

The Importance of Job Autonomy, Cognitive Ability, and Job-Related Skill for Predicting Role Breadth and Job Performance

Frederick P. Morgeson and Kelly Delaney-Klinger
Michigan State University

Monica A. Hemingway
Personnel Research Associates, Inc.

Role theory suggests and empirical research has found that there is considerable variation in how broadly individuals define their jobs. We investigated the theoretically meaningful yet infrequently studied relationships between incumbent job autonomy, cognitive ability, job-related skill, role breadth, and job performance. Using multiple data sources and multiple measurement occasions in a field setting, we found that job autonomy, cognitive ability, and job-related skill were positively related to role breadth, accounting for 23% of the variance in role breadth. In addition, role breadth was positively related to job performance and was found to mediate the relationship between job autonomy, cognitive ability, job-related skill, and job performance. These results add to our understanding of the factors that predict role breadth, as well as having implications for how job aspects and individual characteristics are translated into performance outcomes and the treatment of variability in incumbent reports of job tasks.

Role theory has long recognized that individuals holding the same job will perform a slightly different set of tasks, thereby enacting their roles in slightly different ways (Biddle, 1979; Graen, 1976; Ilgen & Hollenbeck, 1991; Katz & Kahn, 1978). This has served as the backdrop for attempts at understanding the kinds of changes individuals make to their work roles, where workers are viewed as active “crafters” or “sculptors” of their jobs (Bell & Staw, 1989; Staw & Boettger, 1990; Wrzesniewski & Dutton, 2001). A related stream of research has sought to understand when individuals will engage in extrarole behaviors (Organ & Ryan, 1995; Van Dyne, Cummings, & Parks, 1995). Although differing in specifics and construct labels (e.g., organizational citizenship behavior, contextual performance), this research fundamentally involves an attempt to understand when individuals will take on broader roles (Parker, 1998).

Results from these two areas of research suggest that there is enough discretion within an organization and its jobs for individuals to make decisions about which tasks to perform. In fact, research investigating this issue has shown that some individuals take on broader roles than others (Hofmann, Morgeson, & Gerras, 2003; Morrison, 1994). Because effective organizational functioning is predicated on behavior that extends beyond formal job requirements (Barnard, 1938; Katz, 1964; Katz & Kahn, 1978), understanding when an individual chooses to broaden his or her role represents an important question for research and practice.

Scholars have identified a number of factors that might lead to greater role breadth, including job satisfaction, commitment, and

fairness perceptions (LePine, Erez, & Johnson, 2002; Organ & Ryan, 1995). A smaller body of research has investigated the importance of other predictors such as leadership (Hofmann et al., 2003; Smith, Organ, & Near, 1983) and various personality characteristics (Bateman & Crant, 1993; LePine & Van Dyne, 2001). Yet there are other potentially important factors that have received little attention.

For example, an assumption of research on extrarole behavior is that individuals have greater discretion to engage in extrarole than in-role behaviors (Organ, 1988). This suggests that individuals with greater discretion in their jobs might have more of an opportunity to broaden their roles. In addition, it is well established that individuals with higher levels of ability will perform at a higher level (Hunter & Hunter, 1984). This suggests that increased role breadth might depend on an individual’s ability and skill to perform additional tasks. To examine these issues, we develop a conceptual model linking job aspects (autonomy) and individual characteristics (cognitive ability and job-related skill) to role breadth and then examine how role breadth mediates the relationship between these predictors and job performance.

Predicting Role Breadth

Opportunity to Increase Role Breadth

It has been assumed that individuals have greater discretion to engage in extrarole behaviors than required task behaviors (Smith et al., 1983). Because of this level of discretion, Organ (1988) suggested that extrarole behaviors will be more strongly related to such things as job satisfaction than will traditional task behaviors or task performance. Yet the discretionary nature of the behaviors themselves is only one aspect of discretion likely to be important for role breadth. Discretion in the job will also be important because greater discretion enables individuals to integrate more job aspects into their role if they so choose.

Discretion in the job has typically been discussed in terms of job autonomy, which reflects the extent to which a job allows the freedom, independence, and discretion to schedule work, make

Frederick P. Morgeson and Kelly Delaney-Klinger, The Eli Broad Graduate School of Management, Michigan State University; Monica A. Hemingway, Personnel Research Associates, Inc., Chicago, Illinois.

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Correspondence concerning this article should be addressed to Frederick P. Morgeson, The Eli Broad Graduate School of Management, Michigan State University, N475 North Business Complex, East Lansing, MI 48824-1122. E-mail: morgeson@msu.edu

decisions, and select the methods used to perform tasks (Hackman & Oldham, 1975). Increased autonomy will allow individuals greater flexibility in how they define their role because they will have greater discretion in deciding how to perform the work (Fried, Hollenbeck, Slowik, Tiegs, & Ben-David, 1999; Troyer, Mueller, & Osinsky, 2000).

Parker (1998; Parker, Wall, & Jackson, 1997) provides insight into why autonomy will increase role breadth. She found not only that enhanced autonomy increased ownership of problems but also that employees recognized a wider range of skills and knowledge as important for their roles. Increased control over the work environment motivates workers to try out and master new tasks, which is consistent with work design research that has demonstrated the motivational benefits of work autonomy (Fried & Ferris, 1987; Morgeson & Campion, 2003). This suggests that when given autonomy, individuals are likely to integrate more tasks into the focal role.

Hypothesis 1: Autonomy will be positively related to role breadth such that individuals with higher levels of autonomy will have greater role breadth than those with lower levels of autonomy.

Capability to Increase Role Breadth

Some researchers have acknowledged the possibility that ability may be a prerequisite for certain types of extrarole behaviors (Organ & Ryan, 1995) and that limitations in capabilities will result in job incumbents limiting how they define their roles (Graen, 1976). Yet few researchers have examined the extent to which job incumbent capabilities are related to role breadth. This is surprising, because research has consistently demonstrated the importance of ability constructs on a range of important outcomes (Hunter & Hunter, 1984). There are at least two reasons why job incumbent capability is likely to be related to increased role breadth.

First, in order to increase role breadth, incumbents must be able to perform the tasks that constitute the broader role. If incumbents are unable to successfully complete the tasks, it is unlikely they will attempt to integrate them into their role. Although the impact of abilities on role breadth has not been directly examined, incumbent self-efficacy has been identified as an important factor for role breadth. For example, Morrison and Phelps (1999) found that self-efficacy was positively related to taking charge at work (an important extrarole behavior), and Parker (1998) suggested that effective performance of broader roles "requires employees who are sufficiently confident in their abilities" (p. 835). The relationship between self-efficacy and role breadth is relevant because ability is an essential component of self-efficacy (Gist & Mitchell, 1992). Self-efficacy beliefs are anchored in an individual's ability level because it reflects a person's history of prior success on the job. As such, high-ability individuals are likely to take on more tasks, which will produce greater role breadth.

Second, individuals with higher levels of ability are likely to receive expanded role expectations from their supervisors (Graen & Scandura, 1987). Leaders send expectations to their subordinates based, in part, on their beliefs about the capabilities of those subordinates. To the extent that a supervisor believes an employee is capable, he or she will provide greater discretion and expectation

for subordinates to expand their roles. Absent the requisite ability, supervisors are likely to minimize their expectations for the range of tasks the subordinate can perform.

For these reasons, job incumbents with higher capabilities are likely to have greater role breadth. Two distinct capabilities will be related to role breadth. The first is the cognitive ability of the individual. Cognitive ability will be related to role breadth because it reflects a capability and competence that extends across all aspects of work. In addition to this cognitive ability, job incumbents possess a given level of skill that is directly relevant to the specific tasks they perform at work. This kind of job-related skill will be related to role breadth because individuals who are the most skilled at the technical aspects of work are the most likely to broaden their roles because they have a better understanding of the specific tasks associated with the job.

Hypothesis 2: Cognitive ability will be positively related to role breadth such that individuals with higher levels of cognitive ability will have greater role breadth than those with lower levels of cognitive ability.

Hypothesis 3: Job-related skill will be positively related to role breadth such that individuals with higher levels of job-related skill will have greater role breadth than those with lower levels of job-related skill.

As a characteristic of the job, autonomy is likely to be a unique predictor of role breadth compared with both cognitive ability and job-related skill, which are characteristics of the incumbent. In addition, although likely related, cognitive ability is not likely to be redundant with job-related skill, and both of these capabilities will be unique predictors of role breadth.

Hypothesis 4: Autonomy, cognitive ability, and job-related skill will incrementally predict role breadth.

Predicting Job Performance

Incumbents who have greater role breadth will be viewed as more valuable employees by their supervisors for at least three reasons. First, the need for employees to assume broader roles has been viewed as essential for organizational success, particularly in highly competitive and dynamic environments (Lawler, 1994; Parker, 1998). Second, because employees with broader roles are able to do more things, they require less input and monitoring on the part of the supervisor. This makes a supervisor's job easier and will be highly valued. Finally, past research has shown that leaders value subordinates who engage in behaviors that extend beyond narrow role definitions. Such greater role breadth is commonly recognized in supervisory ratings of job performance (Borman, White, & Dorsey, 1995; MacKenzie, Podsakoff, & Fetter, 1993; Orr, Sackett, & Mercer, 1989; Rotundo & Sackett, 2002; Werner, 1994). For these reasons, leaders are likely to view individuals with broader roles as better performers.

Hypothesis 5: Individuals with greater role breadth will have higher supervisory ratings of job performance.

Role Breadth as a Mediator

Thus far we have suggested that autonomy, cognitive ability, and job-related skill will predict role breadth. In essence, workers who have the opportunity and capability to do more will do more in their jobs. We then hypothesized that workers who have this greater role breadth will be judged as having better job performance. Given this, a final remaining question concerns how autonomy, cognitive ability, and job-related skill are translated into job performance.

Although previous research has shown that autonomy has small direct relationships with performance (Fried & Ferris, 1987; Liden, Wayne, & Sparrowe, 2000) and cognitive ability and job-related skill have stronger direct relationships to performance (Schmidt & Hunter, 1998), the hypotheses forwarded earlier suggest that role breadth will mediate the relationship between autonomy, cognitive ability, job-related skill, and job performance in two ways. First, autonomy presents incumbents the opportunity to perform more tasks. Those who perform more tasks and have increased role breadth are recognized in their supervisors' judgments of performance. Second, high levels of ability and skill will enable incumbents to perform more tasks, and the performance of these tasks will be recognized in higher ratings of job performance. Thus, employees with job autonomy, higher levels of cognitive ability, and higher levels of job-related skill will broaden their roles, leading to higher ratings of individual job performance (see Figure 1).

Hypothesis 6: Role breadth will mediate the relationship between (a) autonomy, (b) cognitive ability, and (c) job-related skill and job performance.

Method

Participants and Procedure

The data were drawn from three separate data collection efforts at a large, international company headquartered in the United States. First, a job analysis survey containing the job autonomy and role breadth measures was distributed to 1,320 administrative employees, of which 871 responded (66%). Second, the cognitive ability and job-related skill measures were collected as part of a criterion-related validation study. A stratified random sample of 432 employees was invited to participate in the validation study, and 264 completed the measures (61%). Third, job performance ratings were requested from 358 supervisors, of which 260 were returned (73%). The final sample consisted of 132 individuals who had data across these data collection efforts. Thus, data were gathered from two sources at three time periods, allowing methodologically separate tests of the study hypotheses. Participation in each phase of the study was voluntary.

Incumbents in this job performed administrative and secretarial tasks and constitute a single job family. An assumption of this study is that the

jobs within this administrative job family are essentially the same and, consequently, it depends on the incumbent to do or not do the tasks listed in the job analysis survey. We directly examined the similarity in jobs by testing for differences in the number and types of tasks performed across jobs within the job family. In this sample there were seven different administrative jobs. There were no significant differences in the number or types of tasks performed across these seven jobs.

Because role breadth is a key construct, it is important that these employees actually have the latitude to change their role breadth. There are at least two reasons why administrative employees in this organization have the opportunity to increase their role breadth, if they so choose. First, three of the six key corporate values of this organization are respect for people, innovation, and agility. These are manifested in the high levels of autonomy given to employees at all levels and an empowerment-oriented culture. In fact, these aspects are used as a key part of the organization's recruitment and retention strategy and form the basis for empowerment-oriented organizational development interventions that have occurred throughout the organization. Second, and perhaps more important, the levels of autonomy in this sample are quite high ($M = 4.11$ on a 5-point scale). This suggests that these incumbents do indeed have the opportunity to increase their role breadth.

In terms of education level, 24% had a high school diploma, 63% had an associate's degree, and 13% had a bachelor's degree. Average age was 38.81 years ($SD = 9.98$), with a range from 21 to 58. Only full-time employees who had worked longer than a year in the job were included in the analyses. Average job tenure was 4 years ($SD = 3.78$). We did not select participants on the basis of gender, but all were female and worked in the United States. This is representative of the administrative population in this company.

Measures

Job autonomy. Job autonomy was measured with three items adapted from Hackman and Oldham (1980; "I have significant autonomy in determining how I do my job"; "I can decide on my own how to go about doing my work"; "I have considerable opportunity for independence and freedom in how I do my job"). Incumbents rated these items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Internal consistency reliability was .78.

Cognitive ability. Cognitive ability was measured with the verbal comprehension section (VP5.1) of the Personnel Test Battery published by Saville & Holdsworth, Ltd. This test involves reading a written passage and making a variety of logical conclusions based on that information. The test publisher reports that this test has lower correlations with other purely verbal measures than it does with more cognitively loaded tests, such as numerical reasoning. As such, this measure can be viewed as an indicator of cognitive ability. Research has shown that such tests are related to job success in occupations like this (Pearlman, Schmidt, & Hunter, 1980), and verbal ability and reasoning are key components of cognitive ability (McHenry, Hough, Toquam, Hanson, & Ashworth, 1990; Wonderlic, Inc., 1999). Incumbents read eight passages and responded to 5 questions for each passage, for a total of 40 questions. The test publisher reports reliability of .85.

Job-related skill. According to an extensive content validity analysis, a key job-related skill for the administrative job is working with word processing and spreadsheet software. This was tested via a computerized work sample test of Microsoft Word and Excel, which required test takers to perform word processing and spreadsheet software tasks in a perfect interactive simulation of the actual software. The organization uses this test for all entry-level administrative hiring. A description of a work sample item is as follows:

In the test an area of text is selected for the test taker and the test taker is instructed to change the bullets for the selected text to white squares. Test takers are able to answer the question in any way that the

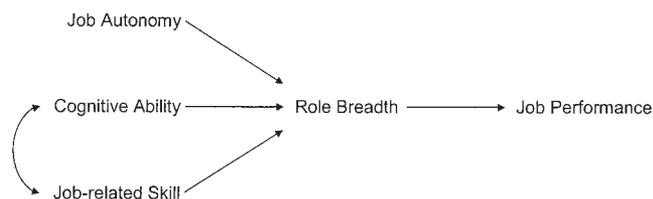


Figure 1. Conceptual model indicating expected relationships.

Table 1
Descriptive Statistics and Correlations for Study Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Education	132			—							
2. Age	122	38.81	9.98	-.24**	—						
3. Job tenure	132	4.00	3.78	-.27**	.30**	—					
4. Autonomy	131	4.11	0.63	.03	.10	.09	—				
5. Cognitive ability	127	30.83	4.97	.08	-.18*	-.13	-.10	—			
6. Job-related skill	121	17.00	4.27	.06	-.43**	-.22*	.04	.32**	—		
7. Role breadth	132	148.92	16.13	.12	-.14	-.03	.24**	.30**	.38**	—	
8. Job performance	113	3.41	0.73	.05	-.12	-.12	.17*	.24**	.24**	.29**	—

Note. Education was a categorical variable, coded such that higher numbers correspond to higher levels of education. Role breadth was the sum of individual task performance ratings across 94 tasks (1 = task not performed, 2 = task performed) such that higher numbers indicate more tasks were performed.

* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

actual software allows (e.g., using menus, using shortcut keys) and are allowed two attempts at each item. The test score is the number of items that the test taker answers correctly.

The correlation between the two subcomponents of the job-related skill test in the current sample was .76 and can be viewed as an alternative-forms reliability coefficient.

Role breadth. The job analysis survey included 94 task statements developed following a literature review of typical tasks for administrative jobs, an examination of other job analysis surveys, and input from focus groups and subject matter experts. Example task statements include (a) "Schedule meetings and other events in a timely fashion using electronic (e.g., Outlook) and/or paper calendars"; (b) "Analyze data from spreadsheets, reports, archival records, and so forth"; (c) "Open, sort, forward, and file mail"; and (d) "Create electronic and/or hard copy text documents to capture or convey information." For each statement, incumbents indicated whether a task was done on the job (1 = *task not performed*, 2 = *task performed*). These ratings were summed across all tasks to create the role breadth measure. We operationalized role breadth as the number of tasks performed because it most fully captures the essence of the role breadth construct: how much a person does in his or her job. Internal consistency reliability was .95.

Job performance. Supervisors provided job performance ratings for their subordinates across seven performance aspects (word processing, spreadsheets, work quality, problem solving, learning, empowerment, and overall job performance). These dimensions were shown by a separate analysis of administrative performance to be critical for performing administrative work in this organization.¹ Ratings were made on a 5-point scale ranging from 1 (*does not meet job requirements*) to 5 (*routinely exceeds job requirements*). These seven items were averaged to create a measure of job performance. Internal consistency reliability was .89.

Control variables. Because education level, age, and job tenure might be related to the autonomy, cognitive ability, job-related skill, and role breadth measures included in the study, they were used as control variables in the regression analyses.

Results

Descriptive statistics and correlations are provided in Table 1. Statistical power was more than 90% to detect a medium effect ($r = .30$) and more than 99% to detect a large effect ($r = .50$; $p < .05$, one-tailed; Cohen, 1988). All of the measures demonstrated adequate variability, and none evidenced floor or ceiling effects, with the possible exception of autonomy, which had a fairly high mean level. The control variables were modestly intercorrelated,

and age and job tenure were significantly negatively related to job-related skill. Role breadth was positively related to autonomy, cognitive ability, job-related skill, and job performance, providing initial support for Hypotheses 1–3 and 5.

Hierarchical regression was used to examine the hypotheses (Cohen & Cohen, 1983). The control variables were entered in the first step, followed by the relevant independent measures. Hypotheses 1, 2, and 3 suggested that autonomy, cognitive ability, and job-related skill would be positively related to role breadth, respectively. Tests of these hypotheses are shown in Table 2. In support of Hypothesis 1, we found that autonomy was positively related to role breadth ($\beta = .24$), $t(116) = 2.65$, $p < .01$, $\Delta R^2 = .06$. In support of Hypothesis 2, we found that cognitive ability was positively related to role breadth ($\beta = .28$), $t(112) = 3.04$, $p < .01$, $\Delta R^2 = .08$. In support of Hypothesis 3, we found that job-related skill was positively related to role breadth ($\beta = .41$), $t(106) = 4.02$, $p < .01$, $\Delta R^2 = .13$.

Hypothesis 4 suggested that autonomy, cognitive ability, and job-related skill would incrementally predict role breadth. To test this possibility, we simultaneously regressed all three predictors on role breadth. As indicated in Table 2, autonomy ($\beta = .24$), $t(102) = 2.70$, $p < .01$; cognitive ability ($\beta = .28$), $t(102) = 3.01$, $p < .01$; and job-related skill ($\beta = .31$), $t(102) = 3.06$, $p < .01$, all incrementally predicted role breadth, accounting for 23% of the variance in role breadth.

Hypothesis 5 suggested that role breadth would be positively related to job performance. We found this relationship to be significant ($\beta = .30$), $t(99) = 3.13$, $p < .01$, $\Delta R^2 = .09$, indicating support for the hypothesis (see Table 3).

¹ These performance dimensions are viewed by the organization as reflecting job knowledge or technically oriented performance. Six other performance dimensions pertaining to interaction were also measured. A factor analysis indicated two distinct factors, with the technically oriented performance measure accounting for 52% of the variance and the interaction factor accounting for 10% of the variance. We focused on the technical performance measure because our primary concern involved the opportunity and capability to perform additional work tasks (which largely concerned technical aspects of work) and the relationship between such role breadth and job performance.

Table 2
Regression of Autonomy, Cognitive Ability, and Job-Related Skill on Role Breadth

Independent variable	H1		H2		H3		H4	
	ΔR^2	β						
Step 1	.03		.02		.04		.04	
Education		.08		.06		.16		.16
Age		-.14		-.12		-.09		-.09
Job tenure		.04		.03		.04		.04
Step 2							.23**	
Autonomy	.06**	.24**	—	—	—	—	—	.24**
Cognitive ability	—	—	.08**	.28**	—	—	—	.28**
Job-related skill	—	—	—	—	.13**	.41**	—	.31**
Overall <i>F</i>		2.56*		2.92*		5.18**		6.24**
<i>dfs</i>		4, 116		4, 112		4, 106		6, 102

Note. Dashes indicate that the variable was not entered in the regression equation. H = hypothesis.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Hypotheses 6a, 6b, and 6c suggested that role breadth would mediate the relationship between autonomy, cognitive ability, job-related skill and job performance, respectively. Given the results of Hypotheses 1–3 and 5, two of the preconditions for mediation were supported (Baron & Kenny, 1986). Specifically, autonomy, cognitive ability, and job-related skill were related to role breadth, and role breadth was related to job performance. In addition, inspection of Table 1 indicates that autonomy, cognitive ability, and job-related skill were all significantly related to job performance, suggesting that there is a significant effect to be mediated.

The final step in the investigation of mediation involved regressing both the independent measure (autonomy, cognitive ability, or job-related skill) and role breadth on job performance. We conducted three regression analyses, one for each of the independent variables (see Table 3). This allowed us to test the significance of a reduction in parameter estimates in mediated versus nonmediated conditions. When autonomy and role breadth were regressed on job performance, autonomy ($\beta = .13$), $t(97) = 1.34$, *ns*, was not significant, and role breadth ($\beta = .26$), $t(97) = 2.57$, $p < .01$, was

significantly related to job performance. To determine whether the reduction in the parameter estimate of autonomy was statistically significant, we performed a direct test of the reduction using a modified form of Sobel's (1982) formula (see Baron & Kenny, 1986). The result of this test showed that the parameter estimate for the relationship between autonomy and job performance was significantly lower in the mediated condition than in the nonmediated condition, $t(97) = 1.71$, $p < .05$. This indicates that role breadth significantly mediated the relationship between autonomy and job performance, providing support for Hypothesis 6a.

When cognitive ability and role breadth were regressed on job performance, cognitive ability ($\beta = .16$), $t(95) = 1.56$, *ns*, was not significant, and role breadth ($\beta = .25$), $t(95) = 2.51$, $p < .01$, was significantly related to job performance. A test of the significance of the reduction in parameter estimates showed that the relationship between cognitive ability and job performance was significantly lower in the mediated condition than in the nonmediated condition, $t(95) = 1.82$, $p < .05$. This indicates that role breadth significantly mediated the relationship between cognitive ability and job performance, providing support for Hypothesis 6b.

Table 3
Tests of Mediation

Independent variable	H5		H6a		H6b		H6c	
	ΔR^2	β						
Step 1	.02		.02		.03		.03	
Education		.02		.04		-.04		.01
Age		-.10		-.10		-.11		-.11
Job tenure		-.08		-.07		-.11		-.09
Step 2			.10**		.10**		.10**	
Role breadth	.09**	.30**	—	.26**	—	.25**	—	.24*
Autonomy	—	—	—	.13	—	—	—	—
Cognitive ability	—	—	—	—	—	.16	—	—
Job-related skill	—	—	—	—	—	—	—	.17
Overall <i>F</i>		3.04**		2.75**		2.86**		2.47*
<i>dfs</i>		4, 99		5, 97		5, 95		5, 87

Note. Dashes indicate that the variable was not entered in the regression equation. Job performance is the dependent variable in all equations. H = hypothesis.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

When job-related skill and role breadth were regressed on job performance, job-related skill ($\beta = .17$), $t(87) = 1.35$, *ns*, was not significant, and role breadth ($\beta = .24$), $t(87) = 2.19$, $p < .01$, was significantly related to job performance. A test of the significance of the reduction in parameter estimates showed that the relationship between job-related skill and job performance was significantly lower in the mediated condition than in the nonmediated condition, $t(87) = 2.01$, $p < .05$. This indicates that role breadth significantly mediated the relationship between job-related skill and job performance, providing support for Hypothesis 6c.

Although testing for mediation using three separate regression equations allows us to test the significance of the difference in parameter estimates, it does not allow us to examine the simultaneous effect of all three independent variables. To simultaneously test the model, we used a manifest variable approach to examine the fit of the structural model in EQS Version 5.7b (Bentler, 1995). Given the expected relationship between cognitive ability and job-related skill, we added a path between them. In addition, preliminary analyses indicated that the only control variable that should be entered in the model was education level.

To assess the adequacy of our model, we examined the chi-square statistic, the comparative fit index (CFI), the standardized root-mean-square residual (SMSR), and the root-mean-square error of approximation (RMSEA). Chi-square for the model was 10.00, which was nonsignificant. The χ^2/df ratio was 1.11, which indicates good fit (Arbuckle, 1997). The CFI was .98, SMSR was .06, and RMSEA was .035, all of which indicate excellent model fit (Hu & Bentler, 1999). We also examined the Wald and Lagrange multiplier statistics to determine whether any parameters should be dropped or added, respectively. This indicated that no further changes to the model were needed, suggesting that the hypothesized conceptual model has a good fit to the data (see Figure 2).

Discussion

The present study sought to expand our understanding of the factors that predict greater role breadth and how role breadth translates into ratings of job performance. The results supported the hypotheses that job autonomy, cognitive ability, and job-related skill incrementally predict role breadth, accounting for a substantial 23% of the variance in role breadth. Role breadth, in turn, was related to job performance. Finally, regression and structural equation analyses demonstrated that role breadth mediates the relationships between job autonomy, cognitive ability, job-related skill, and job performance.

Several aspects of this research strengthen our confidence in these findings. First, the data were gathered from two different

sources at three time periods. This minimizes any impact common method variance might have on the results. Second, study constructs consisted of both objective (e.g., ability test and work sample performance) and perceptual (e.g., job autonomy and role breadth) measures. This minimizes problems associated with incumbent impression management and faking. Third, we obtained a direct measure of role breadth by gathering ratings of whether 94 specific tasks were done on the job. Such specific and detailed rating stimuli stand in contrast to previous research that has tended to use more generic behavioral statements.

These results have a number of implications for research. First, they add to our understanding of the factors that are important for greater role breadth. Previous research has shown that expectations (Morrison, 1994) and leadership (Hofmann et al., 2003) are related to expanded work roles. By investigating job autonomy, we have demonstrated that the opportunity to expand one's role is important for the performance of additional work tasks. By investigating cognitive ability and job-related skill, we have shown that individuals with greater capabilities are likely to perform more work tasks. These findings are important because although there has been considerable research into job autonomy, cognitive ability, and job-related skill, the importance of these factors has not been empirically tested in the context of broader work roles.

Second, the finding that role breadth mediates the relationship between job autonomy, cognitive ability, job-related skill, and job performance provides insight into how job aspects and individual characteristics are translated into performance outcomes. Although job autonomy has been linked theoretically to job performance (Hackman & Oldham, 1975), direct relationships between autonomy and performance have been small and inconsistent (Fried & Ferris, 1987; Morgeson & Campion, 2003). The current research suggests that the relationship between autonomy and job performance is more complex. Job autonomy offers incumbents the opportunity to perform more tasks. Those that perform more tasks are recognized in their supervisors' judgments of performance. This helps us better understand the process by which aspects of job design are translated into important organizational outcomes.

There is a strong tradition of research linking ability- and skill-based constructs directly to job performance (Hunter & Hunter, 1984). Yet it has also been shown that the relationship between ability and job performance is mediated by job knowledge (Hunter, 1986). This current research suggests there may be additional mediators of the ability-job performance relationship. High levels of ability and skill enable incumbents to perform more tasks, and the performance of these tasks is related to higher ratings of job performance. Of course, it is important to recognize that this relationship may be limited to situations in which greater role breadth is valued. Given the need for employees to be adaptive and take on additional tasks, however, it is likely that greater role breadth will be viewed positively by an increasing number of supervisors and organizations.

Third, the results have implications for the collection of job-related information. We found there is variability in incumbent task performance, and this variability can be predicted with the constructs investigated here. Such variability has typically been viewed as measurement error to be eliminated (Harvey, 1991). Yet this study shows that these differences are meaningful and should not necessarily be viewed as inaccuracy (Morgeson & Campion, 1997).

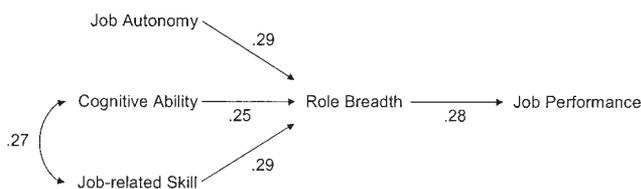


Figure 2. Path model with standardized regression coefficients (all significant at $p < .01$).

Fourth, the current research operationalized role breadth by summing the number of tasks performed by incumbents. Although this is a direct measure of the amount of activities an individual performs in his or her job, there are other ways to operationalize role breadth. One possibility is to identify distinct task clusters and then treat role breadth as the number of task clusters performed or the number of tasks performed within each cluster. This would enable a more fine-grained examination of role breadth. The use of task clusters has proved useful when redesigning jobs (Morgeson & Campion, 2002) and should be extended to research on role breadth. It should be noted, however, that the identification of task clusters via factor analysis requires diversity in jobs and tasks (see Cranny & Doherty, 1988).

Notwithstanding these contributions, this study also has several limitations. As noted, we studied a single administrative job family. Although this allows us to rule out job-related explanations for the observed findings (i.e., differences in role breadth were not due to differences in the jobs themselves), it is an open question as to whether these results will generalize to other, more complex jobs. In addition, all of the study participants were female. It is not clear whether these results will generalize to jobs with a heterogeneous gender composition.

It is also important to recognize that our performance measure focused on task performance and not on more contextual performance elements. Task performance reflects activities that are formally recognized as part of the job and support the organization's technical core, whereas contextual performance reflects activities that support the organizational, social, and psychological environment (Borman & Motowidlo, 1993). Our results are likely limited to task performance because our role breadth measure reflects task activities that are formalized on a job analysis survey and are rewarded by supervisors, whereas contextual performance elements are typically not formally part of a job. In addition, the cognitive ability and job-related skill measures concern the ability to perform essential aspects of the job and are, therefore, unlikely to predict contextual performance. Instead, we might expect socially or personality oriented measures to predict contextual performance outcomes.

One potential counter explanation for our results could be that differences in job complexity are responsible for variation in role breadth. This is not likely to have been a problem. First, job complexity is typically conceptualized as a between-job construct where differences are examined across hundreds of different jobs (Hunter, 1986; Wilk & Sackett, 1996). In contrast, the current study includes a narrow job family unlikely to exhibit much variance in job complexity. For example, the "data" dimension from the *Dictionary of Occupational Titles (DOT)*; U.S. Department of Labor, 1991) has been used as an index of job complexity (Hunter, 1986). The two job titles in the *DOT* similar to the jobs in our sample (secretary and administrative clerk) have the same complexity rating, indicating no differences in job complexity. Second, even if there were differences in job complexity and role breadth was partly dependent on this complexity, it is not clear that it would significantly affect the results of this study. Job complexity would likely moderate the relationship between cognitive ability and role breadth. The fact that we found support for our hypotheses suggests that these relationships hold even if there are differences in job complexity (which is a similar conclusion

reached in the ability–performance–job complexity literature; see Hunter, 1986).

Finally, although these results support our hypotheses, additional research should be conducted to confirm the causal ordering of this model. It may be that high performers are given more tasks to perform and that this is reflected in their task performance ratings. Clearly, research using experimental or quasi-experimental research designs is needed to help rule out potential alternative explanations for these results.

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