses virtually all personnel-related duties (recruitment, screening, examination, pay classification, and performance appraisal) for non-uniformed city employees. In some cases the director even makes the formal hiring decision, but more often the department heads perform this task.

Fire and police officers are almost always selected by a civil service board or a fire and police commission, which are commonly required by state law. The scope and authority for these commissions appears to vary considerably, with some performing only the formal selection and appeals functions while others are virtually autonomous departments unto themselves. In those instances where the commissions perform limited duties, city personnel officers often work closely with them, even to the point of taking over many functions which, by state statute or the city charter, belong to the commission. Directors often hold the office of secretary
to the commission, and at times serve as commission directors (except where residency requirements or dual office holding prohibitions apply). Some cities also have a personnel commission, which serves as an appellate board for non-uniformed personnel.

Personnel directors were asked whether state laws affect their duties, and if so, whether the effect was positive or negative. Most respondents cited state laws involving the creation of a civil service board and governing the selection of uniformed officers, but reported these were generally little problem in the performance of their duties. An even more frequent comment involved state collective bargaining legislation, which often allows unions to organize and bargain on a local option basis and sometimes sets out the procedures for impasse resolution. One director in Wisconsin reported state law requires binding arbitration in cases of impasse, and believes this mandate makes bargaining futile as the unions now take the talks to arbitration each time. In all, however, most personnel officials interviewed contend state laws, although antiquated in some cases, are less a factor in sound human resource administration than local ordinances or federal legislation.

The final question the directors were asked concerning their departments involved the process of decision making itself; i.e., whether changes of the sort investigated in this research could be made within the personnel department.
or whether outside approval is needed for adoption. Answers to this question were, again, highly variable, with about one-half of the officials reporting such decisions could be made within the department and the other one-half stating the approval of the city manager or the city council would be needed. As a rule, the directors reported that decisions not involving expenditures of additional money or requiring formal modification of city ordinances are not brought before the council.

This latitude was clearly not the case in all cities, however. Some city councils apparently enjoy becoming involved in the daily operations of the personnel office, even to the point of policy initiation and providing virtually constant guidance to the director. One personnel official in Louisiana said he reported to sixteen different people (an administrative board and the city council), and that just prior to the interview he had been severely criticized by the council in executive session for failure to implement a new selection policy that had not been validated but that would have helped the politicians during an election year. Most cities in which the council tends to become actively involved are either strong mayor-council cities and have recently changed from a commission form of government. Even in those municipalities where legislative approval is not required, council reaction is thought to be a major consideration in adoption.
The city manager or chief administrative officer also plays an extremely important role in the adoption of new personnel policies. If the impetus for change originates outside the department itself, more often than not it is at the urging of the city manager. Changes formulated within the personnel office are, in most cases, brought before the manager for his approval and support. Even in those cities where the directors reported having the statutory authority to make policy changes, the advice and consent of the director was viewed as crucial to successful implementation. In a surprising number of cities in both federal regions, the arrival of a vigorous, human resource-oriented municipal administrator was soon followed by the creation of a personnel department and the appointment of a professional personnel specialist. Virtually every personnel officer reported the city manager or chief administrative officer became involved in all but the most minute or technical policy decisions. All decisions of major consequence are reportedly routed through the city managers' offices prior to council approval, and their recommendations are often the key to council approval.

Also consulted frequently in the policy-making process are the line department supervisors affected by the changes. Many of the directors mentioned departmental consultations as part of the policy-making process in their city, either in a formal policy-making group out of the city manager's
office or through informal contacts. According to one Oklahoma director, "dictating policy defeats the purpose"; department heads are brought into the process at an early date to ease implementation by "making them part of the policy."

Although the specific procedures involved in the change process are, to some degree, different in each locality, a few general steps are apparent in virtually all cases based upon the directors' comments. In most instances, the director or someone within the personnel office initially recognizes the need for a policy change, although the city manager or other employees may provide the impetus for change in some cases. If the innovation affects employees in a number of departments or if it goes beyond what personnel officials termed the "interpretation" of city ordinances, the director will commonly go to the city's chief administrative officer for support and will attempt to build a coalition of support among department heads. New programs are said to be more favorably greeted by the city administrator if proposed at the end of the budget year so that they can be included in the next year's proposals. City council and personnel board approval is often the final step in the adoption process.
Innovation 1: Actual or Simulated Job Performance Tests

Personnel directors were asked to describe the process of adoption in their cities of three personnel innovations from the survey, the first of which was the use of actual or simulated job performance tests. Such selection devices are usually intended to replace written examinations or oral interviews suspected of being invalid or only indirectly related to the job being performed. Not only are they generally more predictive of subsequent job performance, but they are also believed to have a less disparaging effect on disadvantaged populations. The change had been adopted by sixteen of the twenty-two cities at the time the survey was conducted (October, 1979).

 adopters

Those cities using actual or simulated job performance tests were asked a series of questions dealing with the manner in which the innovation was adopted. Initially, the directors were asked to describe the nature of the change implemented to insure a common frame of reference across cities. The responses indicated cities were describing the same phenomenon, although the change took several different forms in the cities visited. Some cities use job performance tests for fire and police positions only; some use them only in such skill-related areas as typing and auto mechanics; some use a pre-hire probationary period as a job performance
measure; others use sophisticated assessment centers and "in-basket" tests for selection of top managers.

Since none of the process models of innovation reviewed in Chapter II are dominant in the literature, a variation of the rational problem-solving model was used to structure the directors' responses. It encompasses many aspects of the models presented in Chapter II, including a series of adoption steps beginning with a felt need followed by a series of logical steps culminating in implementation and feedback. While simpler than some of the more intricate rational models in the literature, most sub-processes are represented (see Figure 14).

Prior ^ Need + Solution + Decision to Adopt/Implement
Situation + Recognition + Development

Fig. 14--Rational decision-making model of innovation sub-processes.

Directors were asked to describe the situation that existed prior to the change, the recognition of that situation as a problem, the development of the solution to the problem, and the decision to accept that solution as a new policy. Feedback is represented by any resistance from political leaders, city employees, or the general public. Directors were also asked whether any assistance was used during the adoption process.
Prior situation.--Cities adopting this change reported using written examinations and oral interview and background checks as the predominate forms of selection prior to the change. Most personnel directors now view those procedures as "unrealistic," "useless," or "biased." The director in a major Texas city reported the old methods were "not capable of identifying any skilled talent." Another director in the state said the use of arithmetic tests to screen applicants for police positions in his community resulted in the employment of only white applicants for years; he reportedly "wanted to do something about it for a long time, but was worried about the EEOC (Equal Employment Opportunity Commission)."

Need recognition.--In eleven of the fifteen cities, the personnel director or some other individual within the personnel department reportedly first recognized the prior situation as a problem in need of change. Other problem-recognition sources include consultants and even potential employees complaining about unrealistic examination requirements. Most often, however, the problem was recognized because of the professionalism of the director and his awareness of the innovation in another locale which prompted reexamination of that policy. An equally salient factor was the passage of federal civil rights legislation and equal employment guidelines. Several directors confided that they acted because
"our tests were illegal"; one said he recognized the deficiencies of that city's examinations "immediately upon publication of the federal guidelines on employee selection."

Solution development.--The development of the solution was also largely confined to the personnel department with the directors citing their exposure to the innovation through journals and prior experience as the primary stimulus for change. Other sources include consultants, collaborations with department supervisors, collective bargaining, and in one instance a management intern from a local university. The personnel director in one city reportedly brought in a consultant from out of state. Even though he had already developed performance tests himself, he felt the consultant "could better convince the council of the need for a change." In most cases the city manager's office was also incorporated into the change process at this point to gain approval and support.

Decision.--The final decision to adopt this change was often made by the director of personnel, although the city council or its equivalent was involved in an almost equal number of occasions. Where the council was not involved, it was either because, according to the directors, they were "not interested" or the personnel manager perceived the change as a "service improvement option" not requiring
council approval. City managers were named as joint decision makers in several of the cities as well.

Resistance.—Virtually no resistance from political leaders was reported in any of the cities; in fact, some directors said their councils did not even know about the change and they "try to keep them out" of these decisions as much as possible. What little resistance that occurred involved the initial reluctance of the councils in two cities to spend added money to implement the change.

City employees, on the other hand, evidenced a widely variable response, ranging from strong advocacy to overt hostility and resistance. Some lower-level employees were highly supportive of the change, while others (predominately line supervisors) were reportedly suspicious of the new methods and the attempts to bring minorities and women into the workforce. Resistance was reduced by either incorporating the reluctant parties into the criteria-setting process or by receiving official approval for the change from the council or the personnel board.

Assistance.—A few communities reported receiving assistance from parties outside the formal organization, although most said the change was handled strictly within the confines of the department or city government. Those cities which did receive outside help were often assisted either by grants, technical assistance, or mobility
assignments through the Intergovernmental Personnel Act (IPA) program or by advice from nearby university professors and students.

**Non-Adopters**

Six of the twenty-two cities had not adopted the use of actual or simulated job performance measures at the time of the survey, and the reasons for non-adoption ranged widely. Several cities reported considering the change but did not adopt it because of cost considerations. One director in Arkansas said the city's poor tax base (characteristic of the state as a whole) prevented his office from having sufficient revenues available to make such changes. He said he realized the change would probably be cost-effective "in the long-run," but the city's first concern is usually "the short-run."

This city and several others also mentioned a lack of professional expertise as a reason for non-adoption. According to the personnel director in a moderate-size Illinois community, "our personnel department is not that sophisticated," a condition which he said stemmed from the city's "financial problems." That municipality, as well as several of the other non-adopters, has only one professional staff member, and would need technical assistance in developing a valid performance examination for all but the most rudimentary positions.
The reason most commonly cited for non-adoption, however, was that the director did not believe the change was worth the effort. One director said he watched the operation in an assessment center in a nearby community and came away with the impression that the system was "bogus"—i.e., two subjective. He was not, however, entirely satisfied with some of the city's current selection procedures (e.g., oral interviews for laborers), but was unconvinced that job simulations were a significant improvement. Another Illinois director objected to the time required to administer the examinations; in his words, "you could shoot a whole day testing for one position." Most of these communities had no sizable minority community to contend with, so the pressure for change apparent in some of the adopting cities was absent in these cities not making the change.

Innovation 2: Compensation Based Upon Performance Evaluations

Adopters

Linking performance evaluations and compensation packages seems, on the surface at least, to be a basic part of sound managerial practice. However, five cities in which interviews were conducted had not adopted this change at the time of the survey; most adopters reported they had only recently done so, and that it was the most controversial of the innovations considered in this research. In most cities,
the innovation took the form of a program awarding annual merit raises to those employees whose performance evaluations warranted praise.

Prior situation.--Prior to the change, most cities reportedly had what could only loosely be referred to as a "merit" pay system; incentive payments were given either to all employees or only to those with the most seniority, without regard for or, in some cases, in the absence of a performance evaluation score. Proper functioning of this change, therefore, not only requires the merging of two personnel systems (incentive-producing pay boosts and accurate performance appraisals), but also implies the existence and proper functioning of those systems.

Need recognition.--In most of the cities, the use of automatic pay increases without regard to merit was first recognized as a problem by either the personnel director or the city manager. Interestingly, the director or manager had just begun his duties in an unusual number of cases, and this was the first change implementation attempted upon arrival in the community. The official commonly had been exposed to this type of system in another setting (a different city, a state agency, or private industry), and felt it was appropriate in the new community.

The impetus for change sometimes came from above or below the managerial level, however. In one city in
Wisconsin, the personnel director said the need for performance-based compensation was first recognized by the city aldermen, and was a result of their displeasure with the compensation paid to one individual—the city attorney. All employees received a 7 per cent raise annually under the old system, and, because the attorney was the highest paid employee, he got the largest raise. As a result of their antipathy toward him, the council ordered a new system be instituted based upon employee performance evaluations. In two other cities, municipal employees themselves requested the change, although the personnel manager in one community said he had already intended to devise a better means of evaluating and compensating department heads.

Solution development.—The method of solution development was commonly an example of "team management," involving the director, the city manager, department heads, and (in some cases) municipal employees. In two cities, the idea originated with outside consultants brought in to study the total personnel system, but more commonly the city manager or the personnel director developed the initial plan. Performance-based compensation was already part of one city's personnel policy according to the administrative manual, but was never really used until the personnel director decided to do so. Another manager developed the idea as part of an intern problem paper while working on his master's degree at
a nearby university. In virtually all cases of successful adoption, however, a "task force" of some kind was used to bring the change into its final form.

**Decision.**—The final decision to adopt this change was made by a number of different parties in the cities studied, but in marked contrast with the other changes, the personnel director was never the sole decision maker. In two communities the director and the city manager jointly decided to make the change; in six others it was the city manager alone who was responsible for the final decision. Final approval by the city council was required in the remaining seven cities. This innovation, therefore, is apparently considered to be a more significant policy shift than the use of job performance selection devices, therefore commonly requires the approval of top administrative or political leaders before it can be implemented.

**Resistance.**—As mentioned previously, this innovation is by far the most controversial of the three investigated. Directors in nine of the fifteen adopting cities reported resistance from political leaders, lower-level employees, or both. Political leaders' reactions were quite varied; some were highly supportive, some strongly opposed, but most were either unaware of the change or unconcerned about its ramifications. On one end of the spectrum, the supporters saw the innovation as a progressive step forward and as a
reflection of "what a good job they are doing," according to the personnel manager in one city. On the other hand, some councils were not convinced the pay plan was workable or preferred to play a greater role in awarding pay increases. In the words of one director, "the aldermen would like to vote on each merit raise individually."

An even more common source of resistance was from lower-level employees and department heads. Most employees were concerned about the effect of the change on their pocketbooks, their promotional opportunities, and the ability of their unions and employee associations to defend them in cases of dismissal. Resistance in two other cities was not of this genre, however. In one Wisconsin community, the employees resisted the change by insisting that it apply to managerial personnel first. They did not believe that the techniques of performance appraisal used were accurate enough to determine their merit pay, and demanded managers be the "guinea pigs" before they were subjected to the plan. In another city in Texas, employees resisted not because they liked the old method of automatic raises better, but rather because they felt the change was unfair. Only 50 per cent of those eligible for merit raises were able to receive them, even though all employees may have been rated "superior."

As a result of that reluctance, the eligibility parameters in the ordinance were raised to 75 per cent and the remaining employees deserving of recognition were awarded in other ways
by their department heads (reclassification and promotion). In most cases, however, the resistance evidenced was defused by bringing employees into the policy process.

Assistance.—Over one-half of the cities adopting this change reportedly had some kind of outside assistance in the development and implementation of the proposal, far greater than the amount of aid used in any of the other innovations investigated. Three of the cities brought in management consultants from private companies for advice and consultation; two others reportedly used IPA funds or technical assistance. The remaining cities relied upon local university professors or interns to develop their programs.

Non-Adopters

Of the five cities which did not link performance evaluations and merit pay increases at the time of the survey, most had not done so because of the expected ramifications of the change, particularly among union employees. One Arkansas director said attempts to change the seniority-based compensation system in his community would "probably cause a strike." The chief personnel officer in a Wisconsin community of about 80,000 said fear of union reactions prevented the inclusion of such a proposal in a 1973 wage and salary study, and is probably the primary factor keeping further studies from taking place. He recognized that the current system also causes dissension because good employees
are not properly rewarded, but described that problem as minor in comparison to the turmoil a performance-based compensation system would cause. Most directors believe the only way to overcome that resistance is to introduce the change gradually, applying it only to new employees.

Two other reasons for non-adoption were presented. One Illinois community which has had a history of political corruption reportedly had not made the change to performance-based compensation because it was "not politically wise" to do so. Prior to this administration, aldermen used city employment as a means of rewarding faithful supporters; the city did not even attempt to evaluate worker performance until very recently. In another city, the change was tried and dropped after a short period in the early 1970's because of problems in developing accurate performance appraisals. Although he recognized that pay should be tied to performance, the director said the current method of giving blanket evaluations to departments precludes the use of this change.

Innovation 3: Codification of Grievance Procedures

Adopters

Codification of employee grievance procedures involves the institutionalization of a series of steps by which employees may seek to have some wrongful act (as perceived by the employee) formally redressed. The grievance may
involve a collective bargaining agreement or may simply be
a dispute with a supervisor. Of the twenty-two cities in
which interviews were conducted, nineteen have reportedly
implemented this change for all or part of their workforce.
Since most cities responding to the survey had adopted
codified grievance procedures more than five years ago,
several of the directors could not remember or were not
aware of the process of adoption for this innovation.

The change itself took a variety of forms in the cities
contacted, but basically involved the designation of a
series of steps an employee may take to complain about some
work-related problem. The employee's immediate supervisor
is usually contacted first, followed by each succeeding level
of supervision to the city manager. In some cases the
grievance may be appealed to a paid arbitor; in others it may
be resolved in a district court. The procedure is often
either set forth in the employee handbook or is verbally trans-
mitted to the employee at the time of the hire.

Prior situation and need recognition.—Cities which
reported having a codified grievance procedure either had no
set procedure established prior to adoption of the change or
did not use one that was formal policy. In many of these
cases, "adoption" was essentially a reaffirmation and imple-
mentation of existing procedures. Recognition of this
earlier situation as a problem in need of change was, again,
most often accomplished by either the personnel director or
the city manager-administrator, but in virtually all cases
was prompted by the actions of city employees. As complaints
became more frequent, the inadequacies of the system also
became more and more apparent, particularly for the city
manager or personnel director having to handle the complaints
which could have easily been resolved at a lower organiza-
tional level.

Managers also recognized, in the words of one director,
that "the legal ramifications of the old system were
tremendous" due to the inconsistent method of adjudication
in what he termed a "catch-as-catch-can" method of grievance
resolution. In Texas, the primary impetus for change in
several cities was the passage of a local option collective
bargaining statute in 1974. Employees reportedly realized
that they could make more demands, and as a result pressured
management for concessions. In cities where unions were
already established and had won codification through
bilateral agreement, non-union employees often pushed for
and received similar measures. In other cities, the problem
was reportedly recognized by a new chief administrator,
either city manager or mayor.

Solution development, decision, resistance, and
assistance.—In contrast to the earlier innovations, this
change appears to be almost exclusively a managerial concern.
In all but two cities, the solution was developed and the final decision to adopt was made by the chief executive. No outside assistance was reported in most cities and virtually no resistance by political leaders or lower level employees occurred. Ratification by the council was required in one of the two cities where outside approval took place solely because the personnel manager decided to make the innovation part of the "personnel rules" of the city and not the more general "administrative directives." Thus, policy designation appears to play a major role in determining who finally decides the change will become accepted procedure.

**Non-Adopters**

Directors in the two cities in which the change had not been adopted said they had not done so because there was no apparent need. Both communities are fairly small (less than 50,000 in population), and have had no complaints from employees that could not be handled quickly by their supervisor or other management personnel. Fire and police procedures are codified by state law in most states, so that potential problem area was not an issue. The personnel director in one of the two non-adopting cities remarked that personnel policy is often made in response to problems, the speed and extent of the solution dependent upon the severity of the problem. Since no complaints had been received concerning existing policy, no changes were anticipated.
Barriers to Change in Municipal Personnel Administration

In addition to these descriptions of the adoption processes for the three personnel innovations, directors were also asked to relate what they believed to be the primary reasons why personnel changes such as these are not adopted more quickly than they have been in the past. Their responses were, again, quite varied, ranging from factors which inhibit change in the abstract to instances peculiar to the personnel function. Similar comments were made by directors in several different communities, however.

One of the more commonly cited reasons for lack of change is an absence of professionalism in many personnel departments, sometimes referred to in the literature as "administrative capability." Several directors interviewed noted that in order to change behavior, one must first recognize that a current condition is inadequate, and then be aware of the tools and techniques available to correct that situation. According to one official, most individuals involved in personnel work in local government are not trained in the profession, having entered the field "through the back door." Lack of formal training is believed to detract from the professional quality of the departments. Professionalism in the chief executive's office (mayor or city manager) is also generally regarded as crucial to effective change.

Closely related to departmental professionalism and mentioned equally often are the attitudes and values of
personnel employees and supervisors, particularly the "fear of the unknown" that accompanies uncertain change. Some directors attribute this to a lack of either professionalism or awareness of policy outcomes in other communities. A number of others believe it is simply a case of being "too damn lazy," to use one director's words, or too "smug" or "complacent." According to comments received in at least eight of the cities, personnel officials often take the position that their departments are operating in a satisfactory manner, and that attempts to change existing procedures would be more trouble than they are worth. The quality of local government personnel management is reportedly in large measure a function of the individuals in charge of that office; the status quo can be maintained and the department can "get by" by doing virtually nothing, or the agency can be a vital force for change throughout the whole of city government. The key component, according to a number of the directors interviewed, is how the person in charge of the department views the job--active or passive. Support from the chief executive is another attitudinal component considered crucial to innovation adoption.

Another factor which a sizable number of directors believe inhibits personnel change involves the perception of the personnel function by both city executives and council members. Several personnel officials complained that a lack of emphasis on personnel matters by top city leaders prevents
effective changes from taking place. This indifference is due at least in part to the general impression (accurate or inaccurate) that "not much goes on" in personnel; others attribute this lack of priority to what they called a "bricks and mortar" orientation by city officials. The low visibility of personnel work (in comparison to streets, police, fire, or even finance) and the lack of tangible goods produced does not generate the support needed for changes of policy or structure. Since there is "no need" for a change, no money is allocated for that purpose. This is reportedly the reason one moderate-size city in the Midwest does not have a personnel office at all. In the words of the assistant city manager who administers that function, the council does not realize that "any fifteen million dollar business [in the private sector] would have a genuine personnel department." As a result, this city has to "farm out" many of their activities to state agencies. One department in Texas suffered the ignominy of a diminution of status and responsibility as a result of an administrative reorganization; the director asserted this was a result of a lack of emphasis on the personnel function in his community by city officials.

A final set of reasons for a lack of personnel change may be generally labeled "politics," one facet of which entails the form of government in which the department operates. The personnel director in a city which had only recently changed governmental forms from a commission to a
strong-mayor system reported this change was almost entirely the cause of his city's lack of innovation. Political considerations by legislative officials in what are considered administrative decisions are, in his words, a "disaster." However, commissioners and council members are said to be highly supportive of visible changes that are politically valuable to the elected official. For example, this director was under pressure to institute a revised selection procedure, even though its validity had not been tested. The council reportedly wanted "some kind" of change to reflect their interest and concern to the city's black community.

Politization of the personnel function is not only a function of the involvement of elected leaders, but is also an interdepartmental matter. A number of directors said that municipal departments are often mistrustful of attempts by the personnel department to change policy, viewing this as an unnecessary interference in their operations. Department heads commonly believe their methods of operation are best, geared to the requirements of their particular situation, and reject what they view as an infringement upon their "local rights." As was noted in the discussion of the process of change, incorporation of department heads into the decision-making process can alleviate much of this intraorganizational tension.
The Innovative Personnel Office

Several scholars in the fields of organizational and communication theory have, either implicitly or explicitly, considered the information gathering step within the rational decision-making process as a message sending and receiving process (3, Chapter 9; 7; 8, p. 252). Since the success of that transference is largely a function of both the sending and receiving units, each deserves investigation in order to understand the innovation process. This section concentrates upon the receivers of innovation—the municipal personnel office. The next section focuses upon those organizations seeking to promote personnel change.

Personnel directors were asked during the interviews to describe the characteristics of an "innovative" or change-oriented personnel office. While a number of different responses were received, the overwhelming majority of the directors' comments fell into three general categories. By far the most commonly repeated characteristics involved the attitudes and values of those involved in the innovation process, particularly those of the city personnel director and chief executive. The ideally innovative department was considered to be "receptive," "communicative," "flexible," and "patient." Departmental officials in this ideal organization encourage an "open atmosphere," were capable of tying together the various personnel duties through effective interpersonal skills, and practiced a participative
managerial style. In the words of one director, the manager "must involve the groups responsible for the change, both interdepartmental and intradepartmental." They must also protect the security and egos of those involved, making sure that "credit is given where credit is due." In sum, the attitude and managerial style is basically what is often referred to as the human relations or behavioral approach to the management of organizational behavior (1, 2, 6, 9).

Also mentioned quite often within this attitudinal category is a motivation on the part of the directors to improve the quality and professionalism of their office. As the manager of a department in a major Wisconsin community noted, "people make offices innovative," and they must be "motivated by the desire to be the leader in their field." Unfortunately, as both he and a director in Oklahoma mentioned, many directors are not drawn into the field through formal training, but rather because "they could not do anything else." As a result of this lack of background in discipline, they have little attachment to it. Experience apparently is not the key to professional pride, however. The director of a large city in Texas observed that some non-innovative directors ("dogs") had been there "forever," and that they had done little to improve the caliber of their personnel system since their arrival. Therefore, one should not expect an individual with little interest or
commitment to the discipline to develop that professionalism and pride through extended tenure.

In addition to these attitudinal components of the office, a large number of the directors' comments centered upon the authority of the department to innovate. One director linked the attitudinal and authority areas together; a department manager is not likely to have the willingness to innovate or an attitude conducive to innovation if the authority to make needed changes is absent. This authority was generally viewed as originating from two sources: one structural and the other, again, attitudinal. Structurally, personnel directors most often believe their departments should be centralized for maximum innovation authority. With virtually all personnel-related functions located in a central office, the department could more easily make wholesale changes of policy without having to involve numerous other departments which may inhibit change.

The attitudinal source of authority stems from top city decision makers' view of the proper role of the personnel office in municipal administration. Nearly one-fourth of the directors interviewed mentioned high departmental status or priority as a major factor contributing to innovation and change. Officials both in the chief executive's office and on the council were often criticized for an excessive physical (e.g., streets and garbage) orientation. They reportedly do not realize that over 70 per cent of most cities' budgets
are spent on human resources. "Caretaker" personnel systems, to use one director's phraseology, result when top decision makers either do not recognize the far-reaching effects a modern system can have on municipal administration or use the personnel department as, what another official described as, a "dumping ground for political cronies." The chief executive should show that the personnel function has some priority in his office, and that changes therein will be readily accepted and supported.

Nearly one-third of the directors interviewed mentioned personnel office staffing as another critical factor in innovation, particularly the adequacy of their numbers in the face of the tasks they are called upon to perform and their particular specialized talents. Several directors noted that without sufficient staff members to provide the time for innovation, non-routine or innovative activity would be driven out by the need to perform more mundane functions such as record keeping and other administrative duties. Provision of sufficient manpower within an organization is conducive to both organizational maintenance and adaptation functions.

Personnel officials also commonly assert that staff members should possess a variety of specialized skills for high levels of departmental innovativeness. The high degree of expertise and commensurately lessened fields of responsibility reportedly make specialized personnel employees
more likely to be aware of recent developments in their areas. Not all department members should be affirmative action specialists, however. Some balance between specialists and generalists is considered most conducive to change; otherwise, sub-departmental parochialism may result.

Departmental professionalism was mentioned almost equally often by the directors interviewed as conducive to innovation. Personnel directors and analysts should, according to a manager in Arkansas, "have a university education to serve as a building foundation for exposure to change." Other directors similarly assert that post-entry training and development, possibly even the creation of a training sub-unit, is a most important element in the innovation discovery process. Several mentioned the need for strong contacts with other organizations in their environment that can serve as sources of innovation information; these include professional organizations, governmental officials, and nearby private organizations.

Other facets of the ideally innovative personnel department include: adequate funding to pay for expenses related to the change; a supportive atmosphere in the surrounding community; and the non-involvement of political leaders as much as possible. As may be apparent by now, virtually all these suggestions are mutually supportive. Staff professionalism and specialization go hand in hand; the authority to innovate and the adequacy of departmental staffing are highly
contingent upon top decision makers' perceptions of the personnel role and its priority as a management function. All the characteristics should, therefore, be viewed as a comprehensive prescription for change as viewed from the vantage point of the local personnel officer.

The Effective Innovation Promoter

The municipal personnel officials were also asked to describe the other half of the informational dyad—the characteristics of effective innovation promoters. Nearly one-third of the directors said the promoter characteristic most conducive to the spread of change is activity, or more specifically "proactivity." Time and again the directors mentioned that innovation promoters seem distant and aloof; they may send pamphlets and brochures urging attendance at a conference hundreds of miles away, but only very rarely do promoters themselves actually go to the local communities. The director of personnel in a fairly large Texas community noted that individuals in low-innovation organizations are least likely to attend conferences designed to promote change. Since local councils of government are usually unconcerned about personnel work, no organization is available to reach out to these cities. Those consultants who are willing to visit the community, to get to understand the local conditions and help the professionals therein to evaluate their needs, generally require prohibitively large sums of money for
their services. Many of the directors interviewed were of the opinion that a statewide network of professionals able to coordinate frequent regional workshops at a relatively low cost and able to recognize the need for local policy adjustments could best promote personnel change. Very few states presently have such professional associations.

Other directors' comments focused upon the tactics that promoters should use in convincing local political and administrative leaders that personnel changes are needed. A surprising number suggested a political angle: council members and top administrative officials, they assert, must be convinced that it is to their personal and political benefit to improve the capacity of local systems. Equally strong and related tactics include stressing the economic savings of the change and the legal morass which may result if the present situation is challenged in the courts. For example, a recruitment drive to encourage the employment of minorities and the disadvantaged or the development of a more valid selection device could be described to local decision makers as a means of lowering expensive turnover and avoiding costly litigation, while at the same time protecting their own self-interest.

The remainder of the comments concerning effective innovation promotion were quite varied. Some suggested that the change agent be totally independent from the city, as city councils are reportedly more willing to accept the
recommendations of an unbiased third party than staff suggestions, even if the two groups come to the same conclusions. These consultants, they argue, should be brought in only for major projects, as frequent use may raise questions about staff competency. Change agents should concentrate on the "administrative power source" (usually the city manager or mayor), and should establish their credibility by showing what has been accomplished in similar communities. Finally, local officials should be trained to carry on the new functions after the promoter leaves the city.

One rather unorthodox director reported that he found the best way to promote change is to "create a crisis."

Since city management is usually crisis-oriented, changes commonly occur only in response to a problem. This personnel manager said he encourages ("motivates") employees to file complaints or grievances against policies which are, in his opinion, "illegal." He can then step in and "cool things down" by solving the problem and making the needed change without the resistance commonly associated with the adoption of new policies.

Intergovernmental Personnel Act Programs:
The View From the Municipal Personnel Office

Perhaps the most important governmental programs designed to promote innovation in state and municipal personnel systems are the Intergovernmental Personnel Act (IPA) programs
begun in 1971 and administered by the Office of Personnel Management (OPM). Through formula grants, technical assistance, personnel mobility assignments, state and local use of federal training programs, and cooperative recruiting and examining efforts, IPA programs are responsible for "strengthening the personnel resources of state and local governments," and by most accounts has been a resounding success (10, p. 1). In fact, it is commonly referred to as one of the most successful intergovernmental ventures ever undertaken (10, 11, 12).

Personnel directors in the twenty-two cities where interviews took place were asked a series of questions about the IPA programs: (a) whether their department had participated in any of the programs described above; (b) if so, their impression of that program; and (c) their evaluation of IPA publications designed to publicize previous efforts and to diffuse policy innovations. The results of these interviews indicated how pervasive the program has become in a short time with a quite limited budget. Only two of the twenty-two cities has had no contact with any of the programs; fourteen have received IPA grants, six have gotten technical assistance, and three have had a mobility assignment. (Some cities received more than one program.) In three cities, however, grants had been applied for and turned down.

Reluctance by city elected officials to commit the required 50 per cent matching funds over a long period of time forced
another city to withdraw from a classification study that had been funded through the program.

Overall, the IPA programs were rated very highly by the municipal officials. Several remarked that the training provided was of great assistance; program administrators were described as "cooperative," "knowledgeable," and having many "good ideas." Only two directors had solely negative comments about the programs, but several others noted several areas in need of improvement.

The most serious and commonly repeated complaints were not directed toward the federal officials who oversee the IPA program, but toward the state agencies through which 80 per cent of the grant funds must flow. In each state, the governor's office is called upon for "review, comment, and suggestions" regarding local government applications for funds. Directors in several states (Louisiana, Wisconsin, and Oklahoma) assert that this process unduly politicizes the nature of the grants, allows state officials to set priorities, and subverts what should be a cooperative goal-setting effort. One director reported that the method of grant application and approval in his state was "all politics"; he was a member of what he termed a "sham committee" charged with the appropriation of IPA funds which disbanded after only one meeting. His city and another major city received no money at all as a result of this process, and were forced to turn to discretionary funds from OPM.
Although state follow-up reports were singled out as one of the largest paperwork problems slowing down the time between grant application and funding, several directors expressed puzzlement over some of the projects funded in their states. One director in Louisiana termed the process "byzantine," giving subsidies for "vague ideas and not concrete proposals. The system is inert unless you hit it; hit it the right way and it throws money at you." Another director in Wisconsin said that unless local needs match priorities established in the governor's office, no value is received by the municipality.

Other problem areas included the size of the grants available (too small), the size of the match city governments are required to provide (too large), and the rigidity of some of the programs (the assumption that all local systems have the same characteristics, e.g., a civil service board). Generally, however, the directors were impressed with the products received and the quality of the assistance available.

Finally, one of the goals of the IPA program is to share the results of previously conducted projects with other potential recipients in order to disseminate effective personnel policies more rapidly. Nearly one-half of the directors contacted had not received any IPA publications, however. Other officials either had not received publications with any degree of regularity (one said it was an "accident" he had gotten any at all), or were somewhat dissatisfied with the
reports received. Directors sometimes commented that the information was irrelevant to their needs or was helpful "only if you were looking for something, not if looking for new ideas." On the whole, however, most directors were pleased with the reports they had seen, and even those who were critical of earlier publications were pleased with some of the more recent issues.

Summary and Conclusions

This chapter has attempted to help one understand the intraorganizational processes involved in the adoption of municipal personnel policy innovations. Data were collected through interviews with personnel directors or their equivalents in twenty-two cities in the Dallas or Chicago federal regions. These interviews focused on the adoption processes for three of the ten innovations considered in this research—job performance selection techniques, performance evaluation based compensation, and grievance procedure codification. Although the processes of innovation adoption are quite different across all three changes, some underlying patterns are discernable. Before one discusses those patterns, however, some of the chapter findings are briefly reviewed.

Chapter Review

A rational decision-making model was used to structure the directors' responses concerning the adoption of the three personnel changes in their cities. The data indicate that the
adoption process is largely a result of the actions of the personnel director and the city's chief executive officer (usually the city manager, city administrator, or mayor). Together or separately, they act as the primary force for change in almost every phase of the process, but are particularly adept at recognizing problem areas in need of change and developing feasible solutions. The director or manager may even make the final decision to adopt the change if it does not represent a major policy shift and does not require additional funds from the council. Personnel directors are generally able to make minor "service improvement" changes while more significant innovations often require the approval of the city manager or the city council. Resistance was reported in several cities during the implementation of two of the innovations, particularly the attempt to link merit pay to employee performance appraisals.

Personnel directors also describe what they consider to be the organizational characteristics which make personnel offices innovative or non-innovative. Major factors believed to affect innovation include: (a) the professionalism of top departmental officials and their knowledge of the latest developments in the discipline; (b) their attitudes and values toward change and the proper role of the department (active or passive); (c) the formal or informal authority granted to the department director to make needed changes; (d) the importance of the personnel function in the eyes of the chief
executive and the city council; (e) the political interests of top decision makers; (f) staff support availability and specialization; and (g) the ability of the director to communicate and work with groups affected by the change.

Department directors were similarly asked to list the characteristics and tactics of outside promoters which are conducive to innovation in municipal personnel management. Most officials interviewed said that the most effective promoter organizations are willing to actively seek out and visit potential adopters and to help them determine their own needs. While in the local community, innovation promoters reportedly should concentrate upon the relevant administrative or political "power source," stressing the economic and legal need for the change and the personal and political benefits that can result from adoption.

**Observations**

Although the specific processes of change are different across all three of the innovations focused upon in this chapter, some general observations about the innovation process may be advanced based upon the researcher's conversations with the personnel directors. The data collected during the interviews seem to indicate that the innovation adoption model used to structure the directors' responses (Figure 14) is a reasonably accurate representation of reality. The adoption of each of the changes, therefore,
may be viewed as a series of steps culminating in the implementation of the innovation and the withstanding of any resistance from political leaders and members of the affected workforce. If the model is indeed valid, an understanding of the processes involved in the movement from one step to the next would be a major factor in comprehending the larger phenomenon of innovation adoption.

For example, the first relevant consideration in the model involves the process by which an existing policy ("prior situation") is recognized as deficient in some way and is perceived as an organizational "need." Three factors likely to foster that perception seem to be personnel staff availability, the professionalism of key city officials, and the provision of local technical assistance. Adequate staffing in relation to the workforce allows personnel officials the time needed to concentrate upon non-routine activities, scanning the horizon for potential problem areas. Without the time for innovation provided by a sufficiently large workforce, personnel officials are forced to lower their vision to the routine problems of more immediate concern, thereby decreasing the likelihood that problem areas will be spotted and needs identified.

Departmental professionalism is an equally important factor in need recognition. Highly trained officials cognizant of alternate personnel techniques are much more likely to perceive the need for change than are unskilled
employees with little knowledge of modern managerial procedures. Professionalism as used here entails not only technical knowledge of the state of the art in the discipline, but also the attitudes and values commonly associated with professionalism. The ability of departments to recognize their needs may be so enhanced by highly trained and motivated leadership that they may be able to break the reactive mode of change described by several directors. Instead of responding to problems threatening to boil over, departments would be able to recognize potential needs by accurately anticipating future conditions.

It should be emphasized at this point that the need for quality professionals in the innovation process does not end at the border of the personnel department. The adoption of almost any change is extremely unlikely unless the city manager or mayor's office is equally convinced that the existing situation is a problem, that the severity of the problem is sufficiently great to warrant action, and that the proposed action is a clear improvement in the situation. In fact, suggestions from the city manager's office were the impetus for many of the personnel innovations considered in this research. Therefore, the level of staffing and professionalism in the chief executive's office is also an important factor in the process of need recognition.

Finally, outside assistance from a variety of sources is reportedly also a critical factor in need recognition.
Virtually every city reported some form of contact with the IPA program, and many said that they had used private consultants and students and professors from local universities in their process of change. The directors reported, however, that the most effective assistance for innovation adoption can be provided by statewide professional organizations willing to go do the local personnel office and help them assess their needs. Unfortunately, few states have such active professional associations.

These three characteristics—proper staffing of the personnel office, the professionalism of key officials, and the provision of outside assistance—appear to be the key factors in recognizing existing policies as an organizational problem in need of change. They are also crucial to the second stage in the adoption process model; the development of the solution to the discovered problem in order that the perceived need may be satisfied. According to the directors' comments, departments with sufficient time (available through proper staffing), with professionally trained and motivated leaders, and with outside assistance where needed are usually much more likely to develop and propose innovative solutions to perceived problems.

The final stages in the innovation adoption model—the decision to adopt and implement the proposed innovation and the ability to overcome any resistance from political leaders
and lower-level employees—are also affected to some degree by the characteristics enumerated above. Of greater significance at these stages, however, is the use of political and communication skills needed to promote the change during this fragile stage of its existence. Political skills are particularly relevant if the final decision to adopt or reject the innovation is made apart from the units involved in its development. Interestingly, the personnel officials interviewed often saw a politics-administration dichotomy in policy making, as many believe politicians should stay out of "administrative" areas. On the other hand, most were quick to point out the political tactics needed for adoption. Political leaders or city administrators required to approve the change must be convinced that the adoption of the proposed policy is not only in the best interest of the community but is also in their own self interest. Directors suggest that arguments couched in terms of the money to be saved and legal problems to be avoided are usually effective, mainly because the official sees the change as a personal political asset. The need for the change must also be communicated to affected employees and line supervisors, as they are apparently quite capable of denying the successful implementation of most policy innovations.

Actually, the dichotomy of skills and abilities described above is not nearly as distinct as has been portrayed, particularly with regard to the development of
the innovation itself. Development of the solution to the perceived problem requires a merger of the professional attitudes and abilities needed in problem recognition with the political and communication talents crucial to the promotion of the innovation. This blend is particularly critical in the adoption of the more controversial innovations, which require either additional funds and legislative sanction for adoption (e.g., job performance selection) or directly affect municipal employees (e.g., compensation based upon performance evaluations). Bringing affected parties into the solution development process as soon as possible and communicating the need for the change to them clears the pathway to adoption of many potentially serious obstacles.

Figure 15 presents the amended innovation adoption model, summarizing the factors believed to affect each stage of the personnel innovation process. The early stages of the process are most affected by municipal professionalism, personnel department staffing, and technical assistance provided; in the later phases, political and communication skills are most important. Solution development is a function of both groups of characteristics.

As the figure indicates, the priority accorded the personnel function and the economic condition of the community are important to the entire process. Many directors strongly asserted that the top decision makers in their cities do not recognize the far-reaching effects of personnel management in
Fig. 15--Factors affecting various stages of the innovation process model
municipal management, and as a result their city was not as innovative as it could be. The importance accorded personnel work affects every stage of the process, but is particularly relevant to the level of staffing and professionalism in the department. The availability of economic resources similarly affects all phases of innovation adoption. Several directors said their city had not adopted two of the changes (actual or simulated job performance selection and performance-based compensation) due to a lack of professionalism, which they in turn attributed to the lack of an adequate tax base from which to attract trained individuals. Others said they were not able to convince city fathers to adopt a change because of the added expense entailed in implementation.

Of the innovation models reviewed in Chapter II, the relationships depicted in Figure 15 most resemble the findings of Eveland, Rogers and Klepper (4). The authors were investigating the adoption of a new computer system in municipal governments, and their data suggested a model consisting of five stages: agenda setting, matching, redefining, structuring, and interconnecting. Each stage represents a gradual specification of operational detail. Factors affecting innovation adoption range from professionalism and system support in the early stages of the process to communication and effectiveness at the end.

It should be noted that this model of innovation adoption is not directly applicable to all processes of change or even
all policy changes. It does, however, represent an improvement over the simplistic "input-output" models used in much of the earlier innovation research. As was mentioned in Chapter II, models are "sets of symbols, of concepts abstracted from the real world, which are organized together to represent a problem . . . [in order to] organize one's observations about the outside world" (5, p. 61). They are neither "right" nor "wrong" but rather more or less useful in developing insights and hypotheses. It is hoped that the comments in this chapter and the representation of those findings in Figure 15 have contributed to the development of those insights concerning the intra-organizational process of innovation adoption in municipal personnel management.
CHAPTER BIBLIOGRAPHY


CHAPTER VI

SUMMARY AND CONCLUSIONS

The purposes of this chapter are to summarize briefly the intent of the preceding research, to review the findings presented in Chapters III through V, and to draw some tentative conclusions suggested by the available data. Because this is but an exploratory study in what remains virtually unexplored theoretical territory--municipal public policy innovation--the conclusions must be prefaced with the disclaimer of non-generalizability and tentativeness. Finally, research implications for both innovation theory and public policy are presented, as are possible subjects for future research.

Summary of the Research

Organizations are conscious assemblages of individuals designed to be used toward some end (2, p. 73), and they have become an indispensable tool in man's attempt to cope with his environment. Because of the rapid transformations occurring in society and the consequences associated with stagnation, organizations must adapt themselves to the altered conditions in order to survive. Despite these pressing conditions, the uncertainties associated with change have a severely inhibiting effect on an organization's
adaptive ability. So strong is that inhibition that some authors believe modern bureaucracies are incapable of systematic change (3, 18, 19). This problem is not, as common conjecture would have it, confined to governmental organizations, but is characteristic of many private enterprises as well.

Numerous general strategies for change are presented in the organization theory literature, but most fall into the category of what Herbert Simon refers to as "proverbs" of administration (17). Such strategies are commonly very broad and ill defined, lacking in the specificity needed for useful application or theory building. Desperately needed are rigorous empirical analyses of organizational change conducted in such a manner that change inducements and inhibitors are clearly delineated; i.e., a contingency model of organizational innovation. From such studies may come information needed to understand the broader process of social change.

This research represents an attempt to add to that body of theoretical knowledge about organizational change and, in addition, to provide information with practical applications for public policy. One such set of policy innovations is the focus of this research—procedural policy innovations in municipal personnel administration. Because of the paucity of research in the area of municipal policy innovation and the unique pressures for change in personnel
administration within the past fifteen years, this research seems particularly relevant and of great heuristic value.

Three basic questions represent the focus of the research:

(1) why are some municipal personnel offices more innovative than others (i.e., what factors seem related to their level of innovativeness);

(2) how do personnel innovations spread from one organization to another (i.e., what forces are involved in the diffusion process); and

(3) what intra-organizational processes are involved in the actual adoption decisions in municipal personnel offices?

Each question is treated separately in the sections to follow. Ten personnel innovations were selected by a panel of both academicians and practitioners from across the nation, representing what they believe to be the "greatest contributions toward improved municipal personnel administration within the past fifteen years" (Appendix A). A mail survey sent to all cities over 25,000 in population in the Chicago and Dallas federal regions focused on their use of the ten innovations (Appendix B). A total of 131 usable responses were received, representing a response rate of 52 per cent.

**Personnel Innovativeness**

Innovation is defined as the first or early decision to adopt a change in procedure by one of a set of organizations with similar goals. Three measures of personnel innovativeness were used in this research:
(a) a temporal measure, based upon the number of months that had passed from the date of the decision to adopt the change to the date the survey was mailed. Those cities which had adopted the changes long ago are, therefore, considered more innovative than those adopting the changes only recently;

(b) a commitment measure, based on the respondents' stated level of innovation implementation on a ten-point scale. Cities which report the implementation of a change at a high level are considered more innovative than those not fully utilizing a change; and

(c) a combined measure, representing the overall innovativeness of the personnel office. The combined measure is derived by multiplying the temporal and commitment measures together.

These three measures of innovativeness were correlated with four general classes of independent variables (community environment, organizational environment, organizational characteristics, and innovation characteristics) to determine whether cities and organizations with particular characteristics are more innovative than cities and organizations with the opposite characteristics (see list of independent variables in Chapter I). Data for these independent variable classes are drawn from the County-City Databook and the survey.

Univariate frequencies.—The data collected concerning the personnel offices have not been available heretofore, and were drawn exclusively from the mail survey (Table V). One of the more surprising findings concerns the length of time the cities have had a formal personnel office with at
least one full-time staff member. According to the survey, the median age for all offices is only 9.6 years. Therefore, over one-half of the cities surveyed did not even have a personnel office prior to 1970. Most of the offices are still rather small; almost one-third have only one full-time staff member.

Equally surprising is the number of years the personnel director has held that position; among those directors surveyed, their median tenure is only 2.8 years. Possible explanations for this rapid turnover include the disparity in compensation between personnel administration in the public and private sectors and the advancement of directors to higher positions in city management. Most directors are fairly young (median age of 37.2 years) and well educated (nearly 60 per cent have had some graduate training).

The innovations themselves were at various stages of diffusion at the time of the survey in October of 1979, although most had been adopted by 50 to 60 per cent of the cities within the previous three years (Tables VI through XV). The lack of any consistent relationship between the speed or extent of adoption measures of innovativeness justifies the use of multiple innovativeness measures. Apparently, cities adopting innovations quickly do not necessarily implement them to the fullest.

Correlational analysis.--Correlation coefficients (Pearson's r) were computed between the four classes of
independent variables and the three measures of innovativeness for each of the ten personnel innovations. This type of analysis is designed to indicate whether the two sets of variable operationalizations are at all related and provides a preliminary test of the hypotheses presented in Chapter II.

Unfortunately, the coefficients produced are generally very weak; only a small percentage are over the 0.25 level (Table XVIII). The innovation most consistently and sizably related to the independent variables is test validation, with city and organizational size, age of the personnel department, and perception of a governmental mandate as its strongest correlates. The independent variables that seem to be most strongly associated with all the innovativeness measures are the age of the city's personnel office and the perceived radicalness and mandate of the change. These three variables account for over 40 per cent of the correlation coefficients over 0.25. Holding constant other potential influences does little to upset these zero-order relationships.

Although the size of the correlation coefficients indicates a lack of strong association between the independent and dependent variables, examination of the signs of the coefficients allows the researcher to determine whether the expected directions of the relationships are borne out by the data. The results indicate support for some of the
hypotheses in Chapter II and lack of support for others (Table XVII). Several independent variables evidence a consistent relationship with the innovativeness constructs across at least seven of the ten innovations and across all measures of innovativeness: city government and personnel department size, the quality of federal and state contacts, horizontal intergovernmental contact frequency, city government wealth, reformed structure of city government, measures of organizational age, departmental professionalism, rewarding change incentive system, and the perceived cost and radicalness of the innovation. Two variables (departmental specialization and formalism) behave opposite of what was expected on the basis of prior research. Apparently, personnel departments with few specialized functions and many rules are most innovative, although the relationships are very weak.

Table XIX presents a summary of the hypotheses and findings for this section of the research. As one can see, most hypothesized directions are borne out by the data, but only a few relationships are supported in terms of both the consistency and strength of the associations. Those variables which are consistently related to innovativeness in all operationalizations and evidence at least one strong coefficient (over 0.25) are measures of intergovernmental contact frequency, size of city government, wealth of city government, reformed structure of city government, size and
age of the personnel department, and the perceived radicalness of the innovation.

Despite these few associations, the correlational analysis may be summarized as follows: characteristics of communities and organizations as measured here do not appear to be significantly associated with measures of personnel innovativeness. At least two possible reasons for this lack of association may be advanced. First, it may be that the results are genuine; no particular pattern of adoption exists in the adoption of personnel innovations by municipal governments. Although certain tendencies are revealed by moderately strong or somewhat consistent relationships, no one type of city or organizational arrangement appears more innovative than others when considering the adoption of those personnel innovations. This conclusion seems substantiated by the interview data in Chapter V.

Second, the lack of independent-dependent variable relations may be due to a number of methodological flaws, the most likely of which is poor concept operationalization. Organizational slack resources could possibly be measured in better ways; the degree of specialization in an organization is probably more than the number of job titles in the department. However, the operationalizations are similar to those used in prior research and are believed to represent the best indicators of the concepts available for empirical survey research. All such operationalizations of broad
theoretical concepts are inevitably unsatisfying, but as Babbie (1, p. 133) aptly states, "the researcher can never make accurate measurements, only useful ones." It is believed that these indicators tap at least a portion of the constructs they represent and, therefore, are probably not the primary cause of the instability evidenced.

Regression analysis.—In addition to discovering factors which covary with the measures of innovativeness, the research attempted to determine the factors which produce variations in municipal personnel innovativeness. The number of independent variables was reduced from over sixty to eighteen through factor analysis (Table XX) and partial beta coefficients were computed between these indicators and the measures of innovativeness for each of the ten innovations (Tables XXI through XXX). Again, however, the overriding characteristic of the betas is their lack of strength; coefficients of determination ($R^2$) for each of the changes never exceed 0.50, indicating that over 50 percent of the variance is unexplained by all the predictor variables in combination. In some cases the amount of unexplained variance is as much as 85 percent. Therefore, the general conclusion drawn from this section of the research is that the speed of innovation adoption and extent of implementation are not affected by any of what are believed to be the most important independent variables.
Some of the variables do, however, appear to be more important than others in producing variations in the measures of innovativeness. Innovation "radicalness" evidences at least a 0.25 level of association in twelve of the thirty innovativeness measures across eight of the ten innovations considered. The tenure of the personnel director is positively related to the speed and extent of adoption in all ten innovations, and is strongly related (over 0.25 beta) in seven of the innovativeness measures. City size and the perception of the innovation mandate similarly affect personnel innovativeness.

**Innovation Diffusion**

Rate and extent of adoption.--Diffusion is defined as the "rate and extent of acceptance and use of innovations among a class of adopters and the process(es) by which individual adopters interact with other change agents" (8, p. 2). The first part of this definition (the rate and extent of innovation adoption) is analysed by using graphs of the adoption of each change (Figures 4 through 13). The data indicate that none of the ten personnel innovations evidence the "S"-shape diffusion curve common in prior research on technological innovations (Figure 3). Two possible reasons for this aberration seem plausible. First, it may be that the incomplete diffusion of these changes prevents the "S"-shape pattern from appearing. Conduct of
the research at a later date may reveal a leveling off of the cumulative number of cities adopting each change. Alternatively, the adoption of policy innovations may genuinely not conform to the pattern established for hardware innovations. Policy changes may be adopted at a more constant rate, without the periods of trial and waning interest common in other areas.

A second point of interest in these graphs is the marked increase in adoption of these personnel changes in or around 1971 and 1972, or about 100 months prior to the date the survey was mailed. In some innovations the rate of adoption takes an especially rapid jump, particularly supervisory training (Figure 9) and affirmative action plans (Figure 12). Although it is impossible to determine why these increases in the adoption rates occur, likely causes include: (a) passage of the 1972 Equal Employment Opportunity Act, which made state and local governments subject to the provisions of Title VII of the 1964 Civil Rights Act for the first time; (b) issuance of federal guidelines on employee selection and promotion by the Equal Employment Opportunity Commission in 1970; (c) the landmark Supreme Court decision in *Griggs v Duke Power Company* (401 US 424) in 1971, which required valid and job related selection devices be used; and (d) the development of the sixth Model Public Personnel Administration Law in 1970 by
the National Civil Service League, which included several of the innovations focused upon in this research.

Sources of information.--In order to determine the "process[es] by which individual adopters interact with other change agents," personnel directors were asked to rate each of seven potential sources of personnel information. The results indicate federal, state and regional governments clearly are not preferred sources; their ratings are in some cases less than one-half of the ratings given to journals, professional meetings, other cities, and individuals in the director's own city (Table XXXI). Subsequent interviews revealed many directors believe federal agencies provide information which is of little value to municipal personnel administrators, state agencies are often unqualified to offer assistance, and councils of governments are either uninterested in personnel management or are too busy "justifying their own position" to provide useful information.

The directors' ratings of these possible points of innovation dissemination were correlated (Pearson's r) with the characteristics of the communities and organizations used in the previous section on personnel innovativeness to determine whether certain types of cities are more likely to use a particular innovation source. Again, however, the strength of the correlation coefficients were disappointingly
low. Of the over 400 coefficients examined only four exceeded the 0.25 level of association and none were over 0.30. Even if all independent variables are used together, over 80 per cent of the variance is unexplained. It appears, therefore, that the use of certain innovation sources is not peculiar to a particular type of adopter.

Analysis of the signs of the coefficients to determine the consistency of the direction of the relationships across operationalizations reveals that most of the relationships expected in Chapter II are disconfirmed (Table XXXII). For example, community wealth and education measures are negatively related to the use of journals across all operationalizations, although a positive relationship had been predicted. None of the independent variables are positively associated with all seven potential innovation sources.

A final approach in the analysis of innovation sources is the correlation of the source ratings with the cities' measures of personnel innovativeness. If the use of a particular innovation source is conducive to the adoption of any of the personnel changes, a high correlation coefficient should be evidenced. The data indicate, however, that this is not the case (Table XXXIII). The coefficients are extremely weak (only four over 0.25), leading one to conclude that the reported usage of any source of information has little association with the innovativeness of the personnel offices surveyed. Looking only at the direction of the
coefficients, though, one sees that the expected relationships are evident (Table XXXIV). Virtually all the source ratings are positively associated with the three measures of innovativeness across at least seven of the innovations considered. The lone exception among the sources is state agencies, indicating that contact with this source is not conducive to personnel innovation.

Innovation leaders.—Since one of the more highly rated innovation sources is other cities, an attempt was made to identify those cities which are consistently in the forefront of change. Innovation leaders are defined as cities which are in the top 10 per cent of potential adopters for five or more of the innovations. Seven cities fit those criteria: Columbus, Ohio; Galesburg, Illinois, Harlingen, Texas; Madison, Wisconsin; Milwaukee, Wisconsin, Port Arthur, Texas; and Stillwater, Oklahoma. Descriptive data concerning these cities reveal few common characteristics, although the tenure of the personnel directors does appear to be somewhat longer than the median for all cities (Table XXXV).

Although these cities are leaders in the sense of adopting and implementing the changes more rapidly and thoroughly than most, they are apparently not the predominate source of information for other cities. Personnel directors were asked to list particular cities they are likely to consult with about personnel changes. Only nine of the officials
in the 131 cities named any of the leader cities; virtually all the directors listed cities in their own state (88.9 per cent), and most (53.1 per cent) looked to cities their own size.

**The Process of Innovation Adoption**

The final analysis chapter investigated the intra-organizational processes which occur during adoption and the factors which both impede and encourage innovation adoption. Interviews were conducted with personnel directors or their equivalents in twenty-two cities in six states; they focused on three innovations: job performance selection techniques, performance evaluation-based compensation, and grievance procedure codification. A modified rational decision-making model (Figure 14) helps to structure the data gathering process since such a model encompasses many attributes of innovation models presented in the literature.

The interviews revealed that the adoption of most personnel policy changes is largely the result of the actions of the personnel director or the chief city executive (mayor or city manager). Although they are able to make minor "service improvement" modifications on their own, personnel managers reportedly must have the official or unofficial approval of the city manager or the city council before a final decision to adopt is made. Other actors may have to be incorporated into this process as well due to resistance from line supervisors and lower-level employees.
Generally, however, the model of innovation adoption used to structure the responses seems appropriate to describe the process which occurs. A variety of forces seem to affect that process along the way: in the early stages of adoption (need recognition and solution development), director and staff professionalism and the existence of outside assistance seem most important; in the final stages (solution development, decision to adopt-implement, and resistance) political and communication skills are crucial. Personnel directors also mentioned the priority personnel administration is accorded and the availability of economic resources as factors which affect virtually every phase of innovation adoption (Figure 15).

Finally, directors were asked to describe their experience with the Intergovernmental Personnel Act (IPA) programs administered by the Office of Personnel Management. In all, the directors are quite pleased with the program and its efforts to strengthen managerial capacity and encourage personnel change. The programs and services were highly praised, although certain phases of grant administration were criticized by some officials. Singled out for particular criticism is the process of routing grant funds through the governor's office in each state. It is believed that this process unduly politicizes the grant system and removes the priority setting process too far from the grant recipients.
Conclusions and Implications

This study began with the expressed purpose of contributing to the body of knowledge about the adoption and diffusion of policy innovations in order to both promote theory building and to offer practical advance to decision makers concerning how personnel innovations may be encouraged. The results of this effort indicate only mixed success in meeting those goals, however. For example, the data in Chapter III do not allow one to clearly determine "why some cities are more innovative than others," but do indicate certain factors which seem to produce moderate changes in the cities' levels of innovativeness. Large cities with long-tenured directors of personnel who view the changes as non-radical yet highly mandated by governmental authorities (particularly local government authorities) appear much more likely to have adopted these changes than cities with the opposite characteristics. Although the data in Chapter IV indicate personnel directors in the cities surveyed clearly favor one group of information sources (journals, meetings, other cities, and their own cities) over another group (federal agencies, state agencies, and councils of government), the strength of these ratings seem unrelated to either independent or dependent variables used in this research. Interviews with the directors revealed several common patterns in the intra-organizational adoption processes across the twenty-two cities visited, but
illustrate even more clearly the distinctly different sets of conditions faced by officials in each city.

These sometimes inconclusive results are not unique to this study; they echo the findings of several previous researchers. For example, Eveland, Rogers, and Klepper's (7) 1977 study of the innovation process in public organizations similarly found few relationships between standard independent variables and innovativeness measures. The authors attribute this lack of association to more diversity in the applications of particular innovations than is normally allowed for. . . . We generally found that organization-wide characteristics were not very helpful in understanding the innovation process. Usually the whole organization was not involved in the innovation process . . . , particularly at the first stages of the innovation process when many of the crucial specification decisions are made. Often one or a few individuals in the organization were directly involved with the innovation (7, p.

The authors believe that individual variables play a more important role in explaining decisions to adopt or "apply" a change than broader organizational or community-level indicators. Their findings are very similar to those of this research in that very few people are involved in the early stages of adoption (usually the city manager or mayor and the personnel director) and their attitudes and actions are considered crucial to this process.
Theories of Innovation and Organizational Decision Making

Despite the lack of strong associations in many parts of the analysis and the variety of adoption patterns evidenced, the data seem to indicate that the process of innovation in municipal personnel offices is a function of both rational decision making and political considerations. Personnel directors report that the process of innovation adoption is basically one of need recognition, development of alternative strategies to satisfy that need, selection of the best strategy from among the alternatives presented, and the implementation of that strategy. However, the directors are also quick to point out the limitations to rationality: lack of available time due to inadequate staffing, an inability to consider or even be aware of available strategies due to low professionalism, and a lack of goal consensus. It is in this last consideration—the achievement of goal consensus—that the political nature of their positions becomes obvious. Political leaders or higher administrative officials often must be convinced that the change will be in their interest as well as the interests of the organization as a whole before their approval is granted. Other individuals in the organization and the community must also be considered in order to implement a policy change. Since multiple goals are usually evident, the change promoter must recognize this situation and find
some way to come to terms with these potentially conflicting needs.

The literature of organization theory has long reflected the competition between political and rational models of decision making, with the former commonly viewed as a minor modification of the latter. Some authors, however, have concluded that a politically dominant model is more appropriate. In his discussion of organization theory in the Handbook of Political Science, Dennis J. Palumbo (15, p. 361) makes just such a contention:

Most of the assumptions of the pure theory of rational choice prove to be a bad fit for organizational behavior. Individuals in organizations are motivated by more than self interests; they are more likely to satisfice than maximize; organizations have more than one goal; choice involves a search for goals as well as means; it is seldom possible to find objective probabilities for the alternatives faced by the organization; feedback concerning decisions is likely to be vague and incorrect; and the cost of achieving consensus is a major part of most organizational decisions.

Organizations learn, adapt, compromise, and continually search for ways of legitimizing new goals, for their very lives depend on the successful quest for consensus on a set of goals. Decisions, therefore, frequently depend on the distribution of the changes in that vague quantity called power. Organizational behavior can be explained as well—if not better—by changes in power in organizations as by conscious attempts to achieve goals.

The innovation literature is also increasingly cognizant of the role of power or politics in the adoption of policy changes, particularly those changes which represent a radical departure from previous procedure. "Reorientations [radical innovations] do not fit into the existing political
system and tend to be rejected" (14, p. 205). By the same token, many existing procedures and policies will not be dropped because of political ties. Marz (13) cites the example of a United States Department of Agriculture program that would seem on the surface to be a prime target for extinction: the recipients are generally above median income, so the effect is regressive; the program has an extremely high cost per recipient; the program's activities are performed by other organizations in the local jurisdictions; and the goals of the program were completed twenty years ago. Despite these liabilities the program receives a yearly $600 million appropriation from national, state, and local governments. The recipient of this largess is the nation's 4-H Clubs, an unlikely target of budget cuts in even the most cost conscious of administrations. In the words of the author (13, p. 135),

motherhood may no longer be sacred to the American way of life, but the 4-H Clubs seem to me to be politically bulletproof. Indeed, were I advising a congressman I would think the FBI or the National Rifle Association would be a safer target.

A similar phenomenon seems to be occurring in some of the municipal governments studied in this research. Politically dangerous moves such as institution of performance-based compensation are sometimes not undertaken because of the political ramifications that may result. Adoption of this innovation also proved to be a political struggle in many cities having made this change. Several
directors pointed to resistance from employees, supervisors, and others during the adoption and implementation process. In one midwest community, a conflict erupted between the personnel director and the director of administration concerning the particular form the evaluations would take. After threatening to resign, the director was given greater autonomy to make needed changes. Similar phenomena are noted throughout the innovation literature (5, 9, 10, 11, 18, 20).

However, one must not denigrate the importance of administrative rationality in policy innovation. The impetus for innovation often arises when a key decision maker perceives the present situation in a particular policy area as unsatisfactory. Perception of this discrepancy between normative and empirical performance laws, sometimes referred to as a "performance gap," often generates the search for alternate courses of action. The perception of a performance gap is the theoretical basis of the rational choice model, and may be stimulated by the addition of new personnel, by exposure to the actions of others through education or direct contact, or as a result of a number of methods of professional development (5, pp. 171-173; 12, pp. 182-184).

In this research, many of the cities reportedly adopted these personnel innovations in just such a set of circumstances--i.e., immediately after the addition of a new
personnel director or city manager or as a result of the
director's contact with new ideas through professional
training. Virtually all these officials mentioned the need
for professional analytical skills in the adoption of
innovations. One director in Texas commented "before you
can adopt a new policy, you must first recognize that the
old policy is insufficient. That is where professional
training comes in." Evan (6) and Daft (4) assert these
professionals are crucial to the innovation process because
they span the boundary between the organization and their
technical environments, thus exposing them to both theoretical
and practical applications of innovations.

In summary, therefore, neither the political nor
radical models of decision making alone provide the theoret-
ical underpinnings needed to explain the adoption of policy
innovations by municipal governments. A synthesis of the
two approaches seems more appropriate, so long as one
recognizes that the political aspects of innovation become
more important as the radicalness of the changes increases.
The adoption of noncontroversial changes are best under-
stood in terms of the rational decision making process;
innovations which disrupt existing power relationships or
which affect large numbers of people are most appropriately
viewed as a political struggle. This combination of models
is very similar to what Pfiffner (16) refers to as
"administrative rationality," reconciling the best aspects
of the classical "means-ends" approach with the more politically-based behavioral method.

Policy Implications

Although the analysis in Chapter III failed to reveal strong associations between selected independent variables and the measures of innovativeness, the data do seem to suggest several considerations of potential relevance to policy makers interested in improving the diffusion of these personnel innovations in municipal government. For example, of the variables affecting the innovativeness constructs in the regression analysis, perceived innovation "radicalness," or the degree to which the change upsets existing policies and procedures, seems to have the most significant effect on adoption. In almost every case, the more radical the change is viewed by the director the less likely it is that the city will have adopted that change. As was noted in the previous section, major policy reorientations often generate considerable political opposition because they disturb established power relationships. Therefore, policy makers and implementors would do well to lessen the disruptive effects of each change as much as possible by stressing how the innovation fits into the existing framework and how to implement the change smoothly. Such considerations are fertile ground for future innovation research.
A related suggestion which seems plausible on the basis of the data in this research is that personnel directors should be given the authority to make minor policy modifications on their own. Directors with the authority to make such changes experienced much less difficulty during the adoption process than did officials who had to rely on the city manager or the council for approval. One key to this process may be the characterization of the change itself. Different directors viewed the same change quite differently; some saw test validation, for example, as an extremely radical change, while others viewed it as a minor modification of personnel policy. By describing the change to their superiors as a "service improvement option," directors are more likely to receive the authority to innovate and lessen the obstacles to adoption.

Another variable found to have a considerable effect on the innovativeness measures is the tenure of the personnel director. Generally, the more innovative cities have retained their personnel director for a longer period of time than have non-innovative communities. The reader may remember from Chapter III that the median tenure of all personnel directors is only 2.8 years, with over one-fourth of the directors on the job for less than one year. One is tempted to conclude, therefore, that cities should offer inducements to personnel directors such as competitive pay
and other rewards in order to achieve greater director stability and innovativeness.

However, directors in some of the most innovative cities often initiated policy changes immediately after reaching the director's office. The true relationship between personnel innovativeness and the tenure of the director may be more a function of the effect of innovativeness or tenure than of tenure or innovativeness. Personnel officials which have successfully implemented changes of the sort analyzed here often possess the skills and reputation of an effective administrator, and therefore insulate themselves from the political pressures described in Chapter V. Thus, while adequate pay and other inducements clearly promote the retention of qualified professionals, directors interested in solidifying their position may do well to establish themselves as professionals by enacting needed changes soon after entering their new jobs. Again, this area warrants further research.

This suggestion must be tempered somewhat by the first consideration--innovation radicalness. The director must recognize the existing power relationships in the organization before attempting change and must demonstrate to those power centers (administrative or political) that they will not be unduly affected by the proposed innovation. Several of the directors interviewed referred to their predecessors
as the stimulus for changes the city had enacted, a role for which they paid with their jobs. As Kelley (9, p. 66) notes, "the innovator is like Prometheus, and what happened to him is hardly encouraging."

In order for the director to make changes, he must be able to perceive these needs and to supply a preferred alternative. Both this research and the results of numerous other studies indicate the professionalism of key organizational members is crucial to need perception and innovation. All measures of director and departmental professionalism are positively related to innovation adoption in at least seven of the personnel changes (Table XV). Directors interviewed during the final portion of the research consistently referred to professional attitudes and skills as crucial to effective personnel administration. They also reported, however, that many of the directors they came in contact with have had little formal training in the discipline; one director said he was "embarrassed" by the quality of administrators present at professional meetings. Therefore, it seems prudent to recommend an accelerated educational and professional development program designed to encourage both the skills and the attitudes conducive to innovative personnel activity.

A final independent variable discovered relevant to innovation is the perception of a governmental imperative. In seven of the thirty dependent variables the "mandate"
beta coefficient exceeds 0.25. The most highly mandated innovation in the eyes of the directors is personnel office reorganization, not such expected items as affirmative action plans or test validation. The directors' ratings of the governmental requirement for this change are also strongly related to its adoption in those cities surveyed (beta = 0.49). Since reorganization mandates are usually the result of state or local government action, encouragement of such legislation could go far toward spurring personnel change. Effective innovation promoters should, therefore, remind local administrators of national policy goals and encourage local governmental bodies to reaffirm those goals through appropriate legislation. The greater salience of local mandates was also discovered by Feller and Menzel (8) in their study of municipal innovation.

Investigation of the process of diffusion in Chapter IV revealed that federal and state agencies and councils of governments are not preferred sources of information about personnel change. Federal agencies reportedly provide the wrong kind of information, state personnel agencies are often non-existant, and councils of governments are usually uninterested in personnel administration. Although other sources such as journals and professional meetings are rated more highly, many of the officials interviewed said "no one does a good job." The preferred means of information
dissemination, according to a number of directors, is through revitalized professional associations, preferably on the state-wide level. In most states, such organizations are either non-existant or have not played a significant role in channeling information about personnel changes to municipal officials. These groups could not only improve the flow of communication, but are also likely to create a stronger professional identity among municipal directors and departments.

Most of these recommendations are not new, but need to be made more emphatically than they have been in the past. Personnel administration plays an important role in municipal government, as over 80 per cent of some cities' budgets are allocated for human resources. Changes such as those outlined in this research are designed to improve the equity of those employment systems and to increase their productivity. An understanding of how those changes take place and what can be done to encourage them can go far toward achieving those ends.

Research Implications

In addition to the implications of this research in terms of policy and innovation theory, the data also seem to indicate several areas in need of future research. For example, innovation characteristics appear to play a more significant role in determining the innovativeness of the
personnel offices studied than any of the other three independent variable categories (community environment, organizational environment, and organizational characteristics). Future research might concentrate solely upon those attributes of innovations believed relevant to policy adoption, including several which were not included in this research. As was noted earlier, innovation characteristics are the independent variables most amenable to manipulation by policy makers, and can, therefore, play a major role in policy implementation.

Two of those characteristics which this research indicates are most important to rapid and extensive policy adoption are innovation "radicalness" and perceived governmental "mandate." Researchers interested in this area could investigate more closely what aspects of such policy changes make them more or less radical and whether local mandates, as suggested by this research, are more salient to policy implementors than national or state orders for compliance. More detailed information in these areas could add significantly to current knowledge about the adoption and implementation of public policies.

Research is also needed with regard to the politics of innovation adoption. Kelley (9) and others have hypothesized that elites in both public and private organizations must be convinced that proposed changes are not threatening to their status and do not challenge the existing value system before
giving their approval. This research has reached a similar conclusion, as many of the directors reportedly did not adopt some changes because of stiff opposition or were able to adopt them only because their superiors were convinced that the change would be in their interest. Data collection in this type of analysis might focus upon identification of those elites, the nature of their value system, and means by which they may be convinced or, to use Kelley's term, "seduced" in order to accept the change.

Were this study of personnel innovation in municipal government to be replicated, several changes of both technique and subject matter are suggested. First of all, the use of macro-level quantitative analysis methods seem to provide little definitive information concerning the adoption of innovation, and probably should be discontinued until better conceptual operationalizations are developed. Two areas in which better measurements clearly are needed are slack resources and performance gaps. A more in-depth, case-study approach is recommended until those methodological improvements are made. Second, the researcher should focus attention upon the two primary actors in this process--the personnel director and the chief executive (city manager or mayor). In virtually every instance, these two individuals acted as the motivating force behind the innovations, perceiving the need for each change, developing solutions, and adeptly implementing the change once formally
adopted. More information is needed concerning their educational backgrounds, post-entry training, and attitudes toward their profession and change in general.

While these recommendations hardly encompass all possible topics for future research, they do comprise several of what this study indicates are the most promising avenues for subsequent analysis. Organizational and policy innovation studies can have significant payoffs in terms of both theory and practice, and should be encouraged as much as possible.
CHAPTER BIBLIOGRAPHY


APPENDICES
APPENDIX A

DESCRIPTIONS OF INNOVATIONS

Innovation 1: Test Validation

Test validity, as used here, refers to the ability of a selection device to accurately measure what it purports to measure. Attributes believed relevant to proper job performance are delineated, usually through a process known as job analysis, and employees' test scores and job evaluations based upon those constructs are compared to determine whether the expected congruence is evidenced. If the test is valid, high scorers on the test should be highly evaluated and low scorers should perform more poorly. Test validation provides guidance to the hiring unit about what interpretations or inferences may be made about test scores.

The issues of test validity and job relatedness have become particularly important to municipal personnel management since the 1971 Supreme Court decision in Griggs v Duke Power Company and the extension of Title VII of the Civil Rights Act of 1964 to "governments," "governmental agencies," and "political subdivisions" by the Equal Employment Opportunity Act of 1972. In Griggs, the Court ruled that a test is illegal if it has an adverse effect upon any protected subgroup (race, color, sex, religion, or national origin)
and if validity has not been proven. Adverse impact may be demonstrated by one of several methods: comparison of rejection rates of one subgroup with another (e.g., whites compared to blacks); comparison of subgroup representativeness in the employer's organization with the subgroups' percentage of the total population of the jurisdiction; comparison of the employer's hiring totals of that subgroup with similar employees; or proof that the hiring policy effectively restricted or excluded employment of the subgroup's members. Lack of intent to discriminate is not a justifiable defense, for the impact of discrimination is the key. Neither is the requirement of validity confined to written tests; all selection devices must be proven valid if adverse impact is indicated.

If a test has an adverse impact upon a subgroup, validity may be demonstrated in one of three ways: criterion-related validation, content validation, or construct validation. While a complete recitation of the methods in each technique is impossible here, it should be noted that the latter methods are somewhat easier to conduct but are usually considered less reliable measures of validity. Criterion validation involves matching pre- and post-employment scores of a large group of applicants, and requires a fairly high level of technical expertise. Not all hiring units have the expertise on staff needed to conduct such analyses or can afford to have others validate their tests. In 1978, the
Equal Employment Opportunity Coordinating Council (EEOCC), composed of representatives from the Equal Employment Opportunity Commission, the Civil Service Commission (now Office of Personnel Management), the Department of Justice, the Department of Labor, and the Commission on Civil Rights, issued their "Uniform Guidelines on Employee Selection Procedures" intended to guide both public and private agencies in the validation of their selection procedures. Lack of compliance with these guidelines could result in expensive lawsuits.

Innovation 2: Use of Actual or Simulated Job Performance in Selection

Closely related to the validity of a selection device is the test's relationship to the job for which it is designed. For example, in the case of Griggs v Duke Power Company, the Court ruled that the use of an intelligence test as a selection device for the job of shoveling coal had a discriminatory impact and was invalid. The test was not reasonably related to the job requirements. A better selection method might have been the use of a performance test, in which the applicants would be evaluated on the basis of how well they shoveled coal.

Job simulations are not uncommon in training programs for a variety of job skills, but are a relatively recent phenomenon in selection and promotion for all but highly skilled jobs. By including the tools of the trade and
observing actual working situations, the applicants' true abilities are more accurately gauged and potentially disruptive anxiety levels often reduced. Performance tests are also believed to be not only valid in terms of prediction of subsequent job performance, but are also more "face-valid." Face-validity refers to the degree to which a selection device appears to be related to the job in question. An applicant may resent taking a test which is apparently unrelated to the occupational requirements, and that antagonism may affect its eventual utility as a selection tool. Performance tests may be used to predict not only job performance, but also trainability.

Although their applicability has in the past been rather limited (predominately trade and clerical occupations), they have also been shown to be valid in predominately verbal and mental occupations as well. One of the more popular manifestations of these exams in this area is the "in-basket" test of managerial performance, which has proven its value in many test situations. The increasing use of "assessment centers," an institutionalization of simulated performance testing, is also an indication of their spreading popularity.

Innovation 3: Critical Behavior Based Performance Evaluations

A necessary part of any competent system of personnel management is the use of sound performance evaluation
techniques. For example, test validation is impossible unless pre-employment test scores can be compared to an accurate indicator of job performance. Performance evaluations are also useful to determine whether an employee should be retained beyond the probationary period, in promotional decisions, in the assignment of duties among employees, and in compensation decisions.

Several basic modes of performance evaluations are available to the operating unit, most of which provide highly questionable data. Production records, such as quantity and quality of work performed, may be useful in some occupations, but are inadequate in most due to the lack of quantifiable job aspects. Even where applicable, their use is criticized as unrealistic and subject to external considerations. Personnel data, such as absenteeism, training time, and rate of advancement are similarly denounced as impractical and inadequate for a variety of job areas. Judgements of others are by far the most common means of evaluating performance, but are also criticized due to the variability of ratings and the common use of such obviously vague terms as "judgement" or "maturity."

One means by which these problems may be eliminated is the use of critical incidents derived from the job analysis. Critical incidents are those aspects of the job believed crucial to its effective performance. The superior is provided with a list of these major performance requirements
upon which the employee's evaluation is to be based, thereby assuring not only that important and valid measures are used, but that the rating scales are the same for all such positions. It is also useful in facilitating employee consultations, as the subjects of the discussions are often jointly decided upon by employees and managers during the job analysis. Use of critical behavior based job performance evaluations can help bring about not only more accurate assessment of employee ability, but can also serve as the guide for performance improvement.

Innovation 4: Performance Evaluation Based Compensation Decisions

One of the more sensitive areas of personnel management is the assignment of rates of pay, merit raises or other areas of compensation policy. Most public sector compensation plans have been "merit" based in name only, with raises often given across the board for a pay classification without regard to individual performance levels. However, there is an increasingly persistent call by personnel specialists to link the use of performance evaluations to compensation packages.

Proponents suggest that employees should be rewarded for high performance, in some cases even to the exclusion of all other factors. Wage increases can be used to motivate employee productivity and may also prove beneficial in boosting of worker morale. Assumptions such as these
underlay the federal pay reforms enacted by Congress in 1978, in which pay is linked to performance for persons in the Senior Executive Service and no later than October 1, 1981, a similar system is to be used for GS 13, 14, and 15 positions.

Linking performance evaluations to compensation decisions is also believed to further the true merit principle. Important personnel decisions should be based on objective measures of worker performance instead of making those decisions based upon political allegiances and cronyism. Such a system may similarly provide a strong impetus for employee development, as employees are more likely to take heed of supervisors' suggestions in counseling sessions if they know that their adherence to these suggestions will be reflected in their paychecks. Employees may also play a crucial role in the determination of the aspects of their job performance that will be evaluated, thereby improving their morale. Although seemingly an obvious means of compensating employees, implementation of this change may meet with stiff opposition from employees accustomed to the traditional "merit" approach.

Innovation 5: Codification of Employee Grievance Procedures

An employee "grievance" may take on any number of definitions depending upon the characteristics of an agency's employees, particularly their degree of union activities.
A grievance may be limited to the interpretation, application, and enforcement of the provisions of a collective bargaining agreement, or may be extended to include any complaint concerning the application of agency rules and policies involving working conditions. It may even include any wrong felt by the employee.

Although not all problems which inevitably arise in an organization can be resolved through a formal set of procedures for grievance adjudication, most personnel experts agree that some such procedure of adjustment is absolutely essential to an effective and harmonious entity. Simply complaining to one's supervisor has decided limitations, particularly if the supervisor is the subject of the complaint. Codification of grievance procedures can also provide significant advantages to managers as well. Many complainants decide the solution to their problem can be most effectively resolved in the upper reaches of the organization, and therefore deluge the manager with grievances both large and small.

Grievance procedures may be adopted by management alone (particularly in organizations without collective bargaining) or may be negotiated with appropriate unions. There is usually no single pattern in either approach, but most delineate a series of steps which must be followed in the filing of a grievance. Hearings may be provided at various stages of the procedure and arbitration by some presumably
neutral third party is often the final step. Grievance procedure codification is believed by most observers to be a necessary step toward improved labor-management relations.

Innovation 6: Supervisory Training

A great deal of a public manager's task is simply to try to keep abreast of developments in their rapidly changing profession. This goal can be achieved only as a result of extensive post-entry training provided or encouraged by organizational policy. Training may be conducted by either staff members within the organization (usually only larger organizations can accomplish this) or by professional training entities recruited from private sources, universities, or other governmental units.

One of the primary ends of training is performance improvement. Respondents in this research survey were asked if training was provided in such areas as "general management practices, equal employment opportunity, or collective bargaining," three areas most commonly the subject of training efforts in modern public administration. Management training probably takes on a larger number of forms than any other form of training, although the main emphasis is usually on the employee's role as a leader and how he can effectively motivate employees. Equal employment opportunity and labor relations training include many topics, such as
selection, promotion, supervision, grievance procedures, and contract negotiations.

Training may also be used to broaden staff usefulness, to orient new managers to their environment, and to develop top leadership candidates. Its incorporation into the organization as a standard operating procedure reflects a desire by the organization to keep abreast of current affairs (flexibility) while evidencing a concern for its own well-being (internal consistency).

Innovation 7: Affirmative Action Recruitment

Affirmative action recruitment refers to the use of "outreach recruitment" methods targeted toward disadvantaged applicant populations. An outgrowth of the broader equal employment opportunity movement, affirmative action recruitment represents a departure in many ways from earlier methods of attracting applicants to the public service. In the past, recruiters often did not visit many black schools or neighborhoods, or may have relied on "word-of-mouth" job publication by their current (all-white) employees in their drives for new organizational members. The result in either case was the same; an extreme disparity in the applicant pool and the maintenance of the existing racial balance among employees.

Today, credible public employers go beyond passive and discriminatory recruitment methods to actively seek out
competent minority and disadvantaged populations, utilizing such methods as public speaking campaigns, minority-oriented media, and contacts with organizations with a close association to the minority community. Implementation of affirmative action recruitment methods signals the community and the profession that the organization has recognized the need to draw skilled public employees from all segments of society.

Innovation 8: Employee Surveys

In order for an organization to successfully adapt to its changing environment, it must be in a position to properly diagnose its existing problems and also to foresee potential roadblocks to healthy growth. Part of that environmental scan must focus upon the human resources of the enterprise. Managers have three basic modes of accomplishing that task. First, they may rely upon their own perceptions of the problem or those of other managers in the firm and adopt training and growth strategies based upon those (subjective) premises. Alternatively, the manager may solicit a fresh outlook by bringing in an external consultant trained to recognize organizational "diseases" and to apply the proper remedy. Although often a viable method, the consultant may not have the depth of understanding necessary to view the problems of the organization in terms of its particular history, and may simply prescribe a remedy which was
successful in a similar circumstance. Unfortunately, solutions are generally not that transferable. A third, and by many accounts a more viable diagnostic and problem-solving technique, is the use of survey methods—i.e., simply asking employees to relate their problems and their suggestions in a systematic fashion.

Consideration of the opinions of line workers and managers is basically an outgrowth of the humanistic school of management, and represents a dramatic break with classical supervisory thinking. Surveys may be used to improve accepted personnel policies, attract more qualified personnel, reduce dysfunctional turnover, reduce organizational tension, rate managerial and organizational effectiveness, avoid grievance, and aid empirical research on organizational performance. Other means are also available to accomplish these ends, but surveys are generally more efficient and accurate. They can be employed with a minimum of employee resistance, allow extensive coverage of the workforce in the shortest available time, and can facilitate unfettered upward communication.

Innovation 9: Affirmative Action Plan

Closely related to the minority/disadvantaged recruitment methods, an affirmative action plan represents a broader, proactive antidiscrimination effort. Affirmative action recruitment is often part of the larger plan.
Although the particular format of the plans vary with virtually each organization, they have a common overall design. After a general policy statement of their commitment to the program, they proceed to both identify existing problems, possible causes, and means of implementation. For example, the problem may be that there are too many blacks and hispanics in the lower reaches of the organization and too few in the firm's leadership positions. The cause may be a lack of employee development programs and an overemphasis on educational credentials for management employees. Solutions entail wholesale restructuring of traditional personnel functions.

Affirmative action plans often include goals and timetables for the employment of minority groups or disadvantaged persons. A great deal of controversy has arisen concerning the use of goals as quotas, so a brief word is necessary to clarify this situation. The Equal Employment Opportunity Coordinating Council (EEOCC) has defined a quota as a fixed, mandatory numerical criteria of hires and promotions which must be met regardless of the extenuating circumstances surrounding the organization. A goal, on the other hand, is a numerical objective which is striven for in good faith, but is not a standard under which sanctions are imposed if not met. Unfortunately, goals often have a way of becoming quotas, as was illustrated in Regents of the University of California v Bakke (98 S.Ct. 2733, 1978). By the narrowest
of margins (five to four), the Court ruled that the number of slots in the Davis Medical School set aside for minorities had the effect of discriminating against whites. While rejecting quotas, the Court did agree in a new majority of five to four that race can be taken into account to ensure that minorities are admitted. Although this case involved admission to medical school, the implications also concern virtually all public and private organizations. Affirmative action plans are clearly one area of personnel policy sure to generate much controversy in the future.

Innovation 10: Civil Service Commission/Personnel Department Reorganization

The final innovation, a personnel system reorganization, is less a functional change than any of the other innovations, but has major ramifications for all personnel operations. In most larger cities, human resource management is handled by two very distinct offices: an independent civil service commission and the staff personnel office. Civil service commissions are an outgrowth of the honest in government campaigns of the late-nineteenth and early-twentieth centuries when corruption and patronage were commonplace in municipal governments. Commissioners are usually appointed by the mayor or chief executive from a set list of names for long terms of office (usually six years), and are protected against undue dismissal. Their duties often extend to a
wide range of personnel functions, particularly certification of those eligible to compete for appointments and promotions, holding examinations, and certification of the three to five names from which the eventual employee is selected. They also serve as an appeals board in grievance proceedings, the results of which may sometimes be appealed to the courts.

Staffed by amateurs in the field of personnel management, professionals often view commissions as vestiges of a by-gone era and a hindrance to effective administration. Staff departments are believed to be much more in keeping with the need of the local government to give the chief executive authority equal to their responsibility and accountability. In the 1970 edition of the National Civil Service League's "Model Public Personnel Administration Law," a strong recommendation is made to divert much of the commission's power to the staff department, with the commission retaining its watchdog and appeals function only. Possible hindrances to this innovation include the commissioners themselves and state laws which sometimes prescribe the duties of the review board.
APPENDIX B

SAMPLE OF SURVEY USED IN DATA COLLECTION

This survey should be completed by the city's personnel director or their equivalent. All responses will be kept confidential. The numbers and boxes beside each question should be ignored, as they are only to assist the processing of your answers.

Name of City/State

PART ONE: Personnel Changes

The following are ten important changes in the field of public personnel management within the past fifteen years. For each item, please note whether your city has made that change and if so, the approximate date of adoption and extent of implementation. Please answer the subsequent questions regarding each change (2-7) whether your city has adopted the change or not, based upon your perception of the change. Partial adoption may be indicated in your answer to question 1b. Where rating scales are provided, please circle the appropriate number.

I. VALIDATION OF EMPLOYMENT TESTS TO DETERMINE WHETHER THEY PREDICT JOB PERFORMANCE.

1. Has a decision been made to adopt the change or is the change in effect?

   ( ) YES
   ( ) NO

   If yes:

   a. Approximate date of decision to adopt the change?

   (Month/Year)

   b. At what point along the following continuum would you place your city's implementation of the change?

   0 1 2 3 4 5 6 7 8 9 10

2. How costly is the change to adopt and implement?

   0 1 2 3 4 5 6 7 8 9 10

   Very inexpensive

   Very expensive

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

   0 1 2 3 4 5 6 7 8 9 10

   Not disruptive

   Highly disruptive

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

   0 1 2 3 4 5 6 7 8 9 10

   Cannot be tried

   Easily tried

5. To what extent does the change represent an improvement over previous personnel procedure?

   0 1 2 3 4 5 6 7 8 9 10

   No Improvement

   Great Improvement
6. How visible is the change to the public when implemented?

0 1 2 3 4 5 6 7 8 9 10
Not visible High visibility

7. To what extent is the change mandated by federal, state, or local policy-making bodies?

0 1 2 3 4 5 6 7 8 9 10
No mandate Mandated

II. SELECTION OF EMPLOYEES BASED UPON ACTUAL OR SIMULATED JOB PERFORMANCE.

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES ( ) NO
If yes, how visible?

a. Approximate date of decision to adopt the change?

( ) YES ( ) NO
b. At what point on the following continuum would you place your city's implementation of the change?

0 1 2 3 4 5 6 7 8 9 10
No employees so selected All employees so selected

2. How costly is the change to adopt and implement?

0 1 2 3 4 5 6 7 8 9 10
Very inexpensive Very expensive

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

0 1 2 3 4 5 6 7 8 9 10
Not disruptive Highly disruptive

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

0 1 2 3 4 5 6 7 8 9 10
Cannot be tried Very easily tried

5. To what extent does the change represent an improvement over previous personnel procedure?

0 1 2 3 4 5 6 7 8 9 10
No improvement Great improvement
6. How visible is the change to the public when implemented?

Not visible | Highly visible
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

7. To what extent is the change mandated by federal, state, or local policy-making bodies?

No mandate | Mandated
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

III. ASSESSMENT OF JOB PERFORMANCE BASED UPON CRITICAL JOB-RELATED BEHAVIORS RATHER THAN GENERAL PERSONALITY TRAITS SUCH AS "JUDGEMENT" OR MATURITY.

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES  If yes:

(a) Approximate date of decision to adopt the change?

(Month/Year)

(b) At what point on the following continuum would you place city's implementation of the change?

Critical behaviors never used | Critical behaviors always used
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

2. How costly is the change to adopt and implement?

Very inexpensive | Very expensive
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

Not disruptive | Highly disruptive
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

Cannot be tried | Very easily tried
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

5. To what extent does the change represent an improvement over previous personnel procedure?

No improvement | Great improvement
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10
IV. USE OF PERFORMANCE EVALUATIONS AS THE PRIMARY BASIS FOR COMPENSATION DECISIONS.

1. Has a decision been made to adopt the change or is the change in effect?
   ( ) YES  ( ) NO
   If yes:
   a. Approximate date of decision to adopt the change?
      (Month/Year)
   b. At what point on the following continuum would you place your city's implementation of the change?
      0 4 8 10
      Evaluations  Evaluations
      never used  always used

2. How costly is the change to adopt and implement?
   0 1 2 3 4 5 6 7 8 9 10
   Very inexpensive  Very expensive

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?
   0 1 2 3 4 5 6 7 8 9 10
   Not disruptive  Highly disruptive

4. How easily can the change be tried and demonstrated on a small scale before its final adoption and implementation?
   0 1 2 3 4 5 6 7 8 9 10
   Cannot be tried  Very easily tried

5. To what extent does the change represent an improvement over previous personnel procedure?
   0 1 2 3 4 5 6 7 8 9 10
   No improvement  Great improvement
6. How visible is the change to the public when implemented? 

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7. To what extent is the change mandated by federal, state, or local policy-making bodies? 

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V. CODIFICATION OF EMPLOYEE GRIEVANCE PROCEDURES TO SETTLE INDIVIDUAL OR CONTRACTUAL DISPUTES.

1. Has a decision been made to adopt the change or is the change in effect? 

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If yes: 

a. Approximate date of decision to adopt the change? (Month/Year) 

b. At what point along the following continuum would you place your city's implementation of the change? 

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<tr>
<td></td>
<td>None codified</td>
<td>All codified</td>
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2. How costly is the change to adopt and implement? 

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<td>Very inexpensive</td>
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3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities? 

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4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation? 

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5. To what extent does the change represent an improvement over previous personnel procedure? 

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VI. REGULAR PROVISION OF TRAINING OR LEAVE-TIME FOR TRAINING FOR MUNICIPAL SUPERVISORS IN SUCH AREAS AS GENERAL MANAGEMENT PRACTICES, EQUAL EMPLOYMENT OPPORTUNITY, OR COLLECTIVE BARGAINING.

1. Has a decision been made to adopt the change or is the change in effect?
   ( ) YES     If yes:
   ( ) NO
   a. Approximate date of decision to adopt the change?
   (Month/Year)
   b. At what point along the following continuum would you place your city's implementation of the change?
   0  1  2  3  4  5  6  7  8  9  10
   No training provided  All supervisors so trained

2. How costly is the change to adopt and implement?
   0  1  2  3  4  5  6  7  8  9  10
   Very inexpensive  Very expensive

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?
   0  1  2  3  4  5  6  7  8  9  10
   Not disruptive  Highly disruptive

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?
   0  1  2  3  4  5  6  7  8  9  10
   Cannot be tried  Very easily tried
5. To what extent does the change represent an improvement over previous personnel procedure?

0 1 2 3 4 5 6 7 8 9 10
No improvement Great improvement

6. How visible is the change to the public when implemented?

0 1 2 3 4 5 6 7 8 9 10
Not visible Highly visible

7. To what extent is the change mandated by federal, state, or local policy-making bodies?

0 1 2 3 4 5 6 7 8 9 10
No mandate Mandated

VII. USE OF AFFIRMATIVE ACTION RECRUITMENT TECHNIQUES (I.E., FOCUSING RECRUITMENT EFFORTS ON DISADVANTAGED POPULATIONS).

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES If yes:

( ) NO a. Approximate date of decision to adopt the change?

(Month/Year)

b. At what point along the following continuum would you place your city's implementation of the change?

0 1 2 3 4 5 6 7 8 9 10
No use of Total use of such techniques such techniques

2. How costly is the change to adopt and implement?

0 1 2 3 4 5 6 7 8 9 10
Very inexpensive Very expensive

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

0 1 2 3 4 5 6 7 8 9 10
Not disruptive Highly disruptive

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

0 1 2 3 4 5 6 7 8 9 10
Cannot be tried Very easily tried
5. To what extent does the change represent an improvement over previous personnel procedure?

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6. How visible is the change to the public when implemented?

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7. To what extent is the change mandated by federal, state, or local policy-making bodies?

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VIII. PERIODIC EMPLOYEE SURVEYS TO DETERMINE MORALE AND TO DERIVE SUGGESTED MANAGERIAL/TECHNICAL IMPROVEMENTS.

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES  If yes:

   ( ) NO  a. Approximate date of decision to adopt the change?

   (Month/Year)

   b. At what point along the following continuum would you place your city's implementation of the change?

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<td></td>
<td>No surveys conducted</td>
<td>Regular surveys for all employees</td>
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2. How costly is the change to adopt and implement?

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<td>Very inexpensive</td>
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3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

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4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

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<tr>
<td></td>
<td>Cannot be tried</td>
<td>Very easily tried</td>
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5. To what extent does the change represent an improvement over previous personnel procedure?

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<tr>
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<td>No improvement</td>
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6. How visible is the change to the public when implemented?

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7. To what extent is the change mandated by federal, state, or local policy-making bodies?

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IX. ESTABLISHMENT OF A WRITTEN AND PUBLICIZED AFFIRMATIVE ACTION PLAN BASED UPON STUDIES OF THE CURRENT AND POTENTIAL WORKFORCE.

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES If yes:

( ) NO a. Approximate date of decision to adopt the change?

b. At what point along the following continuum would you place your city's implementation of the change?

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2. How costly is the change to adopt and implement?

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3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

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4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

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<td>Cannot be tried</td>
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5. To what extent does the change represent an improvement over previous personnel procedure?

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<td>No improvement</td>
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<td>Great improvement</td>
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6. How visible is the change to the public when implemented?

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7. To what extent is the change mandated by federal, state, or local policy-making bodies?

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X. REORGANIZATION OF PERSONNEL FUNCTIONS INTO COMMISSION (WATCHDOG AND APPEALS ONLY) AND PERSONNEL OFFICE (ALL OTHER FUNCTIONS).

1. Has a decision been made to adopt the change or is the change in effect?

( ) YES  If yes:

( ) NO  a. Approximate date of decision to adopt the change?

____________________  (Month/Year)

b. At what point along the following continuum would you place your city's implementation of the change?

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<tbody>
<tr>
<td>Functions performed by commission</td>
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<tr>
<td>Functions performed by department</td>
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</table>

2. How costly is the change to adopt and implement?

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<th>7</th>
<th>8</th>
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<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very inexpensive</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Very expensive</td>
</tr>
</tbody>
</table>

3. To what extent is the change "radical" in the sense that it disrupts organizational structures and procedures, requiring a change in activities?

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<tr>
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<th>7</th>
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<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not disruptive</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Highly disruptive</td>
</tr>
</tbody>
</table>

4. How easily can the change be tried or demonstrated on a small scale before its final adoption and implementation?

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<tr>
<th></th>
<th>0</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot be tried</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very easily tried</td>
</tr>
</tbody>
</table>
5. To what extent does the change represent an improvement over previous personnel procedure?

[ ] 0 1 2 3 4 5 6 7 8 9 10
No improvement  Great improvement

6. How visible is the change to the public when implemented?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Not visible  Highly visible

7. To what extent is the change mandated by federal, state, or local policy-making bodies?

[ ] 0 1 2 3 4 5 6 7 8 9 10
No mandate  Mandated

PART TWO: Personnel Organization

We would like to know something about the organization within which you work. Your answers should refer only to the characteristics of the personnel department and not the city government as a whole, except where so specified. Where rating scales are provided, please circle the appropriate number.

1. To what extent do written rules and procedures guide work activity?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Very little  Great extent

2. To what extent are employees watched to ensure they obey rules?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Very little  Great extent

3. To what extent are staff members allowed to participate in decisions concerning the adoption of new policies and other significant decisions?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Very little  Great extent

4. To what extent is supervisory approval needed before employees are expected to act?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Very little  Great extent

5. To what extent are personnel functions carried out by separate departments as opposed to centralized in the personnel department?

[ ] 0 1 2 3 4 5 6 7 8 9 10
Very little  Great extent

6. About how many city employees are serviced by the personnel department?

(Blank)
7. How many employees (excluding clerical) are employed in the personnel department?

48-50

8. What was the approximate size (dollars) of the personnel department's operating budget for the past year?

51-57

9. Approximately what percentage of the total personnel budget is funded by intergovernmental transfers (categorical grants, block grants, revenue sharing, etc.)?

58-59

10. Overall, how would you rate the quality of the contacts between your department and federal and state officials?

Very poor

Excellent

11. About how many joint programs/projects has your city participated in with other cities or counties in your area in the past ten years?

12. About how many of those joint programs/projects have involved the personnel department?

13. The phrase "environmental turbulence" has been used to describe activity surrounding the organization. This could include groups in the community making demands, wholesale changes of political leaders, reorganizations of city departments, and so on. How "turbulent" would you say your environment has been in the past ten years?

0 1 2 3 4 5 6 7 8 9 10

Very calm

Very turbulent

14. In recent years a number of consulting firms (private, university, federal, state, regional) have arisen to aid cities with management problems. How extensive would you say your department's contacts with these organizations has been in the past ten years?

0 1 2 3 4 5 6 7 8 9 10

No contacts

Extensive contacts

15. To what extent would you say your department's budget has kept up with inflation and the demands placed upon it?

0 1 2 3 4 5 6 7 8 9 10

Fallen behind

Kept up/exceeded
Approximately what percentage of staff members in the department:

16. ...have a masters degree in a personnel-related field?

17. ...are, in your estimation, active members of a related professional organization?

18. ...have attended at least one extra-organizational training program since entry?

19. How many different job titles (excluding clerical) are there among the agency's staff members?

20. How many years has the city had an autonomous personnel department (at least one staff member with full-time responsibility)?

PART THREE: The Personnel Director

We would also like to know something about the personnel director and his/her attitudes and opinions.

1. How old is the current personnel director?

2. How many years has the current personnel director held that position?

3. How many years of college education has the personnel director completed?

Please indicate your responses to the following statements:

4. "Successful changes of organizational procedure are seldom rewarded in this organization, but the failure of such changes is commonly penalized."

   0 1 2 3 4 5 6 7 8 9 10
   Definitely false  Definitely true
5. "There is something refreshing about enthusiasm for change."

0 1 2 3 4 5 6 7 8 9 10
Definitely false Definitely true

6. "If you want to get anywhere, it is the policy of the system as a whole that must be changed and not just the behavior of isolated individuals."

0 1 2 3 4 5 6 7 8 9 10
Definitely false Definitely true

7. "I am much more strongly attracted to values such as work autonomy, peer evaluation, and professional growth than to rewards such as money, power, and status."

0 1 2 3 4 5 6 7 8 9 10
Definitely false Definitely true

For each of the following possible sources of information about changes in the field of personnel management, please circle the appropriate number representing the degree to which it is used by your department to discover new ideas.

8. Professional journals/magazines
0 1 2 3 4 5 6 7 8 9 10

9. Professional meetings/conferences
0 1 2 3 4 5 6 7 8 9 10

10. Federal government agencies
0 1 2 3 4 5 6 7 8 9 10

11. State government agencies
0 1 2 3 4 5 6 7 8 9 10

12. Regional councils/COGs
0 1 2 3 4 5 6 7 8 9 10

13. Other cities
0 1 2 3 4 5 6 7 8 9 10

14. Individuals within city government
None Much
0 1 2 3 4 5 6 7 8 9 10

What specific cities are you most likely to consult when looking for new ideas in personnel management? (Please list in the approximate order of importance.)

_____________________________
_____________________________
_____________________________
Thank you very much for your time and cooperation. To return the questionnaire simply fold and use the enclosed return envelope. If you would like to make any additional comments about the survey, please use the space below. If you would like a copy of the survey results, include your name and address. Thanks again.
APPENDIX C

SUMMARY OF HYPOTHESESIZED RELATIONS BETWEEN INDEPENDENT VARIABLES AND MEASURES OF INNOVATIVENESS

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Direction of Predicted Relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Size</td>
<td>+</td>
</tr>
<tr>
<td>Community Integration</td>
<td>+</td>
</tr>
<tr>
<td>Community Wealth</td>
<td>+</td>
</tr>
<tr>
<td>Community Education</td>
<td>±</td>
</tr>
<tr>
<td>Community Conservatism</td>
<td>-</td>
</tr>
<tr>
<td>Intergovernmental Aid</td>
<td>+</td>
</tr>
<tr>
<td>Quality Intergovernmental Contacts</td>
<td>+</td>
</tr>
<tr>
<td>Number of Joint Programs</td>
<td>+</td>
</tr>
<tr>
<td>Size of City Government</td>
<td>+</td>
</tr>
<tr>
<td>Wealth of City Government</td>
<td>+</td>
</tr>
<tr>
<td>Reformed Structure City Government</td>
<td>+</td>
</tr>
<tr>
<td>Environmental Turbulence</td>
<td>+</td>
</tr>
<tr>
<td>Use of Consultants</td>
<td>+</td>
</tr>
<tr>
<td>Size of Department</td>
<td>+</td>
</tr>
<tr>
<td>Slack Resources in Department</td>
<td>+</td>
</tr>
<tr>
<td>Department Age</td>
<td>±</td>
</tr>
<tr>
<td>Formalization of Department</td>
<td>-</td>
</tr>
<tr>
<td>Centralization of Department</td>
<td>-</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Direction of Predicted Relation</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Specialization of Department</td>
<td>+</td>
</tr>
<tr>
<td>Professionalism of Department</td>
<td>+</td>
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<tr>
<td>Director Values Toward Change</td>
<td>+</td>
</tr>
<tr>
<td>Rewarding Incentive System</td>
<td>+</td>
</tr>
<tr>
<td>Cost of Innovation</td>
<td>-</td>
</tr>
<tr>
<td>Radicalness of Innovation</td>
<td>-</td>
</tr>
<tr>
<td>Trialability of Innovation</td>
<td>+</td>
</tr>
<tr>
<td>Improvement of Innovation</td>
<td>+</td>
</tr>
<tr>
<td>Visibility of Innovation</td>
<td>±</td>
</tr>
<tr>
<td>Mandate of Innovation</td>
<td>+</td>
</tr>
</tbody>
</table>

Key: + = expected positive relation, - = expected negative relation, and ± = no direction predicted.
APPENDIX D

SAMPLE OF PERSONNEL INTERVIEW FORM

Name ___________________________ Position/Job Title ______________________________

City ___________________________ Address ________________________________

Telephone ______________________ Date ________________________________

I. General

1. Would you briefly describe the development and current status of personnel management in this city?
   a. History (development, major changes, executive changes)
   b. Structure/Functions (activities, changes, other agency)
   c. Laws (organization, fire/police, collective bargaining)
   d. Form of government (selection/authority of director)
2. Comments on:
   Reorganization date  Implementation
   Decentralization  Staff participation
   Rule codification  Rule enforcement
   Budget resources  Turbulence

3. I would also like to know something about how decisions are made in this department. Can changes like those on the survey be made by this office or is outside approval needed? What type of decision is made at which level and what processes are involved?

II. Now let's discuss some specific changes that may have occurred.
The survey you recently completed indicates your city did/did not adopt the change

Date__________________________Implementation________________________

Cost____ Radicalness____ Trialability____ Improvement____ Visibility___

Mandate____

1. Would you describe the change as implemented?

2. Would you describe the events that led to the adoption of this change?
   a. Prior situation

   b. Perception of need/problem

   c. Solution development
d. Decision (who, how)

e. Assistance

f. Resistance
   i) Political leaders
   ii) Lower-level employees

g. Modifications
3. Many organizations attempt to encourage change in local government administration, particularly personnel management. What type of organization does the best job or is most effective in promoting change?

4. One of the goals of the OPM's Intergovernmental Personnel Act programs has been the stimulation of personnel change. Has this city had any direct contact with the IPA programs (grants, technical assistance, mobility assignments)? Evaluation?
5. Have you received or are you aware of the results of IPA programs in your area or other areas? Comments?

6. Are there any other areas of personnel change you would like to comment on?
If change not adopted:

A. Why do you believe the change was not adopted? (no need, not suitable, active/passive resistance)
   Is there a need for the change?
   Has the change ever been brought up? Result?
   If resistance, how can this be overcome?
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