Consensus in Work Role Requirements: The Influence of Discrete Occupational Context on Role Expectations

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Although role theory has long described how expectations shape role behavior, little empirical research has examined differences among work role requirements and how features of the discrete occupational context may influence the extent to which role expectations are shared among role holders. The authors examined consensus in work role requirements from a sample of over 20,000 incumbents across 98 occupations. They found that consensus systematically decreased as work role requirements ranged from molecular tasks to responsibilities to molar traits. In addition, they found that consensus in these work role requirements was significantly influenced by the amount of interdependence, autonomy, and routinization present in the surrounding task and social contexts.

Keywords: job analysis, job design, work role requirements, context, role theory

The structure of work in organizations is partially a social construction (Sanchez & Levine, 2000; Weick, 1979), in which the jobs performed by organizational members reflect specific activities performed within the job as well as the capabilities, preferences, and opinions of the role holders (Morgeson & Campion, 2000). Because of this, similar roles are often enacted in different ways (Biddle, 1979; Graen, 1976; Katz & Kahn, 1978). This fact has led scholars to examine and describe the process whereby roles are defined and enacted.

The concept of role expectations has been forwarded to explain how different role holders come to enact their roles in a similar manner. Role expectations are viewed as the primary element in "maintaining the role system and inducing the required role behavior" (Katz & Kahn, 1978, p. 189). These expectations are simply beliefs about what a role entails (Ilgen & Hollenbeck, 1991) and are purported to be antecedents to role behavior. Both role expectations and role behavior are affected by a host of factors, including work attitudes (e.g., job satisfaction, commitment, fairness perceptions; Conte, Dean, Ringenbach, Moran, & Landy, 2005; Organ & Ryan, 1995), leadership (Hofmann, Morgeson, & Gerras, 2003; Smith, Organ, & Near, 1983), personality (Bateman & Crant, 1993), job autonomy (Morgeson, Delaney-Klinger, & Hemingway, 2005), task engagement (Richman & Quinones, 1996), work experience (Borman, Dorsey, & Ackerman, 1992), and ability (Morgeson et al., 2005).

This research has expanded our understanding of the range of individual factors that can affect role expectations. Yet the importance of context in shaping role expectations has been largely neglected. Although this neglect is not necessarily surprising given the general lack of consideration of context in organizational research (Cappelli & Sherer, 1991; Hattrup & Jackson, 1996; Johns, 2006), it is unfortunate because role expectations are strongly influenced by the broader context (Katz & Kahn, 1978). We seek to address this gap in the literature by articulating the contextual conditions under which different kinds of expectations are shared among role holders at the occupational level. Role theorists use the term *consensus* to denote such sharedness or agreement among the expectations held by various role holders (Biddle, 1986). Prior to the discussion of contextual factors, however, it is necessary to discuss the nature of role expectations and various work role requirements that exist in organizational settings.

Role Expectations and Work Role Requirements

Role expectations are derived through the experiences individuals have when acting within particular environments (Biddle, 1986). This includes experiences with both supervisors and peers as well as other individuals with whom one interacts (Graen, 1976). These experiences help shape how people construe and choose to enact their roles (Jackson, 1981). Part of this construal process involves perceptions and judgments about work role requirements, which reflect the content of role expectations (i.e., they describe what a given role entails).

Judgments of work role requirements are an essential component of role enactment because they explicitly represent what people believe to be crucial to the performance of their work roles. Similarities in work role requirements, in turn, also enable individual work roles to be meaningfully combined in occupational groupings that share a common overall goal or purpose (e.g., civil engineers, financial analysts). Clarity of work role requirements has been associated with important individual and organizational outcomes, such as job satisfaction, organizational commitment, and job performance (Abramis, 1994; Tubre & Collins, 2000). In addition, at more molar levels, consensus of role expectations has been thought to lead to more effective integration of social systems

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(Biddle, 1979), as roles serve the important function of coordinating and integrating the behavior of individuals (Katz & Kahn, 1978). Therefore, examining how the work environment influences collective role enactment differences, vis-à-vis consensus of work role requirements, is relevant to both research and practice.

Work role requirements have been described in a number of ways. Most common in the role theory literature has been a focus on role behaviors, or the actions that are performed on the job. These can include the specific tasks or more general responsibilities that are requisite to work roles. Another set of work role requirements, less well studied in the realm of role theory, concerns the underlying capabilities needed to successfully perform role behaviors. This includes such things as traits, which are presumed to promote effective role performance. These two sets of work role requirements have been broadly dichotomized as activities and attributes (Sackett & Laczo, 2003). Role behaviors such as tasks and responsibilities represent activities, whereas traits represent attributes. The extent to which role expectations are shared or consistently held across role holders on these different types of work role requirements is likely to vary, which is reflected in consensus among multiple role holders. Such differences primarily stem from the distinct facets and levels of role enactment specificity that each requirement captures. Collectively, then, consensus in role expectations is likely to be systematically influenced by the kind of role requirement under consideration as well as the work contexts in which role requirements are fulfilled.

In a general sense, activity descriptors provide a focus on how a work role is enacted (i.e., requisite role behaviors). Thus, activity descriptors are work oriented in that they describe facets that pertain directly to behavioral enactment of a work role. These behavioral facets are generally composed of tasks and responsibilities. Tasks represent a collection of several specific elements, including an action (behavior), the object of the action, and the purpose or results of the action (Fine & Getkate, 1995). Tasks are considered to be specific to a particular work role (e.g., conduct chemical analyses of substances such as acids, alcohols, and enzymes). For their part, responsibilities can be described as collections of tasks that form generic activities that are applicable across a wide variety of work roles (Cunningham, 1996). Thus, responsibilities can be seen as broad activity statements that are aggregates of several highly related behaviors used in accomplishing major work goals (Jeanneret, Borman, Kubisiak, & Hanson, 1999). Analyzing data or information; developing objectives and strategies; and judging the qualities of objects, services, or people are some typical examples of role responsibilities.

Because activity descriptors are observable work phenomena and behaviorally based, they are relatively precise descriptions of role enactment (Harvey & Wilson, 2000). However, tasks and responsibilities differ in the level of specificity with which they describe role behavior. Not only are tasks considered specific to a given work role, they are also more molecular than responsibilities in that they describe very precise facets of role enactment (i.e., a single purposeful action vs. a collection of similar purposeful actions). Therefore, because tasks capture role behavior at a greater level of specificity, there should be greater consensus among role holders regarding whether particular tasks are specifically required for role enactment. Recent research has found such consensus differences when comparing tasks with responsibilities (Dierdorff & Wilson, 2003).

Whereas tasks and responsibilities have a behavioral focus, traits indicate what person requirements are needed for role enactment. Thus, these attribute descriptors are worker oriented in that they describe facets of individuals that are important to role enactment. Traits encompass relatively stable personal characteristics (e.g., initiative, conscientiousness, stress tolerance) that, in relation to role enactment, are presumed to influence successful performance. In contrast to tasks and responsibilities, traits are hypothetical constructs not subject to direct observation. Instead, they must be inferred from the demands of the work and thus often reflect each individual's unique talents, not necessarily those pertinent to collective work role performance (Morgeson, Delaney-Klinger, Mayfield, Ferrara, & Campion, 2004). Because traits represent latent psychological variables and do not always have straightforward behavioral references (Sanchez & Levine, 2001), they capture work role requirements at the lowest level of specificity. In other words, whereas responsibilities are more molar than tasks, traits are more molar than responsibilities. Again, the varying levels of specificity across tasks, responsibilities, and traits can be expected to systematically influence consensus among role holders.

> *Hypothesis 1:* Consensus in work role judgments will vary depending on the focal role requirement, such that consensus will decrease as descriptor specificity decreases (i.e., from tasks to responsibilities to traits).

Occupational Context and Consensus in Work Role Requirements

The work environment is considered to be among the most prominent aspects of a person's job, with powerful influences on performance (Strong, Jeanneret, McPhail, Blakey, & D'Egidio, 1999). In a broad sense, work context is the backdrop against which role enactment occurs. As such, contextual factors influence the range of actions that are appropriate within the role environment (Cappelli & Sherer, 1991; Johns, 1991; Peters & O'Connor, 1980). The enactment of work roles necessarily encompasses behavior that is the product of personal characteristics and characteristics of the work situation (Neff, 1987). In other words, the context and processes involved in role enactment are definitively intertwined.

The context of work can be generally conceptualized as a set of moderating factors that influence worker behavior and adaptation (Strong et al., 1999). These moderating influences can be described collectively in a broad, nondifferentiated manner, referred to as *omnibus context,* or can be delineated by more specific factors in a *discrete context* approach (Johns, 2006). This latter perspective seeks to identify specific situational variables that impact behavior directly or indirectly. Johns (2006) summarized three important components that compose the discrete context: task context, social context, and physical context. Of these components of discrete context, task and social contexts are arguably the most salient to consensus in work role requirements, because such contexts directly relate to and describe the milieu in which role enactment is specifically pursued. For example, task contexts can be described as autonomous, uncertain, or predictable, whereas social contexts can be described in terms of social influence and social interactions (Johns, 2006). Moreover, both the objective

environment (i.e., task context) and interpersonal relationships (i.e., social context) have long been considered integral to the way work roles are perceived and enacted (French & Kahn, 1962; Katz & Kahn, 1978). In short, factors from the task and social contexts should be expected to shape not only the ways work roles are enacted but also the consistency of expectations workers have about different work role requirements.

A type of discrete context discussed by Johns (2006) is the discrete occupational context. Discrete occupational contexts arise from the nature of the work itself, such that "knowing someone's occupation permits reasonable inferences about his or her task, social, and physical environment at work, which, in turn, can be used to predict behavior and attitudes" (Johns, 2006, p. 393). In the present study, we examine facets of discrete occupational context that pertain to both the task and the social contexts. More specifically, we investigate interdependence, autonomy, and routinization. Interdependence is a core aspect of the social context (Kelly et al., 2003), whereas autonomy and routinization encompass important features of the task context (Johns, 2006). It is important to note that these task and social components of discrete occupational context are clearly linked to the features of work (see Morgeson & Humphrey, 2006), which indicates that there are likely to be meaningful differences across different occupations. Substantial literature also suggests that these factors can have a profound influence on the ways work roles are defined and performed. For example, these variables have been delineated in prior work that has extensively reviewed literature on general work environments (e.g., interpersonal relationships and structural job features in Strong et al., 1999), job and work design (e.g., social and motivational contexts in Morgeson & Campion, 2003), and situational attributes (e.g., environmental information and task attributes in Hattrup & Jackson, 1996). Role theory further highlights the significance of pressures stemming from social interaction, normative expectations of behavior, and environmental cues in role expectations and role enactment (Katz & Kahn, 1978).

Interdependence, autonomy, and routinization can be further viewed as prominent consequences of changes in the contemporary world of work. For example, commonly noted workplace changes include the flattening of organizations, the prevalence of team- and project-based work, more emphasis on customer service and quality, and increases in automation and other workplace technology (Ashkenas, Ulrich, Jick, & Kerr, 1995; Hodgetts, Luthans, & Lee, 1994; Howard, 1995). These recent changes have shaped the task and social occupational contexts in which work is performed by altering levels of role interaction, individual authority, and regularity of activities (Rousseau, 1997). The following sections discuss in more detail each discrete occupational context factor and its potential influence on consensus in both activity and attribute work role requirements.

Interdependence

Interdependence has been described as the connectedness among work roles (Morgeson & Humphrey, 2006), thus reflecting the degree to which job performance depends on reciprocal interaction with others to accomplish work goals (Kiggundu, 1981). In this sense, interdependence can be viewed as the extent to which role enactment is predicated or reliant on contingent social relationships. Occupations in team-based, managerial, and customer

service settings tend to involve greater levels of interdependence. It is important to note that social relationships also hold a central position in role theory descriptions of role enactment in that they form the basis for mutual influence, role expectations, and role negotiation (Katz & Kahn, 1978).

Because other individuals are primary sources of social information, required interaction with others during the enactment of a work role should, to some extent, impact consensus in work role requirements. Interdependence should also provide more opportunities for role negotiation, which, in turn, affects expectations surrounding role behavior (Naylor, Pritchard, & Ilgen, 1980). For example, team norms exert a powerful influence on how work is discussed and performed, and normative information regarding role expectations is generally learned from interaction with other team members (Thompson, 2004).

In occupations with highly interdependent social contexts, effective performance is often predicated on workload sharing (McIntyre & Salas, 1995). With respect to work role enactment, this sharing occurs in and around activity requirements and can be seen as a discrete contextual influence impacting individuals' collective perceptions and performance of role behaviors (Katz-Navon & Erez, 2005; Kozlowski, Gully, Nason, & Smith, 1999). Moreover, the increase in social information that comes from working in an occupation characterized by an interdependent social context should provide ample cues influencing boundary definitions of role behavior. However, the influence of interdependence is likely to differ depending on the level of role behavior specificity.

Highly specific role behaviors can be expected to vary a great deal across role holders in interdependent social contexts (Van der Vegt, Emans, & Van De Vliert, 2000). Because of their molecular nature, tasks are fairly easy to share or distribute among individual role holders. When people are working interdependently, it is often most efficient to distribute the responsibility for performing different tasks to various subsets of the larger (interdependent) group. As such, slightly different role expectations will exist for individuals in the same occupation. In essence, there will be fewer established task elements for any particular work role and more emergent elements across the set of work roles (Ilgen & Hollenbeck, 1991). The workload sharing that is prototypic of interdependent social contexts enables such differential role definitions and creates a flexible and efficient use of existing resources. These differential role expectations, however, serve to attenuate consensus regarding the group of tasks that make up the work role.

For example, a typical work role is composed of numerous specific tasks necessary for role performance. Because the sharing of particular tasks that coincides with interdependence often varies across role holders, some may view certain tasks as necessarily central to their role enactment. However, these very same tasks may not be viewed as core by others, perhaps because they are commonly shared with nonrole holders or simply not performed. In short, the interdependence of some occupations blurs role boundary definitions for micro-level role behaviors because role holders can be expected to perform different tasks, given increased variability of their unique role interactions with others. This variability in performance of molecular role behaviors subsequently serves to decrease consensus in task-level role requirements.

Hypothesis 2a: Interdependence will be related to lower consensus in task requirements.

Unlike the negative impact of interdependence for molecular role behaviors, such as tasks, a positive effect can be expected for consensus in responsibility requirements. Because responsibilities reflect more generic or general activities, it is more difficult to share or distribute them across different role holders. In addition, by their very nature, they are applicable across different work roles (Cunningham, 1996). Thus, workload sharing is unlikely to render particular responsibilities unimportant to role enactment. Furthermore, the generality of responsibility descriptors should allow interdependence to aid in role boundary definition. This occurs through increased opportunities for role negotiation and clarification through interacting with others (Salancik & Pffefer, 1978), thereby increasing consensus in role responsibilities.

Hypothesis 2b: Interdependence will be related to higher consensus in responsibility requirements.

Reflecting underlying personal capabilities, traits have more ambiguous connections to requisite role behaviors (Sanchez & Levine, 2001). In addition to being only indirectly related to role enactment, traits may manifest behaviorally in a variety of ways across different role holders (e.g., dependability). Thus, although the social information gained from highly interdependent social contexts impacts behavioral role expectations, this information is unlikely to affect consensus on descriptors representing abstract personal characteristics related to role enactment.

Hypothesis 2c: Interdependence will not be related to consensus in trait requirements.

Autonomy

Autonomy represents the degree to which freedom and discretion exist in work scheduling, decision making, and choice of work processes (Breaugh, 1985; Wall, Jackson, & Mullarkey, 1995). In short, this feature of an occupation's discrete task context indicates the amount of personal volition that coincides with role enactment. From a role theory perspective, autonomy facilitates agency in relation to the specific conduct of the work role. It is important to note that although they are related, autonomy and interdependence represent unique discrete context variables. Autonomy reflects the amount of discretion role holders possess and is a feature of task context, whereas interdependence represents the degree to which role holders interact with others' work roles and is a core feature of social context. Thus, enacting a work role in a highly interdependent context does not preclude individual autonomy but rather simply implicates other connected roles in such discretionary choices. Likewise, in some occupations, role holders may have little freedom to make role enactment decisions (low autonomy) but be highly reliant on others to fulfill role requirements (high interdependence).

Autonomy enables role holders to integrate more and different tasks into their focal work roles (Morgeson et al., 2005). Autonomy also entails increased exploration and motivation to attempt and master new tasks (Parker, 1998; Parker, Wall, & Jackson, 1997). This suggests that, in autonomous task contexts, role holders may experiment with or incorporate unique elements into role enactment. Furthermore, role holders have increased opportunities to negotiate their work roles in occupations with autonomous contexts (Troyer, Mueller, & Osinsky, 2000). Therefore, role holders in autonomous task contexts can be expected to display lower consensus in task requirements, because autonomy allows equifinality in the enactment of these precise facets of their work roles.

Hypothesis 3a: Autonomy will be related to lower consensus in task requirements.

Although highly autonomous task contexts allow role holders the freedom to choose the manner in which they specifically engage in their work (i.e., the tasks they choose, the order in which they choose to accomplish these tasks), autonomy is unlikely to impact the more general responsibilities of the work role. In other words, autonomy may affect the precise tasks that are chosen to fulfill a given responsibility, but the responsibility itself is likely to remain requisite lest the work role become a completely different role serving entirely new functions. This intended effect is reflected in job enrichment efforts that increase job autonomy by giving workers more control over their immediate set of tasks for accomplishing major work goals but tend not to change the major functions of the role (Hackman & Oldham, 1976; Parker, 1998). One reason for this is that at the responsibility level, autonomy affects how these responsibilities are enacted but not necessarily what is enacted. For example, cooks often have much autonomy in their work roles, which allows them to perform, not perform, and order specific tasks when preparing meals. However, this autonomy is unlikely to influence the importance of more general role responsibilities, such as handling and moving objects (e.g., pots and pans) or controlling machines and processes (e.g., stove operation).

Hypothesis 3b: Autonomy will not be related to consensus in responsibility requirements.

The increased freedom and authority in occupations with autonomous task contexts is likely to create situations that provide relatively few cues for expectations around what personal qualities are necessary for effective performance. Such situations have been described as weak in the extent to which they possess fewer characteristics that promote consistency in perceptions across individuals (Mischel, 1977). Role theory further argues that fewer cues will translate to more ambiguous role expectations (Rizzo, House, & Lirtzman, 1970), thereby decreasing consensus. Weak situations also tend to increase the potency of particular traits to role performance (Beaty, Cleveland, & Murphy, 2001). This potency amplifies the attention paid to a role holder's own unique qualities relevant to role enactment. This focus on one's own personal qualities serves to increase idiosyncrasies within the occupation pertaining to the important trait requirements of the work role.

Hypothesis 3c: Autonomy will be related to lower consensus in trait requirements.

Routinization

Routinization indicates the degree to which work processes are standardized, repetitious, or automated. Routines shape organiza-

tional behavior through various means, including rules, procedures, conventions, strategies, and technologies (Cyert & March, 1963; Levitt & March, 1988). Work roles in routinized task contexts are performed within predictable and consistent environments that display a high degree of regularity (Pentland & Rueter, 1994). In these task contexts, individuals are more likely to develop habitual routines, as unexpected events occur infrequently (Gersick & Hackman, 1990). Thus, routinization should lead to the formation of a common frame of reference for work role requirements, as routines constrain the possible forms of particular role enactment to be functionally similar (Lillrank, 2003). In other words, in occupations that are highly routinized, role holders have more shared role expectations.

Routinization should increase the conformity of role enactment across different role holders in a given occupation, and conformity pressures have been argued to affect consensus in work role requirements (Morgeson & Campion, 1997). Here, role negotiation centers most on clarification of common and scripted role behaviors, with little room for equifinality in role enactment. Thus, role holders working in occupations with routinized task contexts are less likely to engage in innovation or to craft their own roles (Wrzesniewski & Dutton, 2001). Consequently, a more routinized task context should produce clearer normative expectations for role behavior, which should foster greater consensus in activity requirements. Routinization is likely to impact consensus in both tasks and responsibilities, as standard operating procedures focus on precise tasks and more general job procedures (Cyert & March, 1963). This produces constancy in specific behavior as well as broader behavior patterns (Gersick & Hackman, 1990).

>   *Hypothesis 4a:* Routinization will be related to higher consensus in task requirements.

>   *Hypothesis 4b:* Routinization will be related to higher consensus in responsibility requirements.

Routinization is thought to suppress individual creative expression in role enactment (Oldham & Hackman, 1980) by restricting parameters allowing role holders to uniquely shape their work roles. Moreover, task contexts that are highly routinized can be described as strong situations in which expectations of effective performance via environmental cues are readily identifiable (Hattrup & Jackson, 1996). Routinization can then be seen as facilitating functionally equivalent situations during role enactment, which can enhance consistency of trait perceptions (Mischel, 2004). Because expectations are so apparent in highly routinized occupations, the personal characteristics necessary for effective performance may become more explicit, which lessens the effect of idiosyncratic role expectations pertaining to requisite trait requirements. The result of this attenuation is an increase in consensus surrounding these requirements.

>   *Hypothesis 4c:* Routinization will be related to higher consensus in trait requirements.

Method

Sample and Procedure

The data used in our study were taken from the ongoing data collection effort to populate the U.S. Department of Labor's Oc-

cupational Information Network (O*NET). O*NET is a comprehensive database of occupational information and replaces the 70-year-old *Dictionary of Occupational Titles* (Dye & Silver, 1999). The O*NET database is organized around a theoretical content model composed of six major areas: worker characteristics, worker requirements, experience requirements, occupation requirements, occupational characteristics, and occupation-specific information (Mumford & Peterson, 1999; Peterson et al., 2001). This structure enables a focus on areas that describe important attributes and characteristics of both workers and the work itself.

Work role requirement ratings for tasks, responsibilities, and traits were used to test our hypotheses. These data came from 20,057 incumbents working in 98 different occupations. Occupations were chosen to adequately encompass a broad and representative sample of occupations that, at the time of the study, had available incumbent data. In comparison to the U.S. Department of Labor Bureau of Labor Statistics's Standard Occupational Classification System (SOC), all SOC major groupings for which incumbent O*NET data were available were represented. Table 1 displays the frequencies and sample sizes of the 98 occupations with respect to the SOC as well as examples of occupational titles within each major SOC grouping.[1]

O*NET data are representative of the national labor force and were collected via a staged sampling process. First, the broad business environment in which a target occupation resides was examined to determine the types of establishments that employed occupational incumbents, the different sizes of such establishments, and how many individuals were employed in the target occupation within the U.S. labor market. Next, stratified random sampling was performed to select representative establishments for possible data collection. Third, the randomly selected establishments were contacted to verify the employment of individuals in the target occupation and to enlist participation. Fourth, individuals from the chosen establishments were randomly selected to receive various data collection questionnaires. The number of randomly selected individuals from a given establishment was based on the proportion of incumbents in the labor market who worked at such establishments. One advantage of this sampling procedure is that any potential organization-specific influence on occupation-level responses is greatly minimized.

To reduce the operational burden for respondents, items were organized into four separate questionnaires and randomly assigned respondents to one of the four questionnaires. However, all respondents were required to complete a task questionnaire and provide general demographic information. The random assignment of incumbents is a valuable feature of data collection, as it creates independent samples across all descriptor surveys, except for tasks. To create independence for task data, we randomly selected a sample from each of the 98 occupations from which only task ratings were used (i.e., responsibility and trait ratings were with-

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[1] Incumbent data were not available for two major SOC groupings. The first group was military-specific occupations, for which O*NET data are not collected. The second group was building and grounds cleaning and maintenance occupations, for which incumbent data were unavailable at the time of this study.

Table 1
Occupational and Incumbent Sample Sizes

SOC code	SOC major group	f	Occupation title examples	n
11-0000	Management occupations	9	General and operations managers, human resources managers, funeral directors	2,009
13-0000	Business and financial operations occupations	4	Meeting and convention planners, assessors	544
15-0000	Computer and mathematical occupations	3	Computer systems analysts, actuaries	370
17-0000	Architecture and engineering occupations	7	Cartographers and photogrammetrists, surveyors, aerospace engineers	726
19-0000	Life, physical, and social science occupations	6	Microbiologists, biological technicians, city and regional planning aides	689
21-0000	Community and social services occupations	3	Probation officers and correctional treatment specialists, social and human service assistants	908
23-0000	Legal occupations	3	Lawyers, law clerks	361
25-0000	Education, training, and library occupations	8	Curators, audio-visual collections specialists; English language and literature teachers, postsecondary	3,049
27-0000	Arts, design, entertainment, sports, and media occupations	6	Floral designers, radio and television announcers, reporters and correspondents	1,948
29-0000	Health care practitioners and technical occupations	7	Registered nurses, veterinarians, surgical technologists	1,136
31-0000	Health care support occupations	3	Home health aides, physical therapist aides	369
33-0000	Protective service occupations	3	Municipal fire fighters, correctional officers and jailers	603
35-0000	Food preparation and serving-related occupations	2	Cooks, fast food; bartenders	251
39-0000	Personal care and service occupations	6	Gaming dealers, tour guides and escorts, child care workers	1,182
41-0000	Sales and related occupations	3	Cashiers, real estate brokers, telemarketers	415
43-0000	Office and administrative support occupations	8	Court clerks, file clerks, executive secretaries and administrative assistants	2,854
45-0000	Farming, fishing, and forestry occupations	1	Forest and conservation workers	159
47-0000	Construction and extraction occupations	6	Electricians, sheet metal workers, highway maintenance workers	932
49-0000	Installation, maintenance, and repair occupations	3	Automotive master mechanics, medical equipment repairers	612
51-0000	Production occupations	4	Butchers and meat cutters, machinists	464
53-0000	Transportation and material moving occupations	3	Bus drivers, school; wellhead pumpers	476

Note. SOC = Standard Occupational Classification.

held). This selection technique ensured sample independence and eliminated potential common source bias.

Work Role Requirements

Tasks. Task questionnaires are unique to a given occupation (i.e., the set of tasks for one particular occupation are largely independent of the tasks performed in a different occupation). For example, the tasks used to describe the lawyer occupation are quite different from the tasks performed by automotive master mechanics. Thus, the tasks uniquely describe a particular occupation. Task questionnaires for each occupation were developed by occupational analysts with the goal of only including a set of tasks for a given occupation that the vast majority (80% was the goal) of occupational incumbents could be expected to perform. In other words, because most occupations could have several hundred tasks, with high variability in performance across all of the jobs composing the occupation, it was crucial to only include tasks that all incumbents would need to perform for a given occupation. These task lists were subsequently verified by occupational incumbents during task list development. O*NET task questionnaires typically contain 25–30 task statements. Examples of occupational task statements include "administer compensation, benefits and performance management systems, and safety and recreation programs," "identify staff vacancies and recruit, interview and select applicants," "present and summarize cases to judges and juries," "record patients' medical information and vital signs," and "select and cut trees according to markings or sizes, types, and grades." Past research suggests acceptable levels of reliability (mean ICC[1, 30] = .94) for O*NET tasks (Sager, Mumford, Baughman, & Childs, 1999).

Responsibilities. Responsibility requirements were collected with a standardized O*NET questionnaire that assesses generalized work activities. These activities are organized by four categories: (a) information input, measured by 5 items; (b) mental processes, measured by 10 items; (c) work output, measured by 9 items; and (d) interacting with others, measured by 17 items (Jeanneret et al., 1999). Item examples include "getting information," "judging the qualities of objects, services, or people," and "developing objectives and strategies." Each item is presented with a brief definition to facilitate respondent comprehension. Previous

research has shown acceptable levels of reliability (mean ICC[1, 30] = .92) for items contained in this questionnaire (Childs, Peterson, & Mumford, 1999).

Traits. Trait role requirements were collected via a standardized O*NET questionnaire that assesses 16 work-related traits. These traits compose seven dimensions: achievement orientation, social influence, interpersonal orientation, adjustment, conscientiousness, independence, and practical intelligence (Borman, Kubisiak, & Schneider, 1999). Example items include "achievement/ effort," "initiative," "leadership," "social orientation," "dependability," and "adaptability/flexibility." Each item is presented with a brief definition. Prior research indicates acceptable levels of reliability (mean ICC[1, 30] = .86) for items contained in this questionnaire (Childs et al., 1999).

O*NET questionnaires use two rating scales. The first is a dichotomous relevancy scale (*relevant* or *not relevant*). The second is a 5-point importance scale (1 = *not important* to 5 = *extremely important*). Such scales are useful in representing role expectations because they require role holders to judge the extent to which a given requirement is essential or unnecessary to work role enactment. Thus, these ratings capture what individuals believe their work roles to entail, which is a common conceptualization of role expectations (Ilgen & Hollenbeck, 1991).

Discrete Occupational Context

The three discrete occupational context factors included in our study were operationalized by means of O*NET database information collected via a standardized questionnaire. Substantial efforts, including an extensive synthesis of the extant literature and reliability and validity examinations, were undertaken in the development of this questionnaire (Strong et al., 1999). Similar to the task, responsibility, and trait data, sample independence was maintained, as respondents to the context survey are different from those responding to other surveys.

Interdependence. This discrete social context factor was assessed with three items rated on a 5-point importance scale. The items were as follows: "How important are interactions that require you to work with or contribute to a work group or team?" "How important are interactions that require you to deal with external customers (as in retail sales) or the public in general (as in police work)?" and "How important are interactions that require you to coordinate or lead others in accomplishing work activities (not as a supervisor or team leader)?" These items reflect the basic connectedness of a work role. Coefficient alpha was .80.

Autonomy. This discrete task context factor was operationalized with two items. The first item asked respondents, "How much freedom do you have to determine tasks, priorities, or goals?" The second item asked, "How much freedom do you have to make decisions without supervision?" These items reflect the essential aspects of autonomy, which are the freedom to determine work methods and the freedom to make decisions. Both items were rated on a 5-point scale (1 = *no freedom*, 3 = *little freedom*, 5 = *a lot of freedom*).

Routinization. This discrete task context factor was operationalized with three items. The first item asked, "How automated is your current job?" and was rated on a 5-point scale (1 = *not at all automated*, 3 = *moderately automated*, 5 = *completely automated*). Other items asked, "How important are continuous, repe-

titious physical activities (like key entry) or mental activities (like checking entries in a ledger)?" and, "How important is being very exact?" and were rated on a 5-point importance scale. These items capture the essence of routinization, which relates to regularity, consistency, and standardization of behavior. Coefficient alpha was .78.

We conducted confirmatory factor analysis to verify the distinctiveness of the discrete context factors. A three-factor model provided adequate fit (goodness-of-fit index = .99; comparative fit index = .96; standardized root-mean-square residual = .04; root-mean-square error of approximation = .05) and significant improvements in fit over one- and two-factor models, as assessed with chi-square difference tests ($p < .001$). In addition, because the context factors were aggregated to the occupation-level, it was necessary to assess the extent to which job holders converged in their judgments. The intraclass correlation (ICC[2]; James, 1982; Shrout & Fleiss, 1979) provides an estimate of the reliability of the group means. All three ICC(2) estimates were near unity, ranging from .98 to .99, indicating that the vast majority of variance in the context measures resided between occupations rather than within occupations, thus providing evidence justifying aggregation. Such high ICC(2) values are not surprising given the larger number of respondents within an occupation and the diversity of occupations in the current sample.

Operationalizing Consensus

Consensus in work role requirements was operationalized via estimates of interrater reliability. Interrater reliability represents the degree to which different raters (i.e., role holders) agree on the components of a target work role and portrays the overall level of consistency or consensus of judgments (Dierdorff & Wilson, 2003). This conceptualization of consensus is congruent with descriptions in role theory literature that posit consensus to signify convergence among role expectations held across role holders (Rossi & Berk, 1985).

More specifically, the interrater reliability estimates used to operationalize consensus were in the form of profile correlations computed as Pearson product–moment correlations between an incumbent's profile of requirement ratings and the profile of mean ratings for the entire occupational sample, excluding the incumbent. Thus, the lower the magnitude of an individual's profile correlation, the less his or her role requirement ratings resembled those of the occupational sample (Ballentine, Cunningham, & Wimpee, 1992; Dierdorff, Wilson, & Carter, 2004; Earles, Driskill, & Dittmar, 1996).[2] Next, mean profile correlations were computed for each occupation on each role requirement, which meant that there were three mean profile correlations for every occupation (i.e., one for tasks, one for responsibilities, and one for traits). These occupational mean profile correlations represent the average level of consensus (interrater reliability) on each type of role requirement for a given occupation.

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[2] Any items rated as not relevant were withheld from analyses estimating consensus to avoid issues of inflated reliability, as recommended by previous work role requirement literature (e.g., Butler & Harvey, 1988).

Table 2
Means, Standard Deviations, and Correlations Among Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Job zone	3.09	1.33	—								
2. Level of education	4.42	2.74	.72**	—							
3. SOC major group	9.64	6.15	−.52**	−.55**	—						
4. Interdependence	3.74	0.42	.26**	.34**	−.41**	**.80**					
5. Autonomy	4.08	0.41	.68**	.61**	−.44**	.35**	—				
6. Routinization	3.16	0.41	.06	−.05	−.09	−.02	.01	**.78**			
7. Task requirements	0.81	0.07	−.05	.03	.02	−.24*	−.15	.22*	—		
8. Responsibility requirements	0.63	0.09	.58**	.54**	−.42**	.37**	.42**	.12	−.05	—	
9. Trait requirements	0.46	0.09	−.22*	−.26*	.10	−.17	−.41**	.27**	.09	−.04	—

Note. $N = 98$ occupations. Internal consistency reliabilities are shown on the diagonal in boldface. Variables 4–6 are discrete occupational context, whereas Variables 7–9 are consensus scores. SOC = Standard Occupational Classification.
* $p \le .05.$ ** $p \le .01.$

Control Variables

Several control variables were used in study analyses. Respondents' level of education and the amount of necessary vocational preparation have been suggested to influence work role requirement ratings (Sanchez & Levine, 2001) and thus were included as controls. Level of education was calculated as the mean of incumbent respondents within each occupation. This O*NET measure has 12 scale points, with ratings ranging from *less than a high school diploma* to *post-doctoral training*. Amount of vocational preparation was operationalized with a measure that is termed Job Zone in the O*NET system. This measure derives from an older *Dictionary of Occupational Titles* measure of specific vocational preparation but expands to categorize occupations by how most people enter the occupation, how much overall experience is needed to do the work, how much education is necessary, and how much on-the-job training is required. Job Zone has five scale points, with ratings ranging from *little or no preparation* to *extensive preparation*. This measure has been used in previous work role requirement research (e.g., Gerhart, 1988).

In addition to education and Job Zone, we also controlled for broad-level occupational differences by creating a variable that captured each sample occupation's membership in a "major group" within the SOC system. SOC major groupings cluster occupations by similarity of work performed, required skills, education, training, and credentials. Examples of SOC major groups include the following: computer and mathematical occupations; architecture and engineering occupations; life, physical, and social science occupations; health care practitioners and technical occupations; sales and related occupations; and construction and extraction occupations. By controlling for SOC major group, we could better examine differences in consensus as a function of contextual factors, as opposed to other, broader features that may characterize differences between occupations.

Analytic Strategy

To test Hypothesis 1 regarding consensus differences among tasks, responsibilities, and traits, we used meta-analytic procedures (Hunter & Schmidt, 1990) to estimate levels of consensus across the 98 occupations. We meta-analyzed occupational mean profile correlations to estimate cumulative consensus across the 98 occupations. Similar to previous meta-analyses of interrater reliability of role requirements (e.g., Dierdorff & Wilson, 2003), individual estimates were corrected only for sampling error. These meta-analyses produced sample-size-weighted mean estimates of interrater reliability for each of the three work role requirements. These estimates can be viewed as representing the overall consensus across occupations that one can expect when different types of work role requirements are under consideration.

To test the study's remaining hypotheses pertaining to the impact of discrete occupational context on consensus, we used hierarchical regression analysis. Three separate hierarchical regressions were conducted corresponding to each type of work role requirement. The three control variables were entered first into the hierarchical regressions, followed by the simultaneous entry of the discrete occupational context variables. The dependent variables in these regressions were the occupational mean profile correlations.[3] As work roles certainly vary in terms of each contextual factor (e.g., some jobs are high in all three), hierarchical regressions offer important tests as to the independent effects of each factor on consensus.

Results

Table 2 displays descriptive statistics for the study variables. Note that all variables are at the occupational level. Consensus scores for each work role requirement (Variables 7–9 in the table) were calculated from the occupational mean profile correlations. Thus, for example, the correlation between autonomy and responsibility requirements ($r = .42, p < .01$) represents the relationship between levels of autonomy and consensus in responsibility requirements across the 98 occupations. Two thirds of the correla-

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[3] Correlation-based measures of consensus (i.e., profile correlations) assess the shape or pattern of differences in ratings. As such, they do not account for level or distance differences. To explore level differences, we computed Mahalanobis distance-squared estimates to examine whether different results would be obtained if level differences were examined. Using this alternative level-based measure of consensus produced results that were similar to those obtained via profile correlations. In fact, all the hypotheses received the same level of empirical support. As such, we report results only for profile correlations.

tions between consensus and discrete occupational context were significant, which suggests initial support for the study hypotheses. In general, features of both the social and the task context were positively associated with consensus in responsibility requirements (rs = .37 and .42, p < .01, for interdependence and autonomy, respectively), whereas these discrete occupational context factors displayed both positive and inverse relationships with task and trait requirements.

Eleven of 18 correlations between the control variables and other study variables were significant (p < .05), which indicates the importance of their inclusion in the tests of hypothesized relationships. For example, all three control variables were highly associated with autonomy, which suggests that broad SOC major groupings differed in terms of autonomy and that incumbents working in more autonomous task contexts tend to possess higher levels of formal education and greater amounts of preparation and experience. This is consistent with work design research that has found that high-level jobs tend to have greater autonomy. Significant relationships were also found for interdependent social contexts. Routinization was unrelated to the control variables.

Table 3 presents the results of meta-analyses cumulating consensus across the occupations within each work role requirement. These results address Hypothesis 1 regarding the impact of descriptor specificity on consensus. Sample-size-weighted mean estimates of consensus, observed standard deviations of these estimates, and 95% confidence intervals are provided. Hypothesis 1 predicted that consensus in work role judgments would decrease when the descriptor moved from task to responsibility to trait. Results support this hypothesis, as consensus decreased when descriptors became more general. Important to note is that the 95% confidence intervals were nonoverlapping, indicating that differences were statistically significant. In short, these results suggest that consensus varies across different types of work role requirements and that greater specificity increases role holder consensus.

Table 4 present results from three hierarchical regressions testing the hypotheses regarding the influence of discrete context on consensus. Control variables predicted significant variance in consensus, except in the case of tasks. The addition of discrete occupational context variables resulted in significant incremental prediction, with squared multiple correlation difference values ranging from .06 to .19.

We predicted that interdependence would be related to lower consensus in task requirements (Hypothesis 2a) but greater consensus in responsibility requirements (Hypothesis 2b). Individuals working in occupations with highly interdependent social contexts displayed lower consensus surrounding the task requirements associated with their roles (β = −.26, p < .01) and showed greater consensus in responsibility requirements (β = .23, p < .01).

Table 3
Work Role Requirement Consensus by Descriptor Type

Descriptor type	R_{wt}	n	k	SD_{wt}	95% CI
Task	.81	4,947	98	.07	.80, .82
Responsibility	.66	4,790	98	.08	.63, .67
Trait	.46	5,335	98	.09	.44, .48

Note. R_{wt} = sample-size-weighted mean estimate of interrater reliability; SD_{wt} = observed standard deviation; CI = confidence interval.

Table 4
Hierarchical Regressions of Consensus on Discrete Occupational Context

Variable	Task	Responsibility	Trait
Step 1			
Job zone	−.14	.36**	−.10
Education level	.15	.21*	−.21
SOC major group	.03	−.11	−.08
R^2	.01	.37**	.07*
Step 2			
Interdependence	−.26**	.23**	−.03
Autonomy	−.21*	−.07	−.46**
Routinization	.23**	.11	.27**
R^2	.16**	.43**	.26**
ΔR^2	.15**	.06*	.19**

Note. Standardized regression coefficients are shown. SOC = Standard Occupational Classification.
* p ≤ .05. ** p ≤ .01.

Hypothesis 2c predicted that interdependence would be unrelated to consensus in trait requirements. This relationship was nonsignificant (β = −.03, p = .76). Taken collectively, the results provide full support for Hypotheses 2a–2c, with interdependence being related to lower consensus in micro-level role behaviors but to greater consensus in more general role behaviors.

Autonomy was predicted to be negatively related to consensus in task requirements (Hypothesis 3a), to be unrelated to responsibility requirements (Hypothesis 3b), and to be negatively related to trait requirements (Hypothesis 3c). Autonomy was a significant inverse predictor of consensus in both task and trait requirements (β = −.21, p < .05, and β = −.46, p < .01, respectively). No significant relationship was found for consensus in responsibility requirements (β = −.07, p = .58). These results provide full support for Hypotheses 3a–3c and indicate that occupational role holders working in more autonomous task contexts displayed less consensus regarding both highly specific activity requirements (tasks) and more molar attribute requirements (traits).

Hypotheses 4a–4c predicted that routinization would be related to greater consensus in each type of work role requirement. Routinization was indeed a significant predictor of task (β = .23, p < .01) and trait (β = .27, p < .01) requirements. However, routinization did not predict consensus of responsibility requirements (β = .11, p > .05). Thus, partial support for these hypotheses is provided, as results indicate that routinized task contexts fostered greater consensus in only molecular activity requirements (tasks) and attribute requirements.

Discussion

The primary goal of our research was to first examine the extent to which consensus decreases as work role requirements range from tasks to responsibilities to traits and then examine how consensus in work role requirements is influenced by features of the discrete occupational context. In particular, we examined the relationships of interdependence, autonomy, and routinization with consensus in work role requirements, including role behavior (tasks and responsibilities) and attributes of role holders (traits). Overall, we found consistent evidence that discrete occupational

context substantially impacts the degree to which role holders share expectations about work role requirements. In addition, consensus in general and the relationships between context and consensus in particular varied depending on the type of role requirement under consideration.

Previous role theory research has principally focused on the behavioral components of work roles. Our study both explicates and extends this prior work by further categorizing role behaviors into tasks and responsibilities and incorporating requirements that represent personal characteristics needed for role enactment (i.e., traits). A major benefit of using this more comprehensive conceptualization of role requirements is a much more nuanced consideration of how consensus fluctuates across distinct work role facets. Moreover, the inclusion of attributes extends the conceptualization of work role requirements to constructs that are commonly used for human resource management purposes, such as hiring and development. Consistent with our predictions, general consensus decreased as role holders considered requirements that ranged from molecular tasks to responsibilities and to molar traits. This suggests that as judgments become more abstract, job holders are less likely to agree on the importance of the work role requirement. These results offer the first empirical evidence for a phenomenon that has been postulated but not empirically tested (Harvey, 1991; Morgeson & Campion, 2000).

Overall, our findings strongly demonstrate the substantial role that the discrete occupational context plays in amplifying or attenuating consensus. In fact, all of the task and social context variables significantly influenced consensus in at least one type of work role requirement. These results provide empirical evidence for the proposition, put forth by Katz and Kahn (1978) almost three decades ago, that context shapes expectations surrounding work roles and answer recent calls for context-focused research (Johns, 2006). Our findings extend role theory research by highlighting the fact that features of the discrete occupational context specifically impact consensus of role holder expectations regarding requisite activities and attributes. Because both the task and the social context can be viewed as a backdrop to role enactment, contextual features are likely to influence the range of actions viewed as appropriate (Peters & O'Connor, 1980). Our research shows that aspects of discrete occupational context influence not only the range of actions consensually deemed appropriate (tasks and responsibilities) but also the personal capabilities underlying such actions (traits). Furthermore, the influence of context is complex and varies in both magnitude and direction across task and social contexts and distinct work role requirements.

Our findings have implications for the broader role theory literature. Biddle (1986) noted that a fundamental question that can be addressed by empirical work on consensus in role expectations concerns the extent to which individuals actually share common expectations and what factors impact this agreement. He further pointed out that these factors "seem not to have been studied for most social system forms" (p. 77). Our research directly investigates how role expectations are shaped by different contextual elements. Both the type of work role requirement under consideration and features of the discrete occupational context are depicted as important factors impacting the extent to which individuals share role expectations. In addition, the study of consensus in role expectations by the present research is couched within one of society's most pervasive and influential social systems—namely, work organizations (Clegg & Hardy, 1996).

Role theory suggests that consensus is important for the effective integration of social systems, as individuals can then be relied on to fulfill normative expectations (Biddle, 1979). Moreover, at the individual level, clarity in one's work role is often associated with better performance, increased satisfaction, and higher levels of commitment (Tubre & Collins, 2000). When these issues are considered in conjunction with the current findings regarding consensus in work role requirements (i.e., what individuals collectively believe to be crucial to role performance), several interesting questions for future research become apparent. For example, if an individual's perception of role clarity is related to that individual's job performance, a salient question is whether consensus in role requirements across individual role holders is collectively associated with increased performance. Perhaps greater consensus is related to increases in overall cross-role holder effectiveness. Our results suggest that if such relationships do exist at this level, they are likely to vary depending on the chosen type of work role requirement. It may very well be that consensus in activity requirements is more influential than consensus in attribute requirements, as prior research has provided individual-level results relative to the ambiguity of requisite role behaviors. However, additional evidence suggests that, to some extent, attribute similarity across organizational members (e.g., person–organizational fit) can be related to outcomes such as citizenship, satisfaction, and turnover (Cable & DeRue, 2002; Westerman & Cyr, 2004).

Scholars have begun to describe the process of how individuals come to shape their own work roles, and individuals are thought to actively craft or sculpt their work roles (Bell & Staw, 1989; Wrzesniewski & Dutton, 2001). Indeed, research has shown that individuals do vary in how they define their roles at work (Hofmann et al., 2003; Morrison, 1994). In addition, the breadth of such role definitions has been shown to have important implications for job performance (Morgeson et al., 2005). The current results offer additional insight into this role definition literature by highlighting the task and social context conditions under which collectively held work role definitions are more likely to vary.

Our findings suggest that in highly interdependent and autonomous discrete contexts, individuals are more likely to idiosyncratically define their role, as evidenced by reduced consensus. It is interesting that this crafting appears to manifest itself only at the most molecular level of role enactment (i.e., tasks). In other words, occupations with interdependent and autonomous contexts appear to be fertile grounds for increased agency in the precise task-level enactment of work roles but not necessarily at the broader responsibility level. This implication is further bolstered by results showing that even in highly autonomous task contexts, in which there is much freedom in role enactment, idiosyncratic shaping of requisite role responsibilities does not collectively occur. Taken as a whole, these findings support the conceptual distinction made by Ilgen and Hollenbeck (1991) between emergent and established task elements, suggesting that workers make molecular changes in the enactment of roles but not in main functions of the role itself.

At the same time that highly interdependent social contexts facilitate unique task-level role sculpting, however, such occupational contexts seem to enhance consensus at the responsibility level. This suggests that the increased social interaction associated

with role enactment in interdependent social contexts provides individuals with greater amounts of role boundary information (Salancik & Pffefer, 1978). Such information appears to aid role holders in collectively determining what is and is not a work role responsibility. In social contexts involving role interdependence, much attention has been given to when and how work activities are shared across individuals (e.g., McIntyre & Salas, 1995). Our results suggest that the majority of this sharing occurs in and around task elements, whereas role definitions of responsibility requirements remain intact.

Applicable across different discrete occupational contexts, the general concept of situation strength has been offered to explain how contextual characteristics promote consistency of expectations and causal attributions of role behavior (Mischel, 1977). However, some have also noted the limited empirical evidence regarding the effects of situation strength (Hattrup & Jackson, 1996). Our results provide rather suggestive evidence that situation strength does impact attributions regarding personal qualities that are important for role performance. Our results show that highly routinized task contexts, as arguably strong situations, enhance consensus in trait requirements, whereas the weak situations coinciding with more autonomous task contexts attenuate such consensus. This latter attenuation suggests that trait requirements in weak situations greatly reflect individuals' unique personal characteristics rather than those that are more generally required.

Research has shown the important role human resource management practices play in successful organizational functioning (Huselid, 1995). Because judgments of work role requirements are the central information on which effective human resource applications are predicated (Dierdorff & Wilson, 2003), our results have several practical implications. In many instances, decision makers are likely to expect consensus in requirements, especially from individuals within similar work roles. When such consensus does not meet expectations, the requirements identified by role holders may often be called into question or viewed as inadequate for policy use. Our findings advise that these expectations will be more realistic if special attention is given to the discrete contexts in which work roles are performed. Additionally, the intended use of the information must be considered (Sackett & Laczo, 2003).

For example, molecular requirements such as task elements are frequently used in the development of training initiatives (Noe, 2005), and, thus, consensus may be seen as a prerequisite for properly identifying critical job tasks to be included in subsequent curricula. Our findings show that asking role holders who work in highly interdependent or autonomous discrete contexts to describe role enactment at this molecular level is likely to result in lower judgmental consensus. In such contexts, decision makers should hold more realistic expectations for lower consensus. Perhaps a more viable interpretive strategy is to focus on only the essential task elements of a given work role (autonomous task contexts) or those elements most likely to be shared across different work roles (interdependent social contexts). Then these essential or shared elements could result in training programs that are more relevant across various individual role holders. When high levels of consensus are desired across the full breadth of work role requirements, another alternative could be to use other data collection options to augment or clarify the existing information (e.g., using subject matter experts or direct observation of role enactment).

Strengths and Limitations

The current study has several strengths that are important to highlight. First, the number of individuals who provided work role requirement data is rather substantial: over 20,000 individuals. Second, data used in our research were derived from a well-established, standardized database that was designed to be representative of the national labor force. Additionally, sampled incumbents came from 98 different occupations, representing all but two major occupational segments. Third, the study includes work role requirements that span activities and attributes, a characteristic that allows for more meaningful and complex findings. Finally, prior research has generally focused only on individual variables, whereas the current research specifically examines the influences of discrete occupational context on role expectations.

There are, however, boundary conditions associated with the current study. First, we examined only three aspects of discrete occupational context. Clearly, there are other important aspects that should be examined in future research. For example, conflict or competitive demands are likely to influence consensus, as such factors can be expected to affect the perceived adequacy and accuracy of social information an individual chooses to process (Fiske & Taylor, 1991).

Second, the incumbent respondents in the current study were derived from an existing database of work role requirement ratings. Thus, our results are contingent on the extent to which these ratings are of sufficient quality. We believe the data are indeed of high quality, as they were derived from the nationally representative O*NET database. The work role requirements collected for the O*NET database were chosen on the basis of expansive and thorough theoretical development and preliminary validation, as well as surveyed with standardized methodology that incorporates multiple stages of stratified random sampling.

Third, our hypotheses were developed and tested at the occupation level with occupation-level variables and thus may not generalize to lower levels of analysis or measurement. As noted earlier, there is both conceptual and empirical justification for aggregation of our contextual variables to the occupational level. Occupations are entities absolutely contingent on the specific work roles of which they are composed and thus can be viewed as "true" aggregates that are both hierarchical and taxonomic (i.e., do not meaningfully exist beyond their component work roles). By its very nature, consensus only emerges at a level higher than the individual (i.e., there is no such thing as individual-level consensus, as consensus requires input from multiple individuals). In this sense, consensus is perhaps best depicted as an emergent concept that has no meaningful analogues at lower levels (Klein, Dansereau, & Hall, 1994; Morgeson & Hofmann, 1999).

Fourth, several of our hypotheses predicted a null relationship. As noted by Greenwald (1993), the term *null hypothesis* "most often refers to the hypothesis of no difference between treatment effects or of no association between variables" (p. 419). The use of null hypotheses has long been frowned upon (Cortina & Folger, 1998; Frick, 1995; Greenwald, 1993). For example, Frick (1995) stated that "the best known attitude toward the null hypothesis is that it should never be accepted" (p. 132). Yet these authors also pointed out that science often advances when relationships are not obtained (e.g., Platt, 1964) and that a more comprehensive understanding of a phenomenon occurs when one knows "both when a

phenomenon occurs and when it does not" (Cortina & Folger, 1998, p. 335). This has led to the conclusion that "the null hypothesis is a valuable claim that psychology should want to accept, not merely fail to reject" (Frick, 1995, p. 132) and that "support for the null hypothesis must be regarded as a research outcome that is acceptable as any other" (Greenwald, 1993, p. 442).

Given this, it is important to understand some of the conditions under which accepting a null hypothesis is more appropriate. Frick (1995, p. 136) suggested that "demonstrating a related effect" provides important evidence potentially supporting a null finding. In other words, the support for a null finding is enhanced if a closely related effect is found, which suggests that it is possible to find an effect if it in fact exists. In the current study, our null predictions and findings should be interpreted in the context of the hypotheses and findings of an effect. For example, we predicted that interdependence would be related to lower consensus in task requirements (Hypothesis 2a) and greater consensus in responsibility requirements (Hypothesis 2b). Hypothesis 2c, conversely, predicted that interdependence would be unrelated to consensus in trait requirements (the null hypothesis). The fact that we found support for both Hypotheses 2a and 2b suggests that we would have been able to find an effect if the null hypothesis (H2c) were, in fact, false.

Common alternative explanations for a null finding should be ruled out as well (Cortina & Folger, 1998; Greenwald, 1993). Alternative explanations frequently include inadequate statistical power, poor measurement, and inappropriate sample. In terms of statistical power, in the current study we had 20,057 incumbents working in 98 different occupations. Statistical power to detect a medium effect was 92% ($r = .30$, $p < .05$; Cohen, 1988), which suggests that we had adequate statistical power. In terms of measurement, the O*NET measures used in the current study have been developed and validated in past research and truly reflect the state of the art with respect to the world of work (Peterson et al., 2001). In addition, the high interrater reliability and agreement shown in the current research further attest to the quality of measurement. In terms of inappropriate sampling, the data used in the current study are representative of the national labor force and were collected by means of a rigorous, staged sampling process. For these reasons, we feel we are able to rule out the most common alternative explanations for our null results.

A final boundary condition relates to consensus in work role requirements as the central interest within our research. As such, consensus served as an important dependent variable in our empirical examinations. In some organizational situations, however, consensus in work role requirements may not be of primary importance or may not significantly impact inferences made with work role requirement information. Thus, it is important to be mindful of the eventual use of the information and whether consensus in the work role requirement information is necessary to ensure the quality of human resource decisions predicated on that information.

Conclusion

We sought to articulate the discrete occupational context conditions under which different kinds of role expectations are shared among role holders. This study provides novel findings in that it is the first to examine role expectations specifically pertaining to requisite behaviors and personal characteristics as well as how expectations are influenced by the environment in which individuals enact their work roles. Understanding the determinants of role expectations is an important endeavor, as these expectations serve as key elements in the maintenance of organizational role systems and as antecedents to effective role enactment. Future research should continue to examine role expectations surrounding work role requirements; however, the influence of work context in shaping these expectations must not be ignored.

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