NARRATIVE JOB DESCRIPTIONS AS POTENTIAL SOURCES OF JOB ANALYSIS RATINGS

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Summary

The present study investigated whether narrative job descriptions could be converted to quantitative rating scores using a traditional job analysis questionnaire. Detailed written descriptions of 121 different jobs in a military health care facility were rated using the Position Analysis Questionnaire (PAQ). Indices of interrater agreement (intraclass correlation coefficient and average pairwise correlation) suggested acceptable levels of agreement for job dimension scores derived from these ratings. Further, when regressed against General Aptitude Test Battery (GATB) abilities estimates, the job dimension scores produced values very similar to those reported by previous studies using the PAQ. Finally, cluster analyses of the 121 jobs suggested that the dimensions provided a viable means of grouping jobs into families. Potential uses for data derived from narrative job descriptions are discussed in terms of (a) their appropriateness in decisions regarding relatively macro aspects of the job and (b) the savings in cost and organizational intrusiveness realized when such ratings are used as an alternative to the detailed analysis of specific jobs in many situations.

Narrative Job Descriptions as Potential Sources of Job Analysis Ratings

Recent months have seen a resurgence of interest in structured job analysis techniques (Cornelius, Carron, & Collins, 1979; McCormick, 1976; Pearlman, 1980). This interest is quite understandable as organizational managers and researchers seek more precise and objective data for use in job classification decisions, the development of selection and training programs, and the improvement of performance appraisal systems. Numerous methods exist for obtaining detailed job or task analysis information, but virtually all require a qualified observer to describe the processes involved in accomplishing the job or to make a series of judgments about a variety of specific activities or behaviors required by the job (Cornelius & Lyness, 1980). This inherent element of judgment has led to a number of concerns about who is best qualified to perform such ratings.

Traditional sources of job analysis ratings have included the incumbent, the immediate supervisor, and trained job analysts who observe selected individuals in the work setting. Each of these sources has proven useful but none is without problems. For example, the supervisor apparently represents the most meaningful source of information about the behaviors or activities that should be performed on the job although the job incumbent is likely to be the most knowledgeable informant about behaviors that are actually performed (Greller & Herold, 1975). On the other hand, the job incumbent may lack the necessary skill or sophistication to make accurate distinctions of the kind required by most job analysis questionnaires.

To some degree, the questionnaires themselves contribute to these difficulties. Most of the popular job analysis instruments, especially the Position Analysis Questionnaire (PAQ) developed by McCormick, Jeanneret, and Mecham (1972), have been criticized for language that is too general and too esoteric to be used by the average employee (Ash & Edgell, 1975; Levine, Ash, & Bennett, 1980). This complexity of language has been blamed for findings such as those reported by Robinson, Wahlstrom, and Mecham (1974) that ratings by job incumbents were not as accurate as those provided by personnel department analysts, especially for blue-collar jobs.

In a related study Smith and Hakel (1979) used the PAQ to obtain job analysis ratings from job incumbents, supervisors, trained job analysts, and students. When the scores obtained from these different sources were compared, it was found that job incumbents and supervisors at the lower levels tended to produce less reliable ratings than the other groups and that incumbents and supervisors at all levels produced ratings that appeared inflated compared to those of outside observers and students. The authors noted, however, that even though such trends gave a slight edge to students and outside observers in terms of overall accuracy, it made little practical difference who actually performed the ratings.

Based on evidence that an individual's lack of personal familiarity with the work did not appear to have an adverse effect upon his or her ability to complete the PAQ, Smith and Hakel argued that if the purpose of conducting the job analysis was to group similar occupations into clusters or to classify jobs, "... then the fact that even lay persons with little contact with the job can agree at extremely high levels with incumbents, supervisors, and analysts should be interpreted as evidence for the usefulness of the instrument" (1979, p. 691).

Such conclusions have potentially far-reaching implications for the use of job analysis instruments. First, they raise questions about the degree to which most of these instruments are sensitive enough to reflect differences among jobs of similar types. Second, they raise questions about the nature and scope of information required to form valid and reliable ratings. Third, they raise questions about the utility of using certain sources of information. In regard to the first of these points, Corneliur et al. (1979) attempted to discriminate among seven foreman jobs in a chemical processing plant. They compared different job analysis techniques that emphasized task-oriented, worker-oriented, or abilities-oriented data and found that the various techniques led to different conclusions about the degree of overlap among the seven jobs. Task and ability-oriented data tended to suggest at least three separate clusters while worker-oriented data (derived using the PAQ) suggested that all the foreman jobs were essentially identical. The authors noted that these differences were probably due to the fact that the PAQ was designed for use in a wide variety of jobs and occupational settings, and thus was not sensitive to the more subtle differences that distinguish among relatively similar jobs.

This point of view was given greater credence when Levine et al. (1980) compared four job analysis techniques with regard to their utility for personnel selection. The authors found that the different methods--job elements, critical incidents, task analysis, and the PAQ--produced selection examination plans that differed somewhat in overall quality but not in basic content or applications. They noted that differences in level of precision and detail attributable to the different job analysis techniques tended to be lost in successive applications as the data were translated into a relatively restricted set of alternative examination methods.

Observations such as the above raise doubts about the utility of obtaining information through detailed observations of specific jobs when the primary purpose of that information is to draw conclusions or make decisions about classes of jobs. Whether the investigator uses trained raters or job incumbents to provide such data, the process remains a slow, costly and disruptive intrusion into the work environment (Levine et al., 1980; Morsh, 1964). This is especially true for jobs that occur with some frequency in an organization where many manhours may be required to rate even a significant portion of the individual positions. Thus, a less costly and less intrusive means of providing quantitative, reliable and valid information about classes of jobs would appear beneficial for many organizational applications, such as salary adjustment, job classification, or other common actions that depend on the identification of genotypic similarities or differences.

In some of these applications, it appears that the utility of conventional job analysis instruments might be extended further. Many organizations possess detailed written descriptions of the jobs performed in that organization. Often these descriptions were developed through extensive observations and analysis. Unfortunately, the utility of such descriptions is restricted because they do not provide directly the quantitative scores that are necessary for many of the above applications. Thus, a technique for converting existing narrative descriptions to standardized job analysis ratings without having to readminister such instruments on a position-by-position basis would be valuable whenever the primary purpose of the information is to reveal differences or similarities among job categories rather than specific positions.

The present study was designed to determine whether trained raters could convert such written job descriptions to ratings on a traditional job analysis questionnaire. The PAQ was selected for this assessment because of its extensive development and generic language. As noted by McCormick et al. (1972), the PAQ was designed to describe differences and similarities among positions in terms of general behaviors that are common to all jobs. This is also the level at which

most job descriptions are written since they are generally designed to assist in job classification or in comparing salary levels for different jobs.

Method

Sample of Jobs

A listing was obtained of all employee positions and job titles at a medium-sized military hospital employing approximately 1,100 persons. These individuals represented 121 unique job categories based on differences in job title, job register code, paygrade range, and whether or not the position was designated as supervisory in nature. The inclusion of the latter two variables was necessary because of explicit differences in the duties of positions with the same job title but at different paygrades or different levels of supervisory responsibility (cf. Gottfredson, 1980).

Task Analysis Procedure

Extensive narrative descriptions of each of the 121 job categories were obtained from the U.S. Civil Service Commission Qualifications Standards (1978). These descriptions contained detailed information about the scope of job duties, experience and training requirements, supervisory controls, and general work conditions that are typically encountered by individuals in each category.

Two graduate level psychology students, trained in the use of the PAQ, were asked to rate the 121 job descriptions. Twenty-five of the job descriptions were selected at random for rating by two additional students. Responses were averaged across raters and the resulting job element ratings were scored on the 27 job dimensions and 5 overall dimensions described by McCormick et al. (1972).

Interrater Reliability

Reliability in the form of agreement among raters was measured for items and dimensions by calculating the intraclass correlation coefficient (Ebel, 1951) and the average pairwise correlation. The latter estimate was obtained by correlating ratings across all pairs of raters, converting the resulting correlations to z-scores and averaging. The average z-scores were then converted back to correlation coefficients.

Validity of Ratings

The validity of the ratings was addressed in regard to two issues: (a) correlations with independent scores, and (b) the ability of the ratings to produce meaningful job families.

Correlational analyses. The primary assessment of rating validity paralleled portions of the initial efforts to establish validity for the PAQ (McCormick et al., 1972). Published ratings of appropriate worker trait components were obtained for each job from the Dictionary of Occupational Titles (U.S. Department of Labor, 1965). These ratings closely paralleled the ability requirements of the General Aptitude Test Battery (GATB). PAQ job dimensions were selected and regressed against each of the GATB abilities areas in an attempt to reproduce the multiple regression coefficients reported by McCormick et al. (1972).

Job family analyses. As a second assessment of rating validity, job families were formed via a hierarchical clustering (Ward, 1963; Ward & Hook, 1963) based on score profiles on the five overall dimension scores derived from the PAQ. The resulting clusters were then used as classification variables in a multiple discriminant analysis. Classification functions were computed and used to establish the probability of membership in each cluster for each of the jobs. As a check of the goodness of fit for the initial hierarchical clustering analysis, jobs were reassigned to the cluster with the highest probability of membership.

Results

Interrater Reliability

When indices of interrater agreement were calculated at the item level, the results suggested generally low and unacceptable levels of agreement. Median values for the intraclass correlation and the average pairwise correlation were

.42 and .48, respectively. Interrater agreement tended to improve as items were aggregated, however (See Table 1). For the job dimension scores,[1] the median intraclass correlation was .61, while the corresponding average pairwise correlation was .65. Finally, the median intraclass and average pairwise correlations for the five overall job dimensions were .70 and .83, respectively. Because these latter values were generally consistent with those reported by other studies using the PAQ (Smith & Hakel, 1979; Taylor, 1978; Taylor & Colbert, 1978), it was concluded that the job dimension and overall dimension scores reflected sufficient levels of agreement to justify their inclusion in further analyses.

Table 1

Estimates of Interrater Reliability of PAQ Job Dimensions for 121 Jobs

Job Dimension[a]	Intraclass Correlation	Average Pairwise Correlation
JA-1	.20	.46
JA-2	.74	.78
JA-3	.46	.61
JA-4	.43	.58
JA-5	.60	.58
JA-6	.66	.81
JB-8	.85	.88
JB-9	.48	.55
JC-10	.71	.67
JC-11	.78	.82
JC-12	.76	.86
JC-13	.82	.80
JC-14	.49	.65
JC-15	.76	.74
JC-16	.56	.65
JD-17	.75	.77
JD-18	.45	.50
JD-19	.55	.54
JD-20	.50	.63
JD-21	.55	.59
JE-22	.80	.85
JE-23	.61	.64
JF-25	.45	.64
JF-26	.26	.39
JO-I	.90	.89
JO-II	.69	.79
JO-III	.81	.80
JO-IV	.66	.85
JO-V	.38	.56

[a]The job elements in Dimensions JA-7, JF-24, and JF-27 were highly restricted in the present setting and thus had insufficient variance for inclusion.

Table 2

Multiple Correlations Between DOT Worker

Trait Components and Job Dimensions

Worker Trait Component	PAQ Job Dimensions	Multiple Correlation	
(G) Intelligence	8, 9, 14, 15, 16, 17, 19, 23	.85	(.78)
(V) Verbal	3, 8, 9, 14, 15, 17, 22, 23	.80	(.80)
(N) Numerical	8, 9, 14, 15, 16, 17, 19, 23	.71	(.75)
(S) Spatial	1, 3, 8, 14, 15, 16, 25, 26	.80	(.70)
(P) Form Perception	3, 4, 14, 15, 16, 17, 22	.51	(.62)
(Q) Clerical Perception	3, 4, 8, 9, 11, 15, 17, 22	.74	(.73)
(K) Motor Coordinator	3, 9, 13, 14, 15, 17, 19, 22, 25	.65	(.71)
(F) Finger Dexterity	1, 3, 4, 6, 9, 13, 15, 22	.65	(.64)
(M) Manual Dexterity	3, 6, 11, 12, 13, 14, 20, 25	.59	(.59)

NOTE: Multiple correlation coefficients in parentheses are reprinted from McCormick et al. (1972) and are presented for comparison purposes.

Validity Estimates

Table 2 presents the results of the multiple regression analyses between the PAQ job dimensions and the ability requirements estimates obtained from the Dictionary of Occupational Titles (DOT). These values ranged from .59 to .85 and were generally comparable to those reported by McCormick et al. (1972).

Job Families

As an added assessment of the validity of the job ratings, the 121 jobs were cluster analyzed using the first four of the overall job dimensions. The fifth dimension (JO-V) was not included in these analyses because of the low estimates of interrater agreement. The hierarchical procedure suggested potential solutions of 10, 12, or 16 clusters. All except the 10-cluster solution produced groups with highly similar profiles suggesting that further collapse would yield a more parsimonious solution. Table 3 presents the job titles organized by cluster and subcluster. Profiles for the clusters are presented in Figure 1. Two jobs--police officer and motor vehicle operator--were not able to be grouped into any of the existing clusters.

Table 3

Occupational Clusters of Job Titles

Cluster 1

PROFESSIONAL NON-MEDICAL

1 Safety Manager
30 Industrial Hygienist
37 General Engineer
39 Computer Specialist
62 Medical Sub. Librarian
107 Supvr. Pharmacist

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2 Dental Svc. Analyst
3 Supvr Soc. Sci. Analyst
32 Budget and Acct. Officer
44 Supvr. Dietician
60 Supvr. Purch.. Agent
64 Supvr. Supply Mgmt. Asp.
97 Supvr. Budget & Acct. Officer

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4 Clinical Psychologist
5 Social Worker

Cluster 2

ADMINISTRATIVE SUPPORT

90 Safety Specialist
91 Environ. Prot. Specist.
94 Admin. Manager (Junior)
95 Admin. Manager (Senior)
96 Admin. Asst.
99 Budget Analyst
111 Hospital Admin. Officer
116 Contract Representative
119 Training Instructor
120 Training Administrator

Cluster 3

DIRECT MEDICAL CARE

30 Supvr. Nursing Consultant
40 Pharmacist
99 Medical Officer
100 Supvr. Medical Officer
101 Physician Assistant
102 Nurse Anesthetist
109 Optometrist
110 Podiatrist
112 Dental Officer
119 Supvr. Dental Officer

Cluster 4

NURSING

36 Occupational Health Nurse
37 Clinical Nurse
38 Nurse Practitioner
40 Supvr. Clinical Nurse

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41 Licensed Vocational Nurse
42 Nursing Assistant
43 Lead LPN

Cluster 5

CLERICAL

17 Information Receptionist
19 Mail/File Clerk: Typing
20 Secretary/Clerk
21 Secretary/Stenography
22 Clerk Typist Trainee
24 Supvr. Dictat. Mach. Transcr.
25 Computer Operator
26 Supvr. Computer Operator
28 Data Transcriber
33 Acct. Technician
34 Supvr. Acct. Tech.
51 Medical Records Clerk
61 Procurement Clerk: Typing
63 Library Tech.: Typing
93 Military Personnel Clerk
121 Supply Clerk

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6 Per. Clerk: Typing
8 Military Pers. Clerk: Typing
10 Clerk
11 Clerk/Typist
12 Medical Records Clerk
18 Mail Clerk
23 Clerk: Dic. Mach. Transcriber
29 Coding Clerk
30 Coding Clerk: Typist
35 Teller
50 Med. Rec. Clerk: Typist
53 Med. Rec. Clerk Trainee
58 Load Claims Clerk: Typist
59 Purchasing Agent: Typist
65 Supply Clerk: Typist

Cluster 5 (Cont'd)

7 Personnel Assistant
9 Supvr. Mil. Pers. Clerk
13 Supvr. Clerk
14 Supvr. Clerk/Typist
31 Lead Coding Clerk
52 Supvr Med. Rec. Clerk

Cluster 6

BLUE-COLLAR SUPPORT

66 Laborer
82 Warehouseman
83 Warehouseman Leader

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67 Housekeeping Aid
69 Housekeeping Aid Leader
72 Food Service Worker
73 Food Service Wkr. Leader
78 Linen Control Worker
80 Linen Cus. Wkr. Leader
84 Carpet Cleaner
85 Baker
86 Cook
88 Cook Leader

Cluster 7

BLUE-COLLAR SUPERVISION

40 Supp. Housekeeping Officer
68 Housekpg. Aid Foreman
71 Transportation Foreman
74 Med. Dept Repair Foreman
81 Warehouse Foreman
87 Cook Foreman
89 Cook Gen. Foreman

Cluster 8

MEDICAL TECHNICAL SUPPORT

45 Nuclear Med. Technician
46 Medical Technician
47 Cytology Technician
54 Dental Assistant
56 Rehabilitation Technician
106 Medical Technologist
108 Pharmacy Technician
114 Environ. Health Techn.

Cluster 9

MECHANICAL

70 Multilith Operator
75 Med. Dept. Repair Tech.
77 Mobile Dept. Services
79 Auto Mechanic

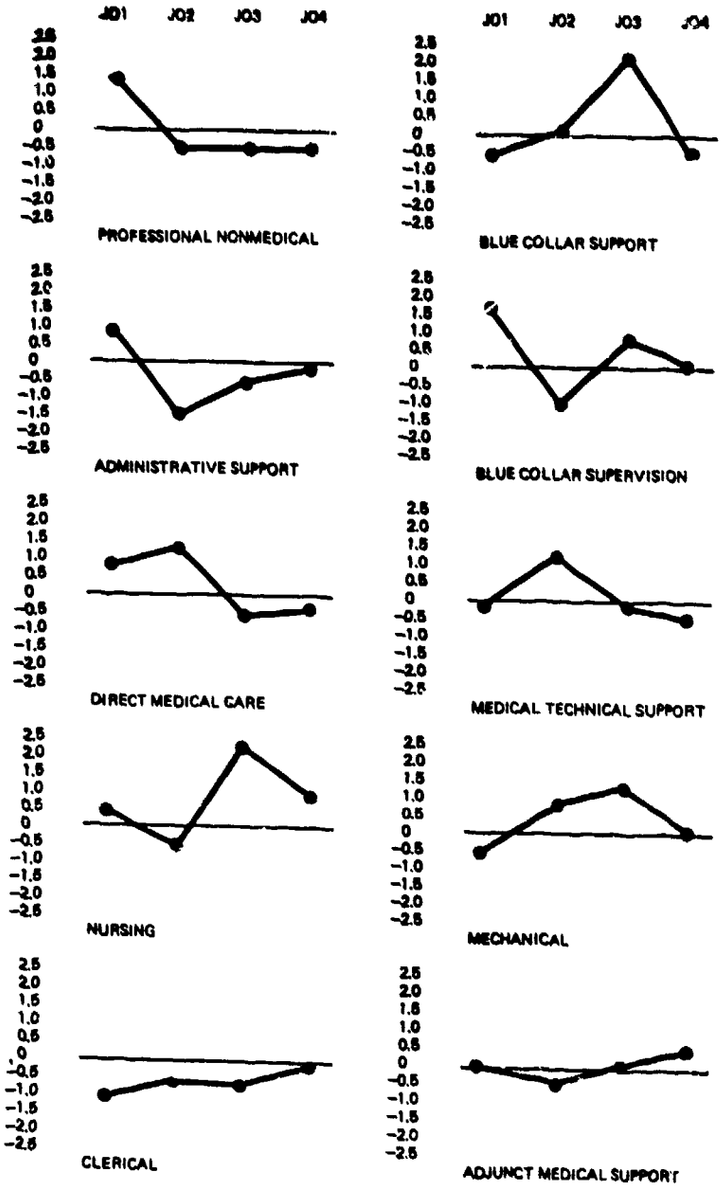
Cluster 10

ADJUNCT MEDICAL SUPPORT

103 Occupational Therapist
104 Physical Therapist
105 Physical Therapist Asst.
115 Engineering Technician
117 Medical Photographer
118 Photo Laboratory Asst.

NOTE: Dotted lines separate subclusters within the larger groups.

Figure 1


J01
J02
J03
J04
2.5
2.0
1.5
1.0
0.5
0
-0.5
-1.0
-1.5
-2.0
-2.5
PROFESSIONAL NONMEDICAL
BLUE COLLAR SUPPORT
ADMINISTRATIVE SUPPORT
BLUE COLLAR SUPERVISION
DIRECT MEDICAL CARE
MEDICAL TECHNICAL SUPPORT
NURSING
MECHANICAL
CLERICAL
ADJUNCT MEDICAL SUPPORT

Cluster 1 consisted of "Professional, Non-medical" jobs. These were jobs that required considerable post-graduate training or highly specialized skills normally obtained in a professional degree program. These individuals generally were not involved in the direct provision of patient care. The profile for this cluster differed from the standardized mean profile[2] primarily in terms of a higher score on the dimension reflecting Decision-Making, Communication, and Social Responsibility.

Cluster 2 was entitled "Administrative Support" and was comprised of jobs that were involved in administering or overseeing various subsystems or programs in the hospital. Technical guidance for some of these jobs was provided by the members of Cluster 1. The resulting score profile reflected jobs that were relatively high in Decision-Making, Communication and Social Responsibility, but somewhat below the mean on the Skilled Activities dimension.

Cluster 3 was entitled "Direct Medical Care" and encompassed physicians, dentists, optometrists and other professionals involved in direct patient contact or specialized care of a distinctly medical nature. The profile for this group tended to be above the mean on the Decision-Making and Skilled Activities dimensions.

The fourth cluster, "Nursing", represented all levels of nursing personnel and was described by above average scores on Skilled Activities and Equipment Operation. Such a profile appears anomalous until one reviews the items that comprised the latter measure. For example, nurses use a variety of equipment in the provision of care. In addition, while items in the Equipment/Vehicle Operation Measure do primarily reflect the concept implied by the title, many of the same behaviors are required to monitor the patient's condition and needs or to provide care. Among such behaviors are the monitoring of sounds, events and visual signals, estimating the speed of fluid flow, responsibility for the safety of others, and so forth.

The fifth cluster was entitled "Clerical" and contained all of the clerical positions. This cluster evidenced a relatively flat profile distinguished primarily by lower than average scores on the Decision-Making, Communication and Social Responsibility dimensions. The sixth cluster--"Blue-collar Support"--consisted of hourly wage employees involved in various skilled or manual labor tasks, while Cluster 7 was comprised of individuals in roles that involved "Blue-collar Supervision." The profile for the former group was defined primarily in terms of higher than average scores on the Physical Activities dimension, while the latter had above average scores on both Decision-Making and Physical Activities but below average scores on Skilled Activities.

The jobs in the eighth cluster were engaged primarily in "Medical Technical Support" and were distinguished by above average scores on Skilled Activities, while jobs in the ninth cluster were involved in "Mechanical Operations" and reported elevated scores on both the Skilled Activities and Physical Activities measures. Finally, the tenth cluster was entitled "Adjunct Medical Support" because it included jobs that provided technical support at a somewhat lower level of technological sophistication than the jobs comprising Cluster 8. The mean score profile for this group was relatively flat.

The ten clusters were then entered into a multiple discriminant analysis. The resulting discriminant functions were used to determine the probability that any particular job was a member of each cluster. When assigned to clusters on the basis of the highest probability of membership, 92% of the jobs were correctly classified into the groups suggested by the hierarchical analysis. Thus, the ten-cluster solution appeared to represent a meaningful and reproducible grouping of jobs.

Discussion

The present study sought to determine whether quantitative ratings of job characteristics could be derived from detailed narrative descriptions of those jobs. In general, the results were encouraging and suggested that reliable and valid scores could be obtained from the written descriptions and, further, that these scores provided a viable basis for grouping jobs into clusters or families.

A primary concern in data such as these is the degree to which different raters agree upon underlying characteristics of the jobs being rated. In the present study, indications of such agreement were mixed. At the item level, the indices were generally too low to justify further analysis. Thus, the present technique is clearly inappropriate if one requires the fine level of discrimination normally associated with analyses of specific items. On the other hand, interrater agreement appeared at least moderate for the job dimension scores and tended to equal or exceed values reported in previous studies (Cornelius et al., 1979; Smith & Hakel, 1979; Taylor, 1978; Taylor & Colbert, 1978). Further, concerns about interrater agreement or reliability were alleviated somewhat by the magnitude of the validity coefficients obtained when PAQ dimension scores were regressed against independently derived estimates of worker abilities obtained from the Dictionary of Occupational Titles.

Potential explanations for this apparent discrepancy are many, but perhaps the most logical reflects the type of information provided by the job descriptions themselves. These descriptions seldom contained the type of information that would permit explicit ratings of specific behavioral requirements, but rather described jobs in terms of general demands. Thus, it appeared that raters were able to recognize and agree upon general characteristics of the job but were unable to extract sufficient specificity from the descriptions to agree upon the exact elements that comprise those general characteristics. A potential corollary influence was suggested by Jenkins Nadler, Lawler, and Cammann (1975) who argued that a lengthy job analysis questionnaire tended to cause raters to become bored and to lose sight of the relationship between a particular item and the concept it reflects. The PAQ definitely qualifies as a lengthy instrument, so that in the process of rating a number of jobs, the raters may have used items in slightly different ways. The aggregation of scores across related items would reduce the potential impact of such tendencies and would produce greater agreement.

The lack of agreement for items argues against analyses conducted at that level but does not negate the potential utility of scores derived from those items. As noted recently by Kaye, "The reliability that matters is the reliability that will actually be used in the analysis, after it has been recoded, transformed, combined, concatenated, or smoothed in preliminary ways" (1980, p. 467). Thus, the level of interrater agreement appears sufficient if the ratings are used for decisions involving dimension scores rather than item scores.

More crucial than the above indications of interrater agreement was the evidence that the ensuing dimension scores represented valid measures of important job characteristics. For example, the results of the multiple regression analyses paralleled both in pattern and in magnitude the findings reported by McCormick et al. (1972) during their original efforts to validate the PAQ. The fact that the PAQ dimension scores used in the present study were derived from sources and techniques that were entirely independent of those used to obtain the ability estimates served as further evidence of validity.

Such evidence of validity forms a necessary foundation for the use of job analysis ratings derived from narrative job descriptions. In many ways, however, the results of the cluster analyses may have more far-reaching implications. These latter results suggested that the ensuing job dimensions (a) were relatively sensitive but robust measures of essential similarities and differences among the jobs, and (b) were able to produce conceptually meaningful clusters of jobs. Equally important was the evidence that the ratings were sensitive to differences associated with job level as well as those associated with job type (cf. Gottfredson, 1980). For example, apparent differences in job requirements produced separate clusters for blue-collar workers and blue-collar supervisors, and suggested distinct subclusters that differed in mean scores but not in score profile for clerical personnel involved in designated supervisory roles.

This apparent ability to classify a wide range of positions into appropriate job families and subfamilies based on the general and widely available information presented in narrative job descriptions provides a number of attractive opportunities for the organizational practitioner or researcher. Aside from obvious implications for setting pay

comparability or for establishing the generalizability of selection and training programs (cf. Cornelius et al., 1979), such information appears quite useful in developing comparable performance evaluation instruments for jobs that possess different titles but which make similar demands on their incumbents. Such scores may also provide useful standards to evaluate measures of other organizational conditions such as subunit structure or workgroup climate. In regard to this last point, Jones and James (1979) noted that individuals in parallel jobs but in different organizations tended to report similar climate profiles. Moreover, these similarities were often greater than were found for different jobs in the same organization. Thus, knowledge of the probable profile for a particular job family would be a valuable tool for persons seeking to understand or change key aspects of the work environment to produce a better fit with the job.

A final note is in order. While the technique proposed in the present effort provides a relatively unobtrusive and inexpensive means for obtaining quantitative indices of common job characteristics, the quality of the final product rests heavily upon the quality of the position descriptions used. To the degree that these descriptions lack sufficient detail, the rater will be forced to rely more heavily on implicit theories or stereotypes of the work conditions being rated. The resulting ratings may reflect meaningful distinctions between jobs, but it appears necessary to explore what is being rated by obtaining ratings from more than one person, or by comparing ratings derived from narrative descriptions with those obtained from job incumbents or in situ observers. These latter sets of ratings could be few in number and may be designed to do little more than demonstrate the adequacy of the narrative descriptions.

In summary, the present study suggested that quantitative job analysis ratings derived from narrative job descriptions provide a reliable and valid basis for a number of organizational applications. While these applications appear most amenable to decisions involving relatively macro aspects of the job, the savings in cost and organizational intrusiveness suggest that such ratings may be attractive alternatives to the detailed analysis of specific jobs in many situations.

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Footnotes

[1]The job elements in Dimensions JA-7, JF-24 and JF-27 were highly restricted in the present setting and thus had insufficient variance for inclusion.

[2]To maintain orthogonality of the factor scores, they were standardized on the present sample. Thus, differences must be interpreted on a relative basis. Insofar as this sample excluded many blue-collar jobs and overrepresented clerical and high level professional jobs, the resulting standardized mean may be misleading for comparing jobs from the present sample with jobs drawn from other samples.

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The present study investigated whether narrative job descriptions could be converted to quantitative rating scores using a traditional job analysis questionnaire. Detailed written descriptions of 121 jobs in a military health care facility were rated using the Position Analysis Questionnaire (PAQ). Indices of interrater agreement suggested acceptable levels of agreement for job dimension scores derived from these ratings. Further, when regressed against GATB abilities estimates, the job dimension scores produced

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values very similar to those reported by previous studies using the PAQ. Finally, cluster analyses of the 121 jobs suggested that the dimensions provided a viable means of grouping jobs into families. Potential users for data derived from narrative job descriptions are discussed.