CHAPTER 3

The Structure of Work: Job Design and Roles

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Jobs and roles both represent prescribed patterns of behaviors for organizational members. It is not surprising that the nature of jobs and roles has attracted much attention in industrial and organizational psychology. Yet in spite of the similarities between the functions of jobs and roles, there is surprisingly little overlap between the literatures on each topic. It is argued here that this lack of overlap is due, in part, to the fact that the two topics are addressed by those who come to industrial and organizational psychology from different orientations so that the definitions of jobs and roles in use fail to clearly differentiate the two constructs. This chapter presents a perspective that more clearly delineates the boundary between jobs and roles. The approach, termed job–role differentiation (JRD), uses Blau and Scott’s (1962) idea of prime beneficiaries, combined with a universe of task elements, to define the boundary between jobs and roles. Once a framework for isolating the domains of jobs and roles is presented, jobs and roles are explored in terms of the characteristics of each domain in an effort to highlight the functions of each and the value of job and role constructs for structuring behavior in organizational settings.
Introduction and Overview

Elements of Organizational Structure

ORGANIZATIONS ARE STRUCTURED systems. Virtually all large organizations specify and legitimize their structure by developing elaborate organizational charts and communicating the elements of the charts to all concerned. At the organizational level, the elements of structure may be defined in terms of a number of companies, divisions, plants, departments, or some other aggregate of positions. These elements are then linked by rules of association typically based on authority relationships. Thus, at an abstract level, organizational structures are described in terms of a set of elements and a set of associative rules that describe the nature of the relationships among the elements.

Although widespread agreement exists on the fact that organizations are structured systems, there is little agreement on the specific elements that constitute structure. Two general systemic perspectives are used—task/functional systems and social systems.

Task/functional systems view organizational structure in terms of the functions that must be accomplished. Functions are further divided into tasks. Tasks are then grouped or clustered and labeled positions or jobs. The basic unit of analysis in the structure is that of jobs or positions. The relationships among units in such systems often get far less attention than the units themselves. To the extent that the relationships are delineated, they are often dictated by the coordination requirements among positions for the accomplishment of general tasks or goals. Relationships among jobs or positions are also dictated by power and authority differences among positions linked to maintain control through lines of authority and responsibility.

A second structural perspective on organizations examines the social system. Social systems consist of individuals and relationships among individuals. Individuals represent the elements of social systems, and the interactions among individuals functioning alone or in clusters or groups are the focus of attention. Theories of social systems are not interested in particular persons that make up the organizational structure. When individuals are addressed, often they are viewed in terms of attributes of either individuals or members of identifiable groups (e.g., union members, blue collar or white collar workers, minorities, women, or older workers). Whereas task/functional systems place much emphasis on the elements of the structure, social systems focus more on the nature of the relationships among elements. At the most general level, these relationships are ones of status as reflected in power and influence differentiations among persons and groups.

Although organizational structures can be described in terms of organizational level characteristics, our concern in this chapter is more at the individual level than at that of the organization, plant, or division. In particular, we are concerned with the nature of structural characteristics that filter down to the everyday work environment of employees. At this level, our interest is in the dynamic interaction between characteristics of the physical and social environments of individuals with the persons themselves and with the behavioral and attitudinal consequences of such interactions. We shall argue that these interactions between the individual’s immediate task/physical environment and the social environment have been addressed most frequently in two relatively nonoverlapping literatures, the literature of jobs and the literature of roles. The lack of overlap is not because of an absence of a shared domain but because research and writing in one domain tends to ignore that in the other. It is our intention in this chapter not to isolate the two.

Before becoming immersed in the specifics of organizational structures from within either the job or role perspective, some consideration should be given to the permanence and/or concreteness of structures defined by jobs or
roles. At any given time, the structure of an organization appears relatively objective and well defined from either the job or the role perspective. That is to say, if multiple observers were asked to describe the structure in terms of some system, such as a set of jobs, there would be a great deal of agreement about what jobs exist in the organization. There may also be a great deal of agreement on the duties and responsibilities that define these jobs. Finally, when viewed over time, there also tends to be a great deal of stability; jobs comprising an organization normally do not change radically from year to year and neither do the duties and responsibilities attached to most jobs. Obviously, there are exceptions; some jobs change a great deal, a few are eliminated, and a few are added. However, most of the time changes over adjacent years are modest.

This stability gives permanence to the organizational structure. The permanence is quite useful. Without some relative constancy in the nature of organizational jobs and roles, it would be extremely difficult to function in organizations. For example, selection of new employees assumes that the jobs into which these new employees will be placed will remain relatively stable so that persons with personal attributes matching the job requirements can be selected. However, the stable appearance of organizational structures often masks the arbitrary nature of the structures. Jobs and roles evolve over time as the result of the interaction of physical and social systems in the organization and often stabilize for very arbitrary reasons. The arbitrariness is often overlooked when examining an already existing system staffed by employees who have held their positions for some time. The very existence of the jobs and roles and the existence of people in them who have been in them for some time often leads both the incumbents and independent observers to conclude that there is some inherent goodness or correctness to the structure that exists. At this point, we simply caution the reader of the tendency to see jobs and roles as having more credibility than they deserve.

**Jobs and Roles: Definitions, Comparisons, and Contrasts**

**Jobs.** The study of jobs and the study of roles have long but divergent histories. The study of jobs has been dominated by industrial engineers and psychologists interested primarily in description and in the development of taxonomies. Understanding the critical knowledge, skill, and ability requirements of jobs is necessary to select, place, and train employees for particular jobs and to design new jobs or redesign existing ones. Systems for comparisons among jobs are needed for evaluating financial compensation for particular jobs and for developing equitable compensation systems. Elements and physical and psychological demands are necessary to construct new or alter already established jobs to fit the people who fill them. These are just a few of the many demands for information about the nature of jobs that necessitate the development of taxonomic systems and measurement techniques for describing jobs according to the taxonomies.

Like all taxonomic systems, those for describing and analyzing jobs are arbitrary, with their value depending on the extent to which they are useful for the purposes to which they are applied. Ideally, one taxonomic system for classifying jobs could be devised that would meet everyone's needs for information about jobs. Unfortunately, no such system exists, nor is one likely to emerge in the near future. Fleishman's monumental work (summarized in Fleishman & Quainance, 1984) began as an attempt to develop an overarching taxonomy of tasks that would provide a way to classify all kinds of tasks, especially those that are an integral part of most jobs in the workplace. This broad-based effort led to the conclusion that more than one taxonomic system was necessary to capture the important dimensions.
of tasks and meet the needs of the various constituencies interested in knowledge about tasks. The five taxonomic systems Fleishman and Quaintance settled on were the (a) criterion measures approach, (b) information-theoretic approach, (c) task strategies approach, (d) ability requirement approach, and (e) task characteristics approach. The same conclusion—that it is impossible to design one broad taxonomic system that meets the wide range of purposes that exist for its use—is equally relevant at the aggregate level of jobs as it is for tasks. The demands on a job taxonomic system are simply too diverse to be met by one system.

In part, the wide variety of approaches to jobs is due to the fact that there are diverse groups interested in jobs. These groups can be combined into three relatively homogeneous clusters. One cluster is represented by *industrial engineering* or *human factors*. Here the concern is primarily with the design of jobs and the distribution of tasks required by the system to the human and nonhuman elements in order to maximize system effectiveness. The focus is on individual jobs within systems and the implications of human performance capabilities for the design of jobs in those systems. This approach can be characterized as deductive, in that it begins with a normative theory about how new jobs should be designed to maximize reliability and efficiency of performance from a physical requirements perspective.

Another focus on jobs is that of *job analysis*. Here the concern tends to be more with developing descriptive taxonomies for existing jobs than with designing new jobs. Through structured observation systems, taxonomies of jobs are developed and measurement systems devised to aid in the selection, placement, and training of people at work as well as to develop integrated structures or job families. This approach is inductive; it begins by collecting data on the job via observation, interviews, or questionnaires and then develops conceptions about what the job entails. It is also passive. The primary criterion is fidelity of description rather than increasing efficiency of performance or increasing task motivation.

Finally, jobs have also been approached from a *motivational perspective*. From this perspective, the ability of job incumbents to accomplish job requirements is assumed. Concern is with the willingness of job incumbents to invest time and effort over extended periods of time in the job to perform it effectively. In contrast to the other two approaches, the motivational approach often makes assumptions about the needs and values of job incumbents, and these assumptions guide or influence the taxonomic systems developed for jobs.

This motivational approach, like the human factors approach, is deductive because it begins with a normative theory about how new jobs should be designed to maximize some outcome. Rather than reliability and efficiency of performance, this approach attempts to maximize job incumbents’ motivation to work on the job for reasons associated with the job itself. Such motivation is commonly labeled *intrinsic motivation* to imply that task motivation stems from intrinsic properties of the task or job rather than from incentives or rewards attached to holding the job or to job performance. Historically, this approach represented an alternative to the human factors approach and clearly attempted to distance itself from that earlier perspective. Nevertheless, the motivational approach shared, with human factors and industrial engineering, an interest in designing jobs to accomplish particular ends. It did not share the job-analytic concern with developing taxonomic systems of jobs for selection, placement, training, and financial compensation.

**Roles.** Research on roles developed primarily in the fields of sociology and social psychology from interest in the nature of social
systems and the interrelationships among people comprising those systems. At its most basic level, a role is often described as an expected pattern or set of behaviors (Biddle, 1979). This expected pattern of behavior is labeled in the everyday language of the people in the social system. These labels may correspond to terms that are identical to jobs (e.g., bookkeeper, systems analyst, or accountant), but they also may not map directly onto jobs (e.g., parent or friend).

The simplicity of the role definition as a set of expected behaviors masks the complexity and ambiguity that is discovered as one probes more deeply into the underlying assumptions behind the definition. Each behavior in the expected set can be described along two dimensions, a quality dimension and a quantitative one (Naylor, Pritchard, & Ilgen, 1980). That behaviors differ qualitatively and quantitatively is obvious. Typing a letter is very different from composing the letter. In addition, within any given qualitative behavioral category, different amounts of that behavior exist. Thus, we might expect that roles are sets of expectations about the amount and type of behavior expected of a person holding a particular role. This is only partially the case. Roles tend to be much more precisely defined in terms of types of behaviors than in terms of amounts. Moreover, with a few exceptions (e.g., J. S. Jackson, 1965), more of each particular type of behavior expected in the role is presumed to be better. Thus, roles are often only partially bounded quantitatively on any particular qualitative dimension, with the quantitative limits being imposed by the finite amount of time and effort that the individual can devote to the total set of behaviors constituting the role.

Although the definition of a role deals with the particular pattern of behavior expected of persons in that role, most of the interest in roles has not been with the patterns per se but with the way in which the patterns develop, are changed, and interact with other patterns of behaviors (roles) over time. By definition, expectations are beliefs or cognitions held by individuals. Therefore, roles exist in the minds of people. In all work with roles, at least one of those persons of concern regarding a role is the person who holds the role and acts out behaviors as a holder of that role. Yet there may be a number of others who are linked in various ways to the role holder and who also hold expectations about the pattern of behavior that should be displayed to perform the focal person's role. Most of the research on roles and role phenomena addresses the degree of agreement and disagreement in beliefs and expectations about role behaviors among different individuals.

Comparisons and Contrasts. Although the literature on jobs and roles developed relatively separately, a closer examination of each reveals considerable overlap in the theoretical domains that each attempts to span. For example, both literatures suggest that the nature of each gets mapped into the individual job–role holder through learning and that similar motivational constructs influence compliance with the learned jobs or roles. Likewise, both literatures are interested in the effectiveness of job or role behavior and judge effectiveness by comparing the behavior exhibited by a person in a given job or role to some standard(s) of performance. In addition, the conclusions drawn about behavior in jobs and in roles are often quite similar in both literatures. However, the differences in focus between the two sometimes lead to conclusions that, at least on the surface, appear to conflict. The major points of divergence are mentioned below.

The greatest difference between job and role orientations toward work is in the primary focus of each. Job literature focuses on the behavioral content of the elements called jobs, and the role literature focuses on the process that establishes the expected set of behaviors labeled a role. As we mentioned earlier, the actual content of jobs, or even the taxonomic
systems on which to describe the content, differs for different investigators and different purposes addressed by the job information. However, there is not disagreement on the fact that it is the content of the job that is important. How that content is defined, learned, or changed often is of interest, but that interest is subordinated to the content itself; it is of interest only after the content itself is understood. In contrast, role theorists put much less emphasis on content. Rather, they are concerned about how the content, any content, is communicated, or learned, or how compliance to the content is enforced.

A second difference in orientation between the two views is that the origins of job characteristic perceptions are often traced to physical characteristics of the job, whereas the origins of role characteristics are traced to the social domain in which the person is located. The physical domain of job characteristics requiring direct responses to physical conditions is obvious, such as the grocery cashier’s responses triggered by the items placed on the conveyor belt and the need to register the price of these items in some fashion. Less obvious are more abstract job characteristics such as job scope or task uncertainty. These can be traced less easily to particular physical demands of the task and are likely to be influenced by the opinions of others in the workplace (O’Reilly & Caldwell, 1979; Weiss & Shaw, 1979; White & Mitchell, 1979). Nevertheless, from a relative emphasis standpoint, descriptions of jobs are more likely to look at the physical job demands than to the social environment for the definition of “reality” regarding the job. Role theorists are more likely to do the reverse. For them, expectations are communicated to role incumbents through others or through observing others. Roles are seen as existing in the shared perceptions of people. Thus, role theorists concentrate more on social sources when searching for sources of role expectations than do those with a job focus.

Finally, when comparing the motivational dynamics suggested by one motivational view of jobs, termed the job characteristics model, to that of role theories, the two differ somewhat in the psychological mechanisms they emphasize. Job characteristic theories posit motivational states that are positively oriented and deal with feelings of responsibility, meaningfulness, and knowledge of results, the latter of which allows for learning the job and for feelings of accomplishment when the feedback indicates that the job was done well (Hackman & Oldham, 1976, 1980). Role theorists, however, are primarily concerned about the uncertainty and stress felt when job incumbents feel they cannot accomplish all role demands (D. Katz & Kahn, 1978). These motivational states are primarily aversive and therefore are to be avoided or reduced.

**Toward an Integration of Jobs and Roles.**

The time has come for an integration of theory and research on jobs and roles. Such an integration is desirable for several reasons. Clearly there is much overlap in the functions of jobs and roles as well as in the outcomes with which each of the literatures is concerned. Scientific parsimony would suggest that integration is preferred over separation in the case of high overlap. Yet, in spite of the overlap, there are a number of issues where the orientations of the two are quite different and the conclusions drawn appear to be in conflict. Any integration of job and role orientation has to address directly the apparent inconsistencies in the two independent literatures that now exist.

We found that the development of an integrative view of jobs and roles was complicated by two factors. First, as already stated, there are three distinct schools of thought on jobs—industrial engineering/human factors, job analytical, and motivational. A comprehensive integration of roles and jobs would need to integrate the three schools of thought on jobs themselves and integrate the three with
the theory and literature on roles. Yet such an extensive undertaking is beyond the scope of this chapter. Thus, we will be integrating the theory and literature on roles with the theory and literature on one school of thought on jobs, the motivational approach.

This choice was made for two reasons. First, an integration of the three schools of thought in jobs is already under way in a program of research by Campion (Campion, 1988, 1989; Campion & Thayer, 1985). Second, of the three schools of thought on jobs, the motivational approach has most recently generated the greatest amount of attention in industrial and organizational psychology and organizational behavior. Although we shall place the emphasis on the motivational approach, the conceptual framework developed here will draw from, and hopefully add to, the other two schools of thought on jobs. Where this occurs, it is noted.

It is somewhat paradoxical that the second factor that hindered an integration of the job and role literature is that there is currently a lack of differentiation between the two concepts as they are defined in their respective literatures. That is, despite the fact that separate literatures are recognizable for jobs on one hand and work roles on the other, most researchers would, in our opinion, be harried to identify which of the two constructs was being defined if the definition were removed from the context of the text in which the definition was embedded. For example, does the definition, “Behaviors and activities that are directly associated with achieving a specific objective” (Herbert, 1976, p. 316) define a job or a work role? If you guessed job, you were wrong; so were we. In the remainder of the chapter, we will first develop a framework that draws a clearer distinction between jobs and roles. Admittedly, to gain this distinction we will have to force the two apart somewhat more than even we will be willing to tolerate in the end. However, once we have created a system for separating the two, we shall map each back onto the system in a way that we feel more clearly develops the similarities and differences between jobs and roles than is frequently done at the present time. The presentation of the integrating model will then be followed by a discussion of the job characteristics and the role literature, taking into account the implications of the integrative model for each. In the final section of the chapter, some remaining steps for further development of a unitary job-role perspective will be outlined.

Job–Role Differentiation: A Task Elements Approach

Before launching into the task elements approach to job–role differentiation, we should stress that the following discussion is not meant to describe the ways in which these issues are currently being treated. Rather, what follows is a description of how we have chosen to construe the issues at this point. In order to understand the distinction we wish to draw between jobs and work roles, we must first discuss two concepts: prime beneficiaries and universe of task elements. The former is borrowed from organization theory and the latter from the job-analytical approach to task description.

Prime Beneficiary

Any discussion of jobs or work roles must first come to terms with the fact that neither can be divorced from the organizational context within which it exists. Organizations typically originate to meet the needs of an individual or group of individuals whose needs cannot be met without the creation of a social organization. Blau and Scott (1962) developed a typology of organizations that was based on the notion of who benefited from the social structure, and they differentiated organizations by their prime beneficiaries.
According to Blau and Scott, there were four basic categories of prime beneficiaries. The four organization types were: (a) mutual benefit associations, (b) service organizations, (c) commonweal organizations, and (d) business concerns.

_Mutual benefit associations_ are organizations where the members or rank-and-file participants are the prime beneficiaries (Blau & Scott, 1962). These organizations include such groups as labor unions or professional organizations. In _service organizations_, the prime beneficiary is the public in direct contact with the organization. The members of the public are people who are not technically members of the organization, yet who interact with it. Public hospitals or elementary schools are examples, with patients and local families, respectively, as the prime beneficiaries.

_Commonweal organizations'_ prime beneficiary is the public at large—that is, the members of the society in which the organization operates. Examples of this type of organization would include military organizations or protective services such as police or fire departments.

Finally, the most common organizations are _business concerns_. Here the owners of an organization are the prime beneficiaries. Any privately held corporation or small business would fall under this heading.

Although the prime beneficiaries are certainly not the only beneficiaries of a social organization, Blau and Scott emphasized that the prime beneficiaries should be singled out in any typological scheme because they create the primary reasons for the organization's origin and existence. The approach to job-role differentiation taken here will assume that a group can be identified that functions as prime beneficiaries of an organization and that this group can be differentiated from other beneficiaries.

The framework developed here begins with the assumption that, to meet the goals or expectations of the prime beneficiaries, certain functional operations or jobs must be accomplished. Some of these jobs may be performed by the prime beneficiaries, but more often individuals other than the prime beneficiaries must be recruited to perform them. The fact that the prime beneficiaries have to enlist others to perform the majority of jobs within the organization creates the need to formally define the jobs. Without the existence of a priori definitions, it would not be possible to recruit and select the people needed to accomplish the organization's objectives.

It should be stressed that the prime beneficiaries are rarely those who run the organization on a day-to-day basis. Yet the most important jobs that need to be filled are those associated with running the organization. Administrative agents of the prime beneficiaries are often charged with the duty of defining and monitoring day-to-day performance in the remaining jobs. In mutual benefit associations, service organizations, and commonweal organizations, the administrative agents are either elected or appointed by agents who were elected by the prime beneficiaries. In business concerns, these administrative agents are often appointed by the prime beneficiaries at least at the time that the organization is formed. The lasting impact of these founding decisions on organizational structure and functions should not be underestimated (Boeker, 1989). After that point, administrative agents are usually selected by administrative agents already with the organization.

**Universes of Task Elements**

It will also be useful to recognize that jobs can be broken down into smaller job elements or tasks. We will use the term _task element_ to represent these job components. The universe of task elements represents a relatively finite set of generic job components beyond which further reduction is unnecessary—that is, the
elements are expressed at a relatively low level of abstraction. Thus, the word *element* is employed within this conceptual framework in much the same way that the word *element* is used in chemistry. Several different approaches to the specification of such generic task elements exist, including those developed by McCormick and his colleagues (McCormick, 1979; McCormick, Jeanneret, & Mecham, 1972), Fleishman (1975), Campion and Thayer (1985), and Fine and Wiley (1974). For our purposes, the two most important aspects shared by each of these approaches are that, first, the elements they describe are *generic*. That is, they are not job specific. All jobs can be defined with the elements represented in the universe. Second, the elements are meant to be *comprehensive*. That is, no additional elements are needed to describe all jobs.

The practice of breaking down tasks into generic elements and then working with the elements is certainly not unique here. For example, virtually all approaches to synthetic validation in the area of personnel selection rely on such a practice (Hollenbeck & Whitener, 1988; Mossholder & Arvey, 1984; Primoff, 1959). Job evaluation also is based on the assumption that such elements can be described and comparisons on these generic elements be made across jobs (Schwab, 1984).

**A Definition of Jobs**

For the purpose of developing a theory of job–role differentiation, jobs will be defined as a set of task elements grouped together under one job title and designed to be performed by a single individual. The task elements that comprise the job are characterized by the following four attributes:

- **Jobs are created by the prime beneficiaries** (or their agents), in the sense that it is this group that originally has responsibility for grouping the task elements into the eventual collection that constitutes the job.

- **Jobs are objective**, where *objective* implies only that there is a shared consensus about the elements comprising the job. (No claim is made here that the jobs are "real" in any positivistic sense.) This shared consensus results primarily from the fact that the elements comprising the job are formally described and are typically written into various organizational documents.

- **Jobs are bureaucratic**. The elements comprising the jobs exist independently of job incumbents. In fact, more often than not, the existence of the jobs predates the presence of the job incumbents.

- **Jobs are quasi static**. It is assumed that, while not immutable, jobs do not change on a day-to-day basis, but rather are relatively constant over time.

For purposes here, task elements that meet the four criteria just listed will be referred to as *established task elements*. Although this definition of jobs is not meant to reflect a consensual definition, it should be noted that this definition and characterization of jobs is not completely alien to the literature on tasks and jobs. The definition for established task elements and jobs is highly similar, although not identical, to what has been referred to in the past as *official tasks* (Pepinsky & Pepinsky, 1961), *tasks qua tasks* (McGrath & Altman, 1966), *objective tasks* (Roby & Lanzetta, 1958), and *defined tasks* (Hackman, 1969). Despite the similarity to past conceptualizations, this definition may sound highly unconventional to some, particularly those who have become accustomed to the blurred distinction between jobs and work roles existing in the scientific literature.

Whereas we can arbitrarily define jobs as being objective, bureaucratic, and quasi static,
the fact remains that jobs exist in an environment that is subjective, personal, and dynamic. Moreover, there exists in this environment a number of diverse constituencies other than the prime beneficiaries. Members of these constituencies have a great deal at stake in these jobs. This manifest incongruence between jobs on one hand and work environments on the other severely limits the viability of jobs, as restricted by our definition, in ongoing work organizations. Moreover, the complexity (and sometimes the remoteness) of the work environment makes it virtually impossible for the prime beneficiaries to anticipate all the task elements that will be necessary to make jobs work in the environment for which they are designed.

Thus, to make jobs work in their environment, an extra set or collection of task elements needs to be added to those that originally constituted the job. It is important to note that this does not expand the universe of task elements that we have chosen to call jobs and have defined as finite. Rather, it adds some elements from another domain onto the job that did not exist until there was the necessity of enacting the job in a particular work setting. These additional task elements are specified by a variety of social sources, not the least of which is the incumbent. Such elements will be referred to as emergent task elements. Emergent task elements are differentiated from the established ones defined by the prime beneficiaries; emergent task elements are by definition subjective, personal, dynamic, and specified by a variety of social sources other than the prime beneficiaries. The notion of emergent task elements is similar though not identical to what other writers on tasks have referred to as private tasks (Pepinsky & Pepinsky, 1961), subjective tasks (Roby & Lanzetta, 1958), or redefined tasks (Hackman, 1969).

In the conceptual framework drawn here, emergent task elements are mapped into roles. Thus, the framework proposed differentiates work roles from jobs by relegating to jobs only established task elements, and to roles both established task elements and emergent ones. Roles are larger sets containing emergent task elements plus those elements of the jobs that are communicated to the job incumbent through the social system and maintained in that system. We are suggesting by this system that the boundaries of a job can be relatively precisely defined by limiting job elements to those that are formally established. The boundaries for roles, on the other hand, are less precise both in the sense of the total set of elements in the role and in the sense of the interface between jobs and roles. Ignoring the precise boundaries for a moment, it is reasonable to say that the individual’s role in the organization consists not only of his or her formal job but also of informal task elements that are either self-generated or are thrust upon the role occupant by other people in the social network in which the job is enacted.

Because the established task elements that comprise the job are usually written down, the point where the job elements end and the role as distinguished here begins is usually quite clear from within the job framework. This does not mean, however, that the job is permanently fixed. To allow for change, we defined jobs as quasi static rather than static. Whereas the emergent task elements or role elements are never written down, over time the prime beneficiaries, knowingly or not, may incorporate these elements into the formal job itself. When this occurs (and job analysis methods based on job incumbents’ perceptions virtually assure that it will when the job analyses are used to develop job descriptions), these elements cease to be emergent and become established; they are transferred from the domain of the role to that of the job.

**Various Job–Role Combinations**

To illustrate this distinction more concretely, Figure 1 depicts several different job–role combinations. At one extreme is the classic
FIGURE 1
Examples of Different Combinations of Established and Emergent Job–Role Elements

(a) The Bureaucratic Prototype

(b) The Loose Cannon Prototype

(c) The Job Similarity–Role Difference Prototype

Bureaucratic Prototype, shown in panel a. For these positions, virtually all the task elements are established and there is very little, if any, room for expansion or emergent elements. In this condition, the job and the role become synonymous. Many low-scope jobs, such as a hydraulic pallet unloader at a canning factory, hand packager at a small chemical manufacturing firm, or part assembler in an electronics manufacturing plant, would fit this category well, although as a prototype, no organizational work role would fit perfectly.
Panel b depicts the Loose Cannon Prototype. Here the work role is comprised of few established elements; instead, it is almost wholly made up of emergent task elements. In this type of job, there is little, if any, formal job description, and the incumbent (or those in his or her role set) is free to choose the tasks to be undertaken. The incumbent has the latitude to build his or her role. Ross Perot's tenure at General Motors or Oliver North's role in the National Security Council are examples that fit this category.

The Job Similarity–Role Difference Prototype, shown in panel c, deals with situations where two individuals who share the same job have very different roles. In this situation, although the formal descriptions of the jobs are identical, special characteristics of the incumbents in each job have expanded the role. On a football team, for example, a rookie and a 10-year veteran could both occupy the job of outside linebacker. The established duties of an outside linebacker could be identified for both (e.g., contain the outside run, cover backs coming out of the backfield). Thus, the inner box representing the job is identical in size for each player. However, the veteran, because of his additional experience, would more than likely have an expanded role, with a number of emergent task elements (e.g., calling the defensive formation, making formal decisions regarding penalties, serving as a team leader) that may not be present in the rookie's role. Therefore, the outer box for the veteran player is much larger than the corresponding box for the rookie.

Job-role differences could also originate because of differences in the supervisor (an important person in the role set) rather than the incumbent. The role of research assistant as supervised by an assistant professor who happens to be short on time and high in need for cognitive structure may differ substantially from the role of research assistant as supervised by a full professor who happens to be low in need for cognitive structure and more interested in student development. Again, although the established task elements associated with the job of research assistant are given (and published in the appropriate handbooks and bylaws), the role of research assistant could vary greatly across situations on a person-by-person basis.

With the distinction between jobs and roles (i.e., established vs. emergent task elements) in place, we will now review the literature on job and role characteristics in light of this distinction. Although existing job and role research was obviously not conducted within the present conceptual framework, we nevertheless feel that applying this system to this research in a post hoc fashion will illuminate several important issues associated with each literature.

Theory and Research on Job Characteristics

Job Characteristics Theory

We described earlier three general orientations toward jobs represented by industrial engineers and human factors psychologists, job analysts, and those focusing on motivational characteristics. The first and last of these are primarily concerned with the design of jobs; the job analysts concentrate on describing and clustering jobs already in existence. Furthermore, we indicated that the initial focus on job design was primarily that of industrial engineering and human factors. The motivational perspective grew out of frustration with limitations of the initial approach. A great deal of research in the industrial and organizational psychology literature in the last few years has addressed job design from the motivational perspective. In addition, much of that research has addressed one particular theory, the job characteristics theory (JCT), either by testing tenets of the theory,
extending it, or criticizing it. We shall turn our attention to that model.

**Development.** JCT has its origins in a major study by Turner and Lawrence (1965) that examined the relationship between attributes of tasks and employees’ reactions to their work. These authors constructed measures of six task attributes predicted to be positively related to employee satisfaction and attendance. With a sample of 47 jobs, they empirically derived a summary index, the requisite task attribute index, based on a linear combination of the attributes and used the index to predict satisfaction and attendance. The most striking results of the research were the findings implying that responses to specific job characteristics systematically varied with the cultural backgrounds of employees.

Hackman and Lawler (1971) followed up Turner and Lawrence’s work, narrowing the set of six requisite task attributes to four and suggesting a reductionist view that cultural differences could be mapped into the value systems of employees. They proposed that individuals who desired growth and involvement in their work would respond more favorably toward jobs that were high on the four dimensions just mentioned than would employees who did not value growth and involvement in their work.

Hackman and Oldham (1976, 1980) further extended and refined JCT. It is their version of the theory that we will explore in detail in the pages that follow. The basic Hackman-Oldham job characteristics theoretical model is presented in Figure 2. At the most general level, five job characteristics are seen as prompting three psychological states, which in turn lead to a number of personal and work-relevant outcomes. The links between the variables in the model are shown as moderated by several individual differences characteristics. We shall discuss each of the major classes of variables in the model in more detail.

**Psychological States.** Three psychological states—experienced meaningfulness of the work, experienced responsibility for the outcomes of the work, and knowledge of results of the work activities—are the core of the model. It is postulated that an employee experiences positive affect to the extent that the three states are present. The positive affect created by the presence of these psychological states is believed to be reinforcing and to serve as an incentive for continuing to try to perform the task. The result is a self-perpetuating cycle of positive work motivation that is predicted to continue until one or more of the psychological states is no longer present or until the individual no longer values the internal rewards that derive from high performance.

**Job Characteristics.** Of the five characteristics of jobs shown in Figure 2 as fostering the emergence of the psychological states, three are expected to contribute to perceptions about the meaningfulness of the work and one each to experienced responsibility and to knowledge of results.

The three job characteristics that are predicted to combine additively to determine the psychological meaningfulness of the job are as follows:

- **Skill variety**—the degree to which a job requires a variety of different activities to carry out the work; in addition, the activities must require the use of a number of different skills and abilities of the person

- **Task identity**—the degree to which a job requires completion of a whole and identifiable place of work

- **Task significance**—the degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organization or outside the organization
The job characteristic predicted to prompt employee feelings of personal responsibility for the work outcomes is autonomy. *Autonomy* is defined as the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out.

Knowledge of results is predicted to be prompted by the amount of *feedback* the employee receives from doing the work. Feedback, in turn, is seen as the degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance. Initially, feedback was seen as solely a characteristic of the task or job itself. More recently it has been expanded to include job performance information available both from
doing the job and from others in the job environment.

**Motivational Potential.** According to the job characteristics model, the overall potential of a job to prompt self-generated motivation is highest when all of the following are true: (a) The job is high on the job characteristics expected to lead to experienced meaningfulness, (b) the job is high on autonomy, and (c) the job is high on feedback. The *motivating potential score* (MPS) is a measure of the degree to which these conditions are met. MPS is computed by combining the scores on the five characteristics as follows:

\[
\text{Motivating potential} = \frac{\text{skill} \times \text{task variety} \times \text{task identity} \times \text{significance}}{3}
\]

\[\times \text{autonomy} \times \text{feedback}\]

**Moderators.** Job characteristics theory predicts that three characteristics of people are especially important for understanding who will and who will not respond positively to jobs that are high in motivating potential. These three characteristics are identified as moderators in Figure 2 and will be discussed separately.

The theory posits that the strength of an employee's needs for growth can be critical in determining how vigorously a person responds to a job high in motivating potential. It is expected that those employees with strong needs for personal growth and self-direction at work are most likely to appreciate and respond positively to increased opportunities for personal accomplishment provided by a job high in motivating potential. Employees' reactions to jobs high in motivating potential are expected to be affected by their satisfaction with aspects of the work context, such as pay, job security, co-workers, and supervisors. When employees are not satisfied with one or more of these contextual factors, their ability to respond positively to a high-MPS job may be severely diminished according to the theory. Finally, JCT suggests that employees must have sufficient knowledge and skill to perform effectively on jobs high in motivating potential.

**Outcomes.** Also shown in Figure 2 are several variables that are predicted to be affected by job-based motivation. When a job is high on MPS, employees are expected to be satisfied with the nature of the tasks in the job and also with opportunities they have for personal learning and growth at work. In addition, internal work motivation is expected to be affected by the characteristics of jobs. Finally, the model specifies that employee work effectiveness is likely to be high when jobs are high in MPS.

**Job Characteristics Theory From a Job–Role Differentiation Perspective**

If the framework developed earlier to differentiate jobs from roles is applied to job characteristics theory, our taxonomy would place JCT more in the role than the job domain. There are two primary reasons for this. First, the core job dimensions tend to be those that evolve out of the informal social environment rather than from the physical environment or from formal task descriptions. This is particularly true with respect to the three job dimensions that impact most directly on psychological meaningfulness—task identity, task significance, and skill variety. The first two in particular are primarily defined by the cultural values to which the job holder prescribes, at least in the sense that they are important to the perception of meaningfulness. Task identity, the extent to which the job incumbent works on a complete task and produces an identifiable product, could be defined external to the job holder by reference to the nature of the task. However, in the theory, the dimension is treated from the perspective of the job incumbent. Its meaning is not attached to the job in any absolute sense but is based on the job holder's interpretation.
interpretation is likely to be strongly influen-
ted by other individuals with whom the job
holder identifies (Salancik & Pfeffer, 1977).
These persons may or may not be co-
workers. In a similar fashion, task significance
is highly subjective and very likely to be de-
pendent on the social environment or culture
that provides some basis for judging whether
the job in question is likely to be perceived as
significant. Skill variety, on the other hand,
could be referenced in the more objective
characteristics of the tasks rather than social
perceptions. However, it should be noted that
the measurement instrument developed to ad-
dress JCT usually is completed by the job in-
cumbent as the source for the description of
skill variety and all other job characteristics.

There is a distinct difference between the
JCT approach to skill variety and the approach
to skill variety taken by those who design
jobs from an industrial engineering or human
factors perspective. The former looks at skill
variety as a condition that stimulates the job
incumbent to invest or not invest time and
effort in the job through the perceptions of the
meaningfulness of the work. The latter tends
to view skill variety in terms of the extent to
which the human abilities of the job incumbent
are or are not overextended. In JCT, human
abilities of job incumbents are as-
sumed to be sufficient to accomplish the task—
that is, abilities are taken as given.

A second way in which JCT tends to share
more with roles than with jobs is in terms of
its focus on the job incumbent rather than on
the job. In general, differences in descriptions
of the job obtained from persons sharing the
same job title in the same organization can be
attributed to two sources: (a) measurement
error or (b) true task differences attributable to
the fact that some individuals who hold the
jobs have negotiated additional (or fewer) task
elements in the social system in which they
are located. JCT is much more likely than
other views of jobs to take these differences at
face value, as if they do indeed represent
true differences in jobs when the incumbents
see them as such. This focus is understand-
able because theory is concerned with indi-
viduals’ reactions to their jobs, and it is assump-
ted that the most immediate precursors of
individual responses are the beliefs and expec-
tations of the respondents. The effect of this
orientation is that, whereas other job views
may focus on standardization and homoge-
neous clustering of responses across people to
create jobs and job families, JCT pays little
attention to job systems.

Two primary concerns are always raised
with respect to research on jobs. These are
(a) the nature of jobs in terms of their objec-
tivity and dimensionality and (b) the impact
of jobs on job incumbents’ behavioral and
socioemotional outcomes. An examination of
the jobs literature, much of which has been
focused on the job characteristics theory of
Hackman and Oldham (1976), clearly reveals
these two major areas of focus.

The Nature of Jobs in Terms of Objectivity.
A great deal of controversy in the JCT litera-
ture has developed around the issue of whether
incumbents’ ratings of jobs provided on the
Job Diagnostic Survey (JDS) are based on
objective characteristics of jobs or on extraneous
social or personal influences. The questions
have been framed both theoretically and prac-
tically and have tended to be addressed in one
of three ways. Framed theoretically, the con-
cern is with whether or not ratings of job char-
acteristics obtained from job incumbents on the
JDS can be influenced by factors other than the
objective properties of the job; framed prac-
tically, the issue is one of determining the extent
to which such ratings obtained from job inc-
cumbents are isomorphic with objective prop-
erties of the job. Research on these issues can
be clustered into studies (a) that have explored
the degree of agreement between incum-
berts’ ratings and the ratings of others, (b)
those that have addressed the impact of social
cues on job perceptions, and (c) those that have
assessed the effects of incumbents' job experience on their perceptions of the key job characteristics of the model.

One set of research addressing objectivity focuses on the associations between incumbents' ratings of a job's characteristics and ratings of those characteristics made by others, such as peers, supervisors, job analysts, or researchers. Results of research on this topic are inconclusive. Correlations between job incumbents' ratings of their jobs and others' ratings of the same job have been as low as .16 (Brief & Aldag, 1978) and .36 (Birnbaum, Farh, & Wong, 1986) on one hand, to as high as .90 (Stone & Porter, 1975) and .91 (Griffin, 1983) on the other. Similarly, in some instances the correlations between the ratings of external agents and incumbents' reactions were lower than the correlations between incumbent ratings of jobs and incumbent reactions (Kiggundu, 1980; Spector, 1987), but in most cases these correlations were the same or higher (Algera, 1983; Brief & Aldag, 1978; Oldham, Hackman, & Pearce, 1976; Stone & Porter, 1975).

The second approach to objectivity is the research that contrasted the effects of objective task characteristics with task information provided by social sources. In all cases, raters were exposed to tasks with known characteristics, or at least characteristics that were held constant across raters and then presented with social cues about task characteristics that vary in some way among raters. Again, results across studies appear inconsistent. Some studies indicate job ratings are affected by social informational cues only (O'Reilly & Caldwell, 1979), others indicate that objective task conditions explain nearly all the variance in perceptions (White & Primoff, 1979), and still others find social information effects that are contingent on third variables such as task experience or field dependence (Weiss & Shaw, 1979).

A final theme involving objectivity deals with the effects of incumbents' characteristics and experiences on their ratings of task characteristics. In these studies, correlations between employees' job ratings and their personal characteristics are examined for individuals who perform the same task. Since the task is supposedly invariant, any significant correlations obtained point to a lack of objectivity. Results from some studies indicate personal factors do influence ratings (O'Reilly, Parlette, & Bloom, 1980; Stone, 1979), whereas other studies suggest they either do not affect perceptions (Caldwell & O'Reilly, 1982) or do so in relatively weak fashion compared to objective characteristics (Ganser, 1980).

The most parsimonious conclusion to be drawn from these three sets of research is that the objectivity question remains undecided both theoretically and practically. Yet, in our opinion, this inconclusiveness may be due as much to asking the wrong question as to ambiguities in the research. At the theoretical level, there would appear to be two types of questions that could be asked about the extent to which incumbents' ratings of job characteristics map objective characteristics of the tasks themselves. The first of these asks whether factors other than objective characteristics of the jobs themselves, such as verbal statements by others in the work setting about the job characteristics or personal characteristics of the perceiver, can influence job incumbents' perceptions of job characteristics. The answer to this question is clear. Of course they can. This has been demonstrated for JDS ratings (O'Reilly & Caldwell, 1979; White & Mitchell, 1979) and is entirely consistent with a long history of research that shows that the perception of any stimulus is a function of characteristics of the stimulus itself, of the context in which the stimulus is placed, and of the perceiver. Thus, there is no need to continue to ask whether JDS ratings can be affected by factors other than the objective characteristics of the job itself.

Once it is accepted that job incumbents' perceptions of job characteristics can be
affected by factors other than the objective characteristics of the job itself, the more interesting questions address the contribution of factors other than objective characteristics of the job to variance in perceptions of job characteristics. These questions can be framed in the strong or weak sense. The strong form asks how much variance in job characteristics perceptions is attributable to other variables of interest. The weak form asks whether a particular variable not considered part of the objective job contributes to the variance in job characteristics perceptions.

Unfortunately, both of these types of questions are flawed. The strong question suffers from practical limitations. As a theoretical question, it is a question about explained variance in perceptions in the population of jobs that are of interest to the job characteristics theory. This population of jobs is very large, so large that it is extremely unlikely that research on jobs will be able to adequately sample the population in a way that will allow for an acceptable empirical answer to the population question. Certainly past research that has calculated the percent of variance in perceptions due to social cues or personal characteristics of raters with as few as one job has not provided a reasonable answer to the population question. However, when the question is limited to estimating the percent of variance in job characteristics ratings due to particular nonjob variables for a particular job or a particular situation, the question can be answered, but it is of little interest beyond the particular setting under study. Even studies that do adequately sample the jobs, such as studies relying on large-scale, national data bases, rarely sample or adequately measure the kinds of contextual or personal factors most likely to affect perceptions.

The weak form of the question involves identification of variables not included as part of the objective characteristics of the task that contribute to variance in rated perceptions of job characteristics by job incumbents. This question can be addressed empirically and is of interest. That is to say, if one is interested in using incumbents’ ratings of job characteristics to indicate the nature of the job, then it is important to know what variables other than those in the job itself may affect the ratings. The weak form of the question simply attempts to demonstrate that a particular variable does, under certain conditions, affect such ratings. Observations of such effects are both theoretically and practically interesting.

Practical and theoretical limits in observing variance due to social or personal variables yields very little information related to the primary purpose for which all this research was undertaken—that is, the purpose of understanding the correspondence between incumbents’ ratings of job characteristics and objective properties of the job. In spite of the differences in findings reported in the three areas of research on job perceptions reported earlier, the evidence is clear that incumbents’ perceptions are often affected by other factors. However, whether or to what extent the variance is due to objective job characteristics cannot be addressed directly without clear standards for what is or is not an objective characteristic of the job, and such standards or criteria do not and will not exist. The absence of such standards is particularly the case for some of the job dimensions of the JDS which are, by their very nature, subjective. For example, the assessment of whether a job is significant cannot be defined independently of the value system of the person or persons making the rating. At a normative level, it is reasonable to say that certain jobs should be seen as significant by most people in a particular culture or subculture, but beyond that, there really is little basis for making any absolute claims about the significance level of the dimension. Thus, strictly speaking, questions about the objectivity of job incumbents’ perceptions are unanswerable.

The approach of job-role differentiation (JRD) outlined in this chapter obviates the
objectivity issue by noting that both jobs and roles are socially constructed and neither is objective. Jobs are social constructions of the prime beneficiaries or their agents, and roles are social constructions of the actors in the job incumbents' role set, including him or herself. The meaning attributed to consensus or agreement between job incumbents' perceptions of job characteristics will vary depending on whether job or role elements are being addressed. For example, for jobs where prime beneficiaries or their agents have formalized the job characteristics and described them in some written document, agreement between job incumbents' perceptions and the public descriptions may be attributed to the accuracy of incumbents' perceptions. However, if the job characteristics are ones that fit the role definition and have emerged from the dynamic interaction among individuals in a particular work setting, then the incumbents' perceptions should be just as valid as those of any other of a number of actors in that setting. Also, a lack of agreement between incumbents' self-reports of task characteristics and some specific group of others (e.g., coworkers) may not reflect lack of agreement with other sources (e.g., supervisors). Moreover, lack of agreement may not reflect inaccuracy of perceptions inherent in one party or another as much as it reflects the recognition of power differentials; incumbents may conform to the emergent task elements thrust upon them from a more powerful source but may ignore task elements emerging from less powerful ones.

With respect to roles, social and personal influences on perceptions can hardly be treated as error; they represent legitimate sources of emergent task elements. JRD helps to suggest where such influences will be most pronounced. Given the formality with which established elements are treated, we would expect that it is primarily the emergent elements of the role that will be susceptible to this kind of influence.

The O'Reilly et al. (1980) study, for example, dealt with a role (public health nurse working in the field) where there was likely to be significantly more variance in emergent task elements. The nature of the work, the supervision (or lack thereof), and the context in which it took place were highly conducive to role expansion or contraction. Under these conditions, characteristics of the person and the context were likely to profoundly influence responses to the JDS, such that different incumbents were likely to rate the job differently. Rather than interpreting the differences as perceptual bias, however, JRD suggests that these differences may be real and could be traced to differences in emergent task elements.

However, the Ganster (1980) study, which dealt with assembly tasks in a lab setting with college students, was not very conducive to role expansion or contraction. Under these conditions, only established task elements (which do not vary across individuals) affected responses to the JDS, and there was little in the way of emergent task elements to create variation among respondents.

In this discussion we do not mean to imply that the established job elements constitute the "true score" or are unchangeable. Rather, the research questions raised now turn to the amount and nature of the influence going from one social source to the other. Power differences and the fact that established elements are formalized and written down ensures influence of the prime beneficiaries on incumbents.

However, a great deal of influence also goes the other way because of the remoteness of the prime beneficiaries to the environment in which the jobs must be enacted. This occurs most dramatically when interviews, observations, or questionnaires of job incumbents are used to "update" job analyses. It is here where the JRD approach is also relevant for the job-analytic approach to jobs. The job-analytic approach to jobs, because it is
completely inductive, will inevitably capture both established and emergent task elements in the process of collecting data on the jobs. Although obviously not using the terms that we are using here, researchers in the job-analytic school have hardly been insensitive to the fact that the source of the data can affect the description of the job. It is not surprising, therefore, that a parallel literature dealing with agreement among raters on job ratings (e.g., incumbents, supervisors, or external agents) appears in that literature (Cornelius, DeNisi, & Blencoe, 1979; Hazel, Madden, & Christal, 1964; Meyer, 1959; Smith & Hakel, 1979). This line of research, however, is rarely cited by investigators doing essentially the same work in the area of job characteristics theory.

Over time, job-analytic practices inevitably lead to changes in the classification of emergent task elements, such that emergent elements often become established elements that are written into formal job descriptions. It could also be the case that former elements that might have been established by the prime beneficiaries may disappear altogether. The conditions under which this is most likely to occur and when it is most likely to enhance organizational effectiveness would seem a critical matter to pursue. Under certain conditions this may be a very adaptive response which allows a large organization to stay in tune with its environment and thus promote the goals sought by the prime beneficiaries. In other instances, it could become a form of abdication on the part of the prime beneficiaries that may eventually lead to severe goal conflicts among organizational subgroups and organizational declines. A redirection of research along lines of exploring the movement of elements from jobs to roles and vice versa would seem very informative. It would also promote the use of research techniques such as archival analysis and content analysis (e.g., of formal job descriptions at various times in an organization's history), which to date have received little attention in this area.

**Job Dimensionality.** There has been much research directed at the dimensionality of jobs (Campion & Thayer, 1985; McCormick et al., 1972; and Wood, 1986, to name a few). This has been no less true with the research spawned by the job characteristics theory.

Unlike many theories of jobs, the presentation of JCT occurred simultaneously with that of a measurement instrument developed for the theory, the *Job Diagnostic Survey* (JDS; Hackman & Oldham, 1976). The availability of the instrument had a strong impact on subsequent research. First, it restricted the types of issues that were researched. For example, there have been over 30 empirical tests of growth need strength (GNS) as a moderator of the relationship between characteristics of jobs and job incumbents' responses to them, but there have been few tests of other individual differences variables that might affect these relationships, such as contextual satisfaction or ability. The JDS contains a measure of GNS but not of these other measures. Thus, almost all questions regarding possible effects of individual differences in job settings involved GNS as the individual difference.

A second effect of the simultaneous occurrence of the theory and the measure was the tendency to confound criticisms of the theory with criticisms of the measure. This was particularly true regarding objectivity and dimensionality. Regarding objectivity, the theory was often criticized for purporting to deal with objective properties of the job when in fact, from the outset, it was addressing incumbents' perceptions of jobs (Roberts & Glick, 1981).

Similarly, care must be taken in reading the literature to disentangle theoretical issues from measurement ones with respect to the nature and number of job dimensions. Fortunately, dimensionality research has also been conducted on the *Job Characteristic Inventory*
(JCI; Sims, Szilagy, & Keller, 1976), a widely used alternative to the JDS.

Factor-analytic studies of the dimensionality of the JDS and JCI have failed to converge on any one factor solution. While a few studies have confirmed the presence of the five dimensions suggested by the theory (Brass, 1979; R. Katz, 1978; Lee & Klein, 1982), most have not (Champoux, 1978; Dunham, 1976; Dunham, Aldag, & Brief, 1977; Gaines & Jermier, 1983; O'Reilly et al., 1980; Pierce & Dunham, 1978; Pokorney, Gilmore, & Beehr, 1980; Rousseau, 1977; Sekaran & Trafon, 1978), and for the ones that have not, there was little consistency in the factors that were obtained. Explanations for the inconsistency have been traced both to characteristics of the items of the measuring instruments, such as the presence of negatively loaded items (Idaszak & Drasgow, 1987; Kullik, Oldham, & Langer, 1988) and to sample characteristics such as age, education, and status (Fried & Ferris, 1986).

The research on the dimensionality as viewed from the standpoint of JCT is one of the clearest areas for which a distinction between jobs and roles would be beneficial. In spite of the fact that the factor-analytic studies investigating dimensionality were interested in the dimensions of jobs, almost without exception (e.g., Birnbaum et al., 1986) these studies have used persons rather than jobs as the unit of analysis. That is to say, job incumbents' ratings of job characteristics were factor analyzed without regard for the jobs held by those job incumbents. In some cases, job incumbents all were in the same job or were from as few as two or three jobs (Evans, Kiggundu, & House, 1979; Orpen, 1979; Pokorney et al., 1980). In the worst case, when only one job is used, the intercorrelations among the ratings of job dimensions are likely to be highly dependent on the idiosyncratic nature of that job. Thus, little or no information is gained about the dimensionality of jobs in any population that would be of interest to those concerned about job design or work motivation. Given the inattention that has been paid to the sampling of jobs, it is not surprising that the literature on dimensionality is inconclusive.

Although making a clear distinction between jobs and roles as has been suggested in this chapter does not provide clear answers to the specific content of job dimensions or to the number of dimensions that is most appropriate, it does structure the approach to job and role dimensionality. Most importantly for asking questions about the dimensionality of jobs, the unit of analysis must be the job. Each case in the analysis should be a job, and each job should be represented once and only once in the analysis. To be consistent with JRD as developed here, we would also suggest that the content of job dimensions should consist of those elements that are used to create the formal job system by the prime beneficiaries or their agents. Dimensions of roles, on the other hand, could be explored within jobs. In this case, the individual differences in perceptions of role dimensions when on jobs with identical job elements provide the basis for role dimensions, although the variance between individuals may be due to things other than the roles, such as response styles or rating errors.

Job-role differentiation (JRD) moves the focus away from the five core characteristics of jobs by placing the emphasis on a universe of elements partitioned into two groups and labeled jobs and roles. Once the universe of task elements is defined, determining the number of dimensions may be useful in terms of parsimony of description. However, most of the factors will be a function of the choice of instrument used to delineate the elements. For example, McCormick et al. (1972) described a universe with 194 elements and 33 dimensions, and Campion and Thayer (1985) described a universe with 70 elements and 4 dimensions. Whether one system of condensation is a better representation of the universe described by the instrument than another is much
less important than the comprehensiveness of the instrument itself. Moreover, for certain purposes (e.g., increasing satisfaction), because of the strong relationship between the core characteristics and satisfaction, it may be useful to aggregate various task elements by the core characteristics they influence. The purpose under such conditions is one of control rather than description, and the condensed structure best suited for one purpose is unlikely to be the best for other purposes. If the goal is mapping individuals’ implicit theories about job characteristics, other factor schemes will prove more useful (e.g., Stone & Gueutal, 1985). If the goal is job evaluation, still another scheme may be best (Hay, 1981). Any system for reducing the number of elements is simply a taxonomy, and the “goodness” of the taxonomy is judged in terms of its usefulness for the purpose for which it was proposed.

One final point regarding the dimensionality of jobs and JCT is that the whole issue takes on less importance for JCT when two points are considered. First, the five core characteristics have typically been combined into a unitary composite, or the motivational potential score (MPS) through either a simple additive formula or the multiplicative formula; the empirical evidence suggests that it does not matter a great deal which linear combination is used (Arnold & House, 1980; Ferris & Gilmore, 1985; Hackman & Oldham, 1976; Umstot, Bell, & Mitchell, 1976). Second, no differential predictions are made for any one core characteristic and outcomes. For these reasons, the integrity of any one core characteristic is simply not that critical.

Impact of Jobs on Job Incumbents

Impact of Jobs on Socioemotional Outcomes. JCT originally predicted that job characteristics affect employees’ satisfaction with the work, intrinsic motivation, and performance. Without question, the evidence for a relationship between perceived task scope and satisfaction is strong (Fried & Ferris, 1986; Stone, 1986), often accounting for over 50 percent of the variance in various facets of satisfaction.

One theme of research within this area dealt with exploring the degree to which this strong relationship was artifactual—that is, a function of common method variance (Roberts & Glick, 1981) or priming effects (Salancik & Pfeffer, 1977). The literature in this area has not been highly supportive of these alternative explanations. For example, as already mentioned, several studies indicate that observers’ ratings of job characteristics explain about as much variance in incumbents’ satisfaction as do incumbents’ own ratings (Birnbaum et al., 1986; Oldham et al., 1976; Stone & Porter, 1975). Moreover, the observed relationships between task characteristics and satisfaction were no higher in field settings than in laboratory settings where tasks were manipulated (Stone, 1986). This finding questions the impact of common method variance, since this source of variance should be inflated in field relationships (where measures of task characteristics and outcomes were both obtained from self-reports) relative to those in the laboratory (where outcomes were measured with self-reports, but task characteristics were manipulated). Research exploring the impact of priming as an explanation for task characteristics-satisfaction relationships has also been unsupportive (Brief & Aldag, 1978; Spector & Michaels, 1983; Stone & Gueutal, 1984).

Another theme in the literature on satisfaction and task characteristics deals with the potential reciprocal relationship between job characteristics and satisfaction. Several studies have examined the possibility that satisfaction could cause enhanced perceptions of task characteristics, and results from these studies are generally supportive of this position (Adler, Skov, & Salvemeni, 1986; Caldwell & O’Reilly, 1982; Hogan & Martell, 1987; James & Jones, 1980; James & Tetrick, 1986; O’Reilly & Caldwell, 1979). From a JRD perspective, one way this could result is from a process
whereby individuals who are satisfied with the work tend to take on more emergent elements, resulting in the eventual development of a role with increased task scope.

The final and most pervasive theme regarding affective outcomes deals with the moderating influences of GNS on the relationship between task characteristics and satisfaction. The evidence here has been reviewed elsewhere in no fewer than seven articles: four traditional narrative reviews (Graen, Scandura, & Graen, 1986; Griffen, Welsh, & Moorehead, 1981; O'Brien, 1982; Roberts & Glick, 1981) and three meta-analytic ones (Fried & Ferris, 1986; Loher, Noe, Moeller, & Fitzgerald, 1985; Spector, 1987). The four narrative reviews all concluded that there was at best very weak support for the moderating effects of GNS. The three meta-analytic reviews were more supportive of the proposed moderating effect; however, each of these reviews came to slightly different conclusions regarding specifics about the nature of the interaction.

Viewed from the perspective of JRD, GNS is a variable that would be more likely to directly affect task scope, as opposed to functioning as a moderator variable of the task scope–outcome relationship. The direct effect also would be true for knowledge, skills, and abilities (KSA), moderators that were proposed in the original theory but which received much less attention than GNS. Specifically, given that within jobs the established task elements are fixed, individuals with high GNS and high KSA would be more likely to take on additional emergent task elements. Although such main effects have not been the focus of JCT researchers, it is often the case that the main effects for GNS on outcomes are stronger empirically than their moderating effects (Champoux, 1980; Pierce, Dunham, & Blackburn, 1979; Pokorney et al., 1980).

The Impact of Job Characteristics on Performance. The proposition that job characteristics would be related to performance has received much weaker empirical support (Fried & Ferris, 1987; Stone, 1986). Fried and Ferris (1987) note that the strongest relationship between task characteristics and performance deals with task identity, where the 90 percent credibility value for the average correlation is a mere .13. Fried and Ferris divided the 13 studies that examine the task characteristics performance relationship into two subgroups: cross-sectional (or what they refer to as nonmanipulative) and longitudinal (manipulative).

Looking at research reviewed by Fried and Ferris from a JRD perspective suggests that the performance studies might better be divided into three subgroups: cross-sectional with single job categories, longitudinal with a single job, and cross-sectional with multiple jobs. Currently the tasks characteristics literature does not recognize the conceptual difference underlying these three types of studies. However, the approach to JRD developed here highlights their difference. Moreover, JRD highlights the fact that the divisions among these studies are not just methodological, but instead reflect fundamental differences in how jobs are conceptualized.

First, turning to the longitudinal or manipulative studies, it would appear that researchers here are interpreting JCT as a theory of what JRD refers to as jobs. The rationale for a task complexity–performance relationship comes directly from JCT. That is, according to JCT, the scope of the job has a positive impact on the psychological state of the incumbent and in turn motivates the person's performance motivation (Griffin, 1981). It is an approach to jobs that is consistent with JRD theory because the task is reestablished for all job incumbents in a similar fashion.

However, when one looks at the cross-sectional studies with single job categories, it appears that researchers have interpreted JCT as a theory of what JRD refers to as roles. That is, within a single job category, there is no variation in established task elements, and thus the only source of task scope variations is
through emergent elements. The same rationale that JCT uses to explain why increased task scope may increase performance in a job that has been manipulated could still apply to studies of this variety. However, JRD offers an alternative explanation. In the JRD framework, differences in reported levels and job scope across people in the same job are viewed as a result of an ongoing negotiation between the job incumbent and members of his or her role set. This raises the possibility that the direction or causation may be reversed—that is, job incumbent performance may affect job scope or, to be more technically accurate, role scope. In this case, those persons who perform their role well may have their role altered in such a way that the role at time \( t + 1 \) has greater scope than at time \( t \). This effect of role negotiations and expansion for those that perform well has been observed by Graen and his colleagues in the leadership domain (Graen & Scandura, 1987).

Comparing the results for cross-sectional studies versus longitudinal studies, Fried and Ferris found that the task scope—performance relationship increased \( (r = +.23) \) when longitudinal studies were removed from the analysis. Since the JCT rationale for a scope—performance relationship predicts such a relationship only for the longitudinal studies, it would be tempting to interpret this research as supporting the JRD prediction regarding reverse causality.

The third set of studies that looked at task scope—performance relationships were cross-sectional with multiple jobs. A severe limitation of such research is the absence of a common performance metric across jobs. Performance units, both qualitative and quantitative, vary as a function of the value of the job, making it difficult to obtain high-quality measures that compare performance on different jobs. Some significant advances have recently been made in this area (e.g., Pritchard, Jones, Roth, Stuebing, & Ekeberg, 1988), but most past research has not provided very good ways for combining performance data across tasks and removing the task effects on performance.

**Theory and Research on Role Characteristics**

In contrast to the work on jobs where there are major differences in the three schools of thought on the construct itself, views of roles all share the same overall perspective. At the most basic level, roles exist in the belief system of one or more persons. The beliefs that comprise the role, at the very minimum, relate to the behaviors of persons with whom the role is associated. In addition, although roles themselves are patterns of individual behaviors where the behaviors can be described in quantitative and qualitative terms (Naylor et al., 1980), role theories or models have focused less on the content of the roles than on the process by which roles are developed, transmitted, and enforced. The discussion of roles that follows will first present common models of roles, followed by a description and evaluation of research on roles in light of the job—role differentiation perspective adopted here.

**Role Theory**

The classic role process is the role episode described in the works of Kahn and his colleagues (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; D. Katz & Kahn, 1978) and depicted here in Figure 3. This model is based on the assumption of an interaction between two persons—the person performing in the role (focal person) and another person who holds a set of beliefs that constitute the role (role sender). The role sender communicates this set of beliefs (termed the sent role in Figure 3) to the focal person. The focal person receives this communication in the form of the perceived role and responds to it by taking some action (role behavior). Finally, that behavior is fed back to the role sender and serves as
an input into the role sender's belief system. A role sender's perceptions of the role behavior are then compared to some standard or expectation held by the role sender for the focal's behavior, and the result of that comparison may influence the sender's expectations for future behaviors. The role expectations, in turn, are the basis for the sent role as the whole process recycles. This basic process has been elaborated on by adding individual and organizational variables likely to influence it (e.g., D. Katz & Kahn, 1978) and also by recognizing that the role sender may represent a number of persons, including the focal person.

Graen (1976) termed the role episode a role-taking model and contrasted it with role making. The primary difference between the two models, according to Graen, was the passivity of the focal person. As depicted in Figure 3, focal persons are presented with role behaviors from the role senders, and they react to them. Graen and his colleagues (Dansereau, Graen, & Haga, 1975; Graen, 1976; Graen & Scandura, 1987) argued that focal persons are much more active than this. Typically, focal persons are highly motivated to possess roles in which they can perform successfully. As a result, they do not sit passively by and receive whatever roles role senders decide to give them; rather, focal persons actively attempt to influence role senders as they try to build a role that will be mutually satisfactory to role senders and to themselves. Graen has labeled this more active process role making.

Most recently, Graen (Graen & Scandura, 1987) incorporated role taking into an expanded three-phased longitudinal model of role making that he calls a theory of dyadic organizing. This model is presented in Figure 4. The behaviors of interest to the theory cover a time sequence beginning with the focal person's entry in the organization and ending when the roles and the focal person are well established. Although the model is directed at leader-member dyads, the descriptive phases need not be so restrictive. Phase 1 is the role-taking phase that is nearly identical to the role episode of Figure 3. It is seen as little more than the initial encounter between role senders and focal persons when the latter attempt to get some idea of what is to be done in the role. This phase is followed immediately by the second phase, in which focal persons' roles are developed through a series of behaviors involving sampling various behaviors, negotiating, persuading, and in general working out the nature of the role.
FIGURE 4

The Role-making Model Adapted From Graen and Scandura's Theory of Dyadic Organizing

According to Graen and Scandura (1987), the second phase varies in length as a function of both the nature of the tasks incorporated into the role and the persons involved in the role-making process. Eventually it ends, and when it does, it is followed by the third and final stage, role routinization. Here the relationships between role senders and focal persons stabilizes as both commit themselves to the expected patterns of behavior (roles) that the focal persons are to perform. Interdependencies are established that are understood by both parties and allow for an effective interaction between the parties without investing large amounts of effort defining and maintaining those understandings. If no understanding or commitment can be reached, either the role process remains in the role-making stage or the role relationship breaks down. In the latter case, one or the other breaks off the interaction necessary to maintain the role relationship. Figure 4 presents a schematic of the role-making process for the dyadic interaction between a supervisor (role sender) and a member of his or her work group (focal person).

The theory of dyadic organizing provides an excellent framework for understanding the dynamic nature of the role process. It captures the interaction between role senders and focal persons, and it provides a recognition of the active involvement of the focal persons and dynamic shifts in role behaviors. In particular, the final stage implies that role behavior can continue for extended periods without much investment on the part of either the focal person or the role sender in monitoring behaviors. The classic role episode suggests constant monitoring. Yet the cognitive demands of such a high level of awareness are not consistent with the more recent views of habitual autonomic responding (e.g., Gersick & Hackman, 1990; Mitchell & Beach, 1990).

Like all general models in the role area, Graen’s model is more a heuristic structure for viewing role issues than a testable model of role behavior. He has conducted research within the general framework of a model, the results of which are consistent with that framework (e.g., Graen & Cashman, 1975; Graen, Liden, & Hoel, 1982; Graen, Novak, & Sommerkamp, 1982). Yet this research is best viewed as a series of topics within the role domain, with data that are consistent with the overall view of roles; the research is not, nor was it intended to be, a critical test of the model itself.

Role Ambiguity and Conflict

Although the potential importance of roles and the complex processes represented by the role episode and its logical expansion into a role-making sequence has been well accepted within the organizational sciences, the attention given to roles has been limited to two particular role constructs: role ambiguity and role conflict. Role ambiguity refers to the level of uncertainty or lack of clarity surrounding expectations about a single role. Expectations about specific behaviors that are to be performed in the role may be unclear, and so may be expectations or beliefs about the outcomes likely to result from the behaviors (Cook, Hepworth, Wall, & Warr, 1981). Role conflict involves an incompatibility of demands facing the focal person (Cook et al., 1981). This incompatibility can originate from any number of sources, one of whom may be the focal person him or herself. For example, there may be conflict between the way the focal person believes he or she should perform a role and the beliefs of that person’s supervisor or spouse. Likewise, there may be conflict between co-workers’ and supervisors’ or co-workers’ and customers’ expectations for how a particular person’s role should be performed. The nature of the conflicting expectations is of two types: time conflicts and logical or ethical inconsistencies (Naylor et al., 1980).

There are a number of definitional issues that may influence the anticipated antecedents
and consequences of role ambiguity and conflict. Unfortunately, these are rarely addressed. For the most part, research on these role constructs pays little attention to presenting precise definitions of what is meant by role ambiguity or conflict in the research. In fact, in a recent meta-analysis by Jackson and Schuler (1985), which provided an excellent review of antecedents and consequences of role ambiguity and conflict, the authors launched into the review before offering any discussion of the construct or operational definitions of role ambiguity or role conflict. Their approach was not atypical for role conflict and ambiguity research. Apparently it is assumed among researchers in this area that labels are so clear, or that the readers are so well informed, that definitions are unnecessary.

The failure to define constructs may be due in part to the fact that the vast majority of studies in organizational settings rely on a single measure of the two variables. The measure is that of House and Rizzo, (1972a, 1972b). Given its popularity, its psychometric properties and other characteristics have been investigated, and it has held up well to such scrutiny (Schuler, Aldag, & Brief, 1977). However, these investigations have focused on the factor structure and various estimates of reliability rather than on the construct validity of the scale.

Research. Jackson and Schuler (1985) provided a good inductive review of the role ambiguity and conflict literature. Tables 1 and 2 summarize the literature of Jackson and Schuler’s (1985) meta-analysis. For both ambiguity and conflict, the authors used identical sets of antecedent variables clustered into those that were derived from the organizational setting and those from the focal person. The same sets of consequence variables for ambiguity and conflict were focal persons’ affective reactions and their behaviors. In contrast to other overall reviews (e.g., Van Sell, Brief, & Schuler, 1981), the contents of the sets were empirically determined from an analysis of the literature rather than from some theoretical framework.

In Table 1, three sets of organizational context antecedent variables frequently correlated with role ambiguity are ordered in terms of their proximity to the focal person and his or her job context. At the most distant level, the organization, both formalization and level in the organization were found to correlate significantly with feelings of role ambiguity. The difference in magnitude of the relationship is consistent with the nature of the constructs addressed. Formalization at the organizational level refers to the extent that work practices are guided by rules, regulations, practices, and policies that make clear what is expected of persons in the organization. Presumably, the formalization also is likely to incorporate the nature of the role expectations sent to focal persons. The size of the estimated population correlation is consistent with the prediction. However, job level is believed to impact on roles more indirectly. In this case, it is assumed that, in general, jobs are more complex and less completely specified at higher levels of the organization. It is therefore assumed that the roles sent to role senders should also be more ambiguous. However, at least two conditions must hold for levels to relate to reports of ambiguity; job complexity must relate closely to role complexity, and levels must be closely related to job complexity. These assumptions are consistent with the data, but the likely slippage at each juncture means that high correlations between organizational level and role ambiguity should not be expected.

The remaining two categories or clusters of antecedents within the immediate work environment are those associated most directly with elements of the jobs or tasks of the focal persons and those associated with interpersonal interactions, primarily with the supervisors. With one exception, the correlations are consistent with the generalization that
### Table 1

Summary of Meta-analysis Results for Correlates of Role Ambiguity

<table>
<thead>
<tr>
<th>Correlates</th>
<th>Number of Studies</th>
<th>Number of Cases</th>
<th>$\bar{r}$</th>
<th>SD</th>
<th>&quot;True $\bar{r}$&quot;</th>
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<td>Organizational level</td>
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TABLE 1

Summary of Meta-analysis Results for Correlates of Role Ambiguity (continued)

<table>
<thead>
<tr>
<th>Correlates</th>
<th>Number of Studies</th>
<th>Number of Cases</th>
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Note: $\bar{r}$ is the weighted average correlation; SD, is the standard deviation for $\bar{r}$; "True $\bar{r}$" is the average weighted correlation corrected for the reliabilities of the variables and restriction of range in the predictors, using methods described by Hunter, Schmidt, and Jackson, (1982); *indicates that the 90 percent confidence interval does not include the value of 0.00.


the more that social and task conditions in focal persons' immediate environments provide clear cues about what should and should not be done on the job, the lower the level of role ambiguity reported.

The relationship between role ambiguity and the variables typically labeled consequences of role ambiguity are very consistent. The parsimonious conclusion is that role ambiguity is an unpleasant state. For behavioral variables, the results are less clear; there was a low positive relationship between absenteeism and ambiguity. The relationship was negative for performance when the measures of performance were ratings but not when they were objective measures.

The most obvious impression from Table 2 is that these data look a lot like those of Table 1. From an empirical standpoint, the similarity is not surprising, given the fact that the two role constructs have been estimated to correlate between .37 (Fisher & Gitelson, 1983) and .42 (Jackson & Schuler, 1985) in the population when sample correlations are corrected for unreliability and range restriction. For antecedents, only ratings of the formal structure of the organization and task autonomy differed from those found for role ambiguity. For consequences, the pattern of results was nearly the same, with somewhat lower relationships between conflict and behavioral variables than was the case for ambiguity.

Methodological Limitations of Research. On one hand, a certain degree of comfort could be gained from the convergence across reviews of the literature and between role constructs. In particular, both role ambiguity and role conflict are frequently associated with negative affective states or with states in the environment that, a priori, are judged to produce uncertainty either about what the person is supposed to do or about the consequences of displaying given role behaviors.
### TABLE 2

Summary of Meta-analysis Results for Correlates of Role Conflict

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<th>Correlates</th>
<th>Number of Studies</th>
<th>Number of Cases</th>
<th>( \bar{r} )</th>
<th>SD, “True ( \bar{r} )&quot;</th>
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<td>Affective reactions</td>
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<td>22</td>
<td>4022</td>
<td>-0.30</td>
<td>0.08</td>
</tr>
<tr>
<td>Co-workers</td>
<td>11</td>
<td>2893</td>
<td>-0.28</td>
<td>0.07</td>
</tr>
<tr>
<td>Pay</td>
<td>14</td>
<td>3399</td>
<td>-0.20</td>
<td>0.08</td>
</tr>
<tr>
<td>Advancement</td>
<td>14</td>
<td>3287</td>
<td>-0.23</td>
<td>0.11</td>
</tr>
<tr>
<td>Tension/anxiety</td>
<td>23</td>
<td>4035</td>
<td>0.28</td>
<td>0.13</td>
</tr>
<tr>
<td>Commitment</td>
<td>11</td>
<td>2583</td>
<td>-0.24</td>
<td>0.14</td>
</tr>
<tr>
<td>Involvement</td>
<td>10</td>
<td>2326</td>
<td>-0.16</td>
<td>0.07</td>
</tr>
<tr>
<td>Propensity to leave</td>
<td>13</td>
<td>1915</td>
<td>0.21</td>
<td>0.11</td>
</tr>
</tbody>
</table>
## TABLE 2

Summary of Meta-Analysis Results for Correlates of Role Conflict (continued)

<table>
<thead>
<tr>
<th>Correlates</th>
<th>Number of Studies</th>
<th>Number of Cases</th>
<th>$\bar{r}$</th>
<th>SD, “True $\bar{r}$”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral reactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absence</td>
<td>3</td>
<td>424</td>
<td>-0.01</td>
<td>0.12</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td>3</td>
<td>769</td>
<td>-0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Others’ ratings</td>
<td>14</td>
<td>3119</td>
<td>-0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Self-ratings</td>
<td>7</td>
<td>1037</td>
<td>-0.02</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Note: $\bar{r}$ is the weighted average correlation; SD, is the standard deviation for $\bar{r}$; “True $\bar{r}$” is the average weighted correlation corrected for the reliabilities of the variables and restriction of range in the predictors, using methods described by Hunter, Schmidt, and Jackson (1982); *indicates that the 90 percent confidence interval does not include the value of 0.00.

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In addition, the relationship between role constructs and affect tends to be stronger with ambiguity than with conflict, and neither construct relates very strongly to behaviors.

On the other hand, a closer look at much of this research raises some concerns. The most serious of these relates to the self-report nature of the data. As has already been mentioned, both role ambiguity and role conflict have been measured on the same scale—a scale in which the initial development was aimed at creating two relatively independent dimensions. Yet, as has been mentioned, the estimate of the population correlation between the two constructs is approximately 0.40. Furthermore, if one compares the similarity in the pattern of relationships between role conflict and various outcomes with the same relationships for role ambiguity (i.e., the data of Table 1 with that of Table 2), it is clear that the discriminant validity of the two scales is extremely low. As a rough index of their similarity, we correlated the two sets of correlations from Jackson and Schuler (1985) reported in Tables 1 and 2 and found a correlation of 0.87. Thus, either the constructs are not independent or there is a great deal of method variance confounding much of the research using the House and Rizzo (1972b) scale. We suspect both conclusions are reasonable.

The self-report nature of the data raises another well-recognized limitation of the research when attempts are made to interpret the data of Tables 1 and 2. With the exception of two of the performance measures, all the remaining variables, both antecedents and consequences, were measured by questionnaire items that were administered to the same persons who completed the role ambiguity and conflict scales. Furthermore, with few exceptions, the antecedent or consequent variables were measured at the same time as the role measures, making the inference of causation
implied in the labels antecedent and consequent extremely tenuous.

The solution to the problem of self-report measures is less apparent than its recognition. For task characteristics such as task variety and autonomy, a straightforward recommendation is that others besides focal persons provide assessments of these variables to reduce common method biases and tendencies for individuals to respond to all items in a consistent manner. Both method bias and consistent responding tend to inflate the observed correlation between attributes of tasks assessed in this manner and role constructs. However, subjective reports from focal persons are appropriate for measuring constructs that are themselves subjective states of the persons of interest. If role ambiguity and role conflict are construed as constructs of the focal persons' belief systems, they, too, are best measured directly using self-report measures. Therefore, those measures that appear most appropriate both theoretically and practically for each set of constructs are inherently flawed when used together.

Conceptual Limitations of Research. In response to the common method problem, some have suggested that the role constructs themselves be measured by assessing role characteristics independent of focal persons (e.g., Jackson & Schuler, 1985). Yet the source for obtaining estimates of role characteristics is less a measurement issue than a conceptual one. Recall that earlier it was pointed out that role ambiguity has been defined as the degree of clarity or certainty surrounding expectations about a single role. Referring back to the role episode of Figure 3, such expectations are located in the received role box and clearly are part of the domain of the focal person. Therefore, the appropriateness of the answer to the source problem is dictated by the theory, and the theory implies that ambiguity is a perceptual construct residing within the cognitive framework of the focal person. We caution that, in reaching this conclusion, we do not deny that certain conditions in the external environment of the individual are more likely than others to produce feelings of role ambiguity. Clearly, there are. Furthermore, learning about these conditions is both interesting and important with respect to role ambiguity. In particular, knowing that role ambiguity is associated with negative affective states and desiring to attempt to minimize role ambiguity requires that one understand the environmental variables believed to influence role ambiguity. Accepting such interest, however, does not imply that role ambiguity is a condition of the role environment but only that conditions in the role environment create behavioral expectation cues that vary in clarity.

The issue of external conditions versus internal states also is relevant to role conflict. Here, however, the response to the internal-external dilemma is complicated by the incompatibility between the stated definition of role conflict and the definition in use. We stated earlier that role conflict, if defined by researchers, is defined as an incompatibility of demands facing the focal person. Strictly speaking, according to this definition, role conflict could be defined external to the individual in terms of the number of roles that are being sent to him or her. However, clearly, from the way in which role conflict is treated in the literature, the conflict of interest is the focal person's perceptions of the incompatibility of the role demands. Just as was the case for role ambiguity, if role conflict is going to be a construct that can be addressed by changing conditions in the role set outside the focal person, for practical reasons it is hoped that some correspondence exists between perceptions of incompatibility and actual incompatibility in sent roles.

Redefining role conflict as the focal person's perceived incompatibility between role demands brings the definition more in line with the definition in use in the literature reviewed earlier, but, according to Naylor et al.
(1980), it still lacks one critical element for the experience of conflict. Omitted is the inclusion of perceptions about valued outcomes associated with compliance with one or more of the roles and noncompliance with the others. These authors stress that the primary interest in role conflict is in the effect of perceptions of conflict on the focal person. Furthermore, this effect cannot be anticipated without some knowledge about the magnitude of the value of the outcomes associated with each role and about the similarity of the outcomes.

To illustrate Naylor et al.'s point, consider two roles with a particular level of incompatible demands on the focal person, and assume that the person is well aware of the incompatibilities. Consider the following three sets of perceptions about the nature of the valued outcomes that the focal person believes are associated with compliance with each role:

<table>
<thead>
<tr>
<th>Case</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outcomes associated with neither A nor B are valued.</td>
</tr>
<tr>
<td>2</td>
<td>Outcomes associated with A are highly valued; those associated with B are not.</td>
</tr>
<tr>
<td>3</td>
<td>Outcomes associated with both A and B are both highly valued.</td>
</tr>
</tbody>
</table>

According to the commonly stated definition of role conflict, all three of the situations listed above are equal in the degree of role conflict they produce; under all conditions, the incompatibility of role demands was the same. According to Naylor et al. (1980), conflict is greatest in Case 3. In this situation, the choice of compliance with one role and noncompliance with the other should be difficult; for others it should not. These authors also pointed out the House and Rizzo (1972b) scale for measuring role conflict and ambiguity does not take into account the compatibility and magnitude of rewards associated with alternative roles. This omission may be one of the reasons that role conflict research findings are less consistent than research on role ambiguity. Although it would be valuable at this point to go back to the literature on role conflict to see whether the issues of outcome value may have influenced the empirical findings, it is not possible because of the fact that almost all of the literature used a single scale to assess conflict, a scale that does not take outcome values into account.

It is also the case that defining role conflict and role ambiguity exclusively in terms of the incumbents' subjective experience weakens the link between the theory and interventions aimed at ameliorating role problems. That is, there were very strong links in JCT between the theory, the measurement device (JDS), and interventions based on all these (i.e., job enrichment). Thus far, we have noted that the link between role theory as expressed by either D. Katz and Kahn (1978) and the measurement device (the House & Rizzo, 1972b, scales) has not been as strong. Moreover, there seems to be no intervention efforts stemming from either role theories or measures that would be analogous to job enrichment's relationship to JCT and the JDS.

Conclusions About Role Ambiguity and Conflict. All three major reviews of role ambiguity to which we have frequently referred (i.e., Fisher & Gitelson, 1983; Jackson & Schuler, 1985; Van Sell et al., 1981) concluded that, although there were some consistent findings across studies, a great need exists for theory development and more theory-driven research. All recommended that role ambiguity and role conflict constructs be embedded in a more fully developed role theory and research guided by this more richly articulated theory. Van Sell et al. (1981) made explicit their choice of theory in their elaboration of Kahn et al.'s (1964) extended role episode. Jackson and Schuler (1985) were less explicit as to the specific theory but suggested six ways to address future research (see Table 3). It is interesting to note, however, that none of the calls for extended theory raised questions about
TABLE 3

Recommended Issues for Future Research on Role Ambiguity and Conflict

1. The search for moderators of the relationship between antecedents and consequences of role ambiguity and conflict should be theory driven.

2. Causal designs should be used.

3. The relationship between objective and subjective role ambiguity and conflict must be explored.

4. Role ambiguity and role conflict should be viewed as separate constructs, and separate hypotheses should be generated for each.

5. More rigorous parsimonious theory should be developed for the antecedents and consequences of role ambiguity and conflict.

6. Role ambiguity and conflict must be more closely linked to related issues of task and reward ambiguity and conflict.


The constructs themselves, particularly as they are operationally defined by the scales currently in use for assessing them.

We, too, agree wholeheartedly with the call for greater theoretical development and more theory-driven research. However, we differ from others in one respect: We feel that the theoretical development needs to begin with the constructs themselves before addressing the network of relationships with other constructs. To illustrate our position, consider the list of recommendations in Table 3. Rather than consider recommendations three through six as issues associated with role ambiguity and conflict, we have argued that these are part of the very nature of the constructs themselves. According to our position, objective conditions in the focal person's environment (3), the independence of the two constructs (4), parsimony (5), and links to rewards (6) must be assessed with respect to the nature of the theoretical constructs themselves. The first two conditions, a search for theory-driven moderators and causal research designs, can and should be pursued only after construct development has been addressed. The final suggestion, that the two role constructs be linked to tasks, will be addressed in the next section as we bring together jobs and roles. In the section that follows, we suggest that the job-role differentiation perspective offers some means of guiding role research.

Roles From a Job–Role Differentiation Perspective

It was pointed out earlier that the role literature, in contrast to the job literature, focuses almost exclusively on the processes by which roles are developed and communicated and ignores the specific content of the roles. When content is mentioned, it is usually described in general terms, with little or no information about the elements composing the set. A second way of suggesting content is to infer it from some global label for the role. Examples of the latter are the inferred content of roles with labels such as manager, spouse, parent, or blue collar worker. Although a little more specific than the first, this second method is also extremely imprecise regarding role content.
Measuring Roles

We also noted earlier that existing measures of role conflict and role ambiguity show less evidence of discriminant validity than should be the case. In addition, we argued that since, theoretically, these constructs are subjective states of the role incumbent, subjective measures of each may be completely appropriate. This does not mean that these measures cannot be supplemented, however. Finally, we also noted that the current lack of emphasis on content in role theory resulted in a dearth of applied interventions for dealing with role problems. JRD's emphasis on content (i.e., in terms of task elements) helps suggest methods of measurement that would serve as useful supplements to existing measures. In addition, since these measures move us closer to the environment (as opposed to internal subjective experience), it also helps suggest interventions appropriate for redressing role problems.

Because of its focus on lack of knowledge, role ambiguity as measured in light of JRD could be assessed by asking incumbents how certain they are that various task elements were part of the incumbent's role. The ratings could be made on a scale anchored by "certain that it is" and "certain that it is not." The number of responses that the incumbent makes near the midpoint of the scale would give an indication of the amount of experienced role ambiguity. To measure role conflict, the same ratings could be made by members of that person's role set. Here, the magnitude of discrepancies between (a) the incumbent's description of the role and the description of the role provided by others, as well as (b) one role sender's description and the description of some other role sender, would provide an index of the amount of role conflict. Perceived uncertainties on the part of the incumbent that are not accompanied by differences in role senders reflect ambiguity caused by lack of information, whereas uncertainties accompanied by discrepancies reflect ambiguity caused by conflicts in information.

The type of measurement procedure just described has several advantages, not the least of which is that it may increase the empirical discriminability of two constructs that seem to overlap more than they should in conventional measures. That is, since the index of role conflict is derived at least partially from sources external to the incumbent, this method should reduce the likelihood that response styles are the explanation for associations between these two constructs and may help establish a valid causal link between them.

Another advantage of the measurement approach suggested by JRD is that it could identify the specific social sources that are creating the conflict and thus allow for all assessment of critical contingencies. For example, the role senders that make up the incumbents' social environment may differ greatly in their ability to reward or punish incumbents. Thus, conflict between high-power role senders on the one hand (e.g., the prime beneficiaries or their agents who control pay or continued employment) and low-power role senders on the other, while technically creating a role conflict, does not create role conflict that affects the incumbent in any significant way. The same is the case for conflict among low-power role senders. Role conflict only becomes an issue when it originates from two powerful role senders. Perhaps the failure to distinguish between low-contingency or technical role conflicts and high-contingency or substantive role conflicts is one of the reasons that the role conflict research findings are more variable than the findings for role ambiguity.

By explicitly addressing the beliefs of other members of the role set about the role, JRD allows for the possibility that role ambiguity of the incumbent could be shared by the other members of the role set. Under these conditions, it seems less likely that role ambiguity would lead to low performance ratings.
Similarly, role conflicts could be recognized by others in the role set, and they may adjust their ratings of performance accordingly. Thus, JRD would not make predictions about the relationship of the role incumbent’s perceptions of role ambiguity or conflict without simultaneously addressing the expectations of others in the role set. Conflict and ambiguity would seem to have their most deleterious effects on performance ratings when the incumbent is the only one who is experiencing the ambiguity or is the only one sensitive to the conflict.

A final advantage of the measurement we have suggested for JRD is that it provides the content and hence provides the direction for change. The method, when it uncovers role ambiguity or role conflict, simultaneously isolates the social source and task element creating the problem. Also, by distinguishing the relative importance of the element to the role, the procedure goes beyond distinctions of mere presence and absence. Thus, one can identify ambiguities or conflicts that may arise not because of the presence or absence, but because of uncertainty or inconsistencies in the relative importance of a given element. That is, in some cases, all role senders may agree that a given element belongs in an individual’s role but may disagree on its overall centrality to the role. These kinds of disagreements regarding level of an element in the role may create much role ambiguity and conflict that may not be discernible in measures that only emphasize presence or absence. Hopefully, by increasing the link between the theory (which specifies the task elements), the measures (which obtain ratings of the elements from different sources), and the practice of changing role elements based on this information, role theory may begin to have an impact on applied contexts that is consistent with the interest it has generated among researchers.

As has been mentioned, both role conflict and role ambiguity ignore the content of particular roles. Job–role differentiation retains content in the elements that comprise a role. In particular, from the job–role differentiation perspective, the elements of the role are both the bureaucratic elements described by the job and those behaviors that are over and above those specified by the formal job description; they are the elements of the job resulting from the interaction between the focal person (job incumbent) and others to create the set of duties and responsibilities perceived to constitute the role of the focal person.

Although this perspective still does not provide cues to what will or will not be the qualitative dimensions of roles (i.e., content), we feel that job–role differentiation does offer some useful ways to look at roles. For example, it suggests that, when descriptions are obtained of the actual behaviors displayed by a number of persons all holding the same job, these descriptions can be expected to differ for valid reasons. That is to say, the differences in descriptions should not be attributed primarily to error variance in the measures of the role behaviors for the role in question. Such differences would be expected as each individual role holder and the members of his or her role set negotiate a role for the job holder. If these differences are indeed valid differences due to the construction of each individual role, then the differences should be predictable from variables known to affect the role process. Research aimed at understanding and predicting these differences should be of interest. Furthermore, this perspective implies that job-analytic work that treats all within-job differences as error variance by calculating mean dimensions per job may in this way lose some valuable information about the nature of behavior in the jobs and may also generate central tendency estimates of behaviors on the job that may not fit well many of the jobs in the set. The extent to which variance in job behaviors within jobs exists and is predictable is an empirical issue that the job–role differentiation perspective suggests is important to investigate.
Converting Roles to Jobs

Combining (a) the job–role differentiation perspective on the nature of elements that are seen as part of a job and (b) those that are relegated to roles with Graen’s (Graen & Scandura, 1987) three-stage model of role making suggests that different types of elements are exchanged at different times in the role-making process. We would hypothesize that, in the first stage, the initial role episode, established elements are exchanged between supervisors and subordinates (or any other focal person–role sender pair). These elements will tend to be the standard elements of the job as it was described to the applicant both as part of the hiring process and by the supervisor in the initial encounter with the new employee. In Graen’s second stage, the working-it-out stage, emergent elements that we would classify in the role domain are added. Here the specific actors who have an interest in what the focal person does, the stakeholders, work with the focal person to establish the role as it is to be performed in that setting. Finally, in the third and final stage, the investigation stage, some of what were formerly emergent task elements become formalized and transcribed into actual job descriptions. At the same time, some formerly established elements may be dropped if the need for them fails to emerge regularly. This conversion of role elements into job elements is likely to occur (a) when there is a great deal of consensus on the part of all members in the role set that the element is required by all who hold that job and/or (b) if the prime beneficiaries decide that an element that “emerged” for one jobholder should be formally established for all. This conversion of emergent elements into established elements will also result from inductive job-analytic techniques used to describe the behaviors of particular jobs. Such techniques employ interviews or structured job-analytic instruments such as the Position Analysis Questionnaire (McCormick, 1979) to identify the critical behaviors of a representative sample of job incumbents. The behaviors common to the sample of persons on a particular job are then used to describe the job. To the extent that behaviors emerging from the role-making process become common over all or apply to most of the people in a particular job, these behaviors will get added to the job domain when inductive procedures are used to establish job descriptions.

Conclusion

We argue that there are two systemic perspectives on what constitutes organizational structure as experienced by individual organizational members: the task/functional system and social system approaches. In line with this view, interactions between the individual’s immediate task/physical environment and the social environment have been addressed most frequently in two non-overlapping literatures: that of jobs and that of roles. Despite the separateness of these approaches and these literatures, the fact remains that both jobs and roles evolve over time as a result of the interaction of both physical and social forces. Today, both of these literatures encompass much of the same theoretical domain.

In addressing this theoretical domain, however, each of these two frameworks sees the interaction of organizational members and structure in slightly different ways. The job characteristics literature places a greater emphasis on content of the elements called jobs, whereas the role literature emphasizes the process whereby the expected set of behaviors labeled a role are established. The job characteristics literature stresses the physical demands of the task in terms of defining the reality of the job, and much of the empirical research conducted from the job characteristics framework attempts to establish the nature and objectivity of job perceptions.
The role literature focuses more on the subjective experience resulting from the process of sharing expectations among role occupants and role senders. The empirical research emanating from this is devoted almost exclusively to the constructs of role ambiguity and role conflict.

We attempted in this chapter to initiate an integration of these two literatures. The first step in bridging these two literatures was to more clearly differentiate between the two constructs of jobs and roles, since in our opinion no consensus currently exists regarding how these two relate. For us, the notion of prime beneficiary and the universe of task elements form the basis for integration we label job–role differentiation. Jobs are viewed as a set of established task elements that are objective, bureaucratic, quasistatic, and grouped together by the prime beneficiaries or their agents. The requirement that these jobs operate in an environment that is subjective, personal, dynamic, and filled with many constituencies other than the prime beneficiaries, however, demands that an extra set of task elements be incorporated. These additional task elements are seen as emergent elements, and in the framework drawn here, these constitute roles.

This conceptualization of job–role differentiation was then used as a bridge to link theory and empirical research on jobs and roles. In doing so, notions of content and objectivity from the job literature were applied to the role literature. At the same time notions of process and social diversity in task expectations from the role literature were applied to the job literature. We then showed how our conceptualization offers a new perspective on issues such as (a) the nature of jobs in terms of their objectivity, (b) the dimensionality of job characteristics, (c) the impact of jobs on incumbents’ socioemotional outcomes and performance levels, (d) the measurement of role conflict and ambiguity, (e) applied interventions aimed at ameliorating role problems, and (f) the nature of task elements exchanged at various stages of the role-making process.

Clearly, ours is no more than a first step in the process required to fully integrate these two long-standing literatures. Moreover, even in taking this first step, we realize that we have oversimplified and pulled roles and jobs apart more than researchers in either domain may feel is warranted. If, in coming to grips with this distinction, both sets of researchers begin to examine the other perspective more carefully, then we will have at least partially succeeded in our objective. A formal, well-developed theory of jobs and roles would need to go beyond job–role differentiation as presented here and deal explicitly with other issues, such as the explication of the universe of task elements. The approach as presented here assumes the existence of such elements without developing or adopting any one approach specifically. We have noted that such approaches exist and that the notion of generic task elements is pervasive in other areas of industrial and organizational psychology, but this is clearly not the same as specifying the universe itself.

In addition, a formal theory of jobs and roles also has to deal explicitly with the nature of rewards associated with jobs. Some of these will be inextricably linked to the task elements themselves; others may be connected arbitrarily. A formal theory must also deal with quantitative goals or expectations that may exist for performance on certain established or emergent task elements. These goals may not be formalized, even for bureaucratic elements, and thus could create additional problems for role conflict and ambiguity in terms of ends instead of means.

Although the development of an integrated approach to jobs and roles represents a large undertaking, we feel that the conceptual payoff from such an endeavor warrants the effort. We hope this review and reinterpretation of issues in the job and role literatures provides the springboard for such an effort.
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