GENERIC WORK BEHAVIOR: AN INVESTIGATION INTO THE DIMENSIONS OF ENTRY-LEVEL, HOURLY JOB PERFORMANCE

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Generic work behavior is defined as behavior that contributes to the performance of virtually any job independent of technical job roles. Variations in generic work behavior are primarily dependent on differences in volition, and the effects of generic work behavior are likely to be the most prevalent in jobs where performance does not depend heavily on job-specific knowledge, skills, or ability. Analysis of supervisor ratings of specific employee behaviors gathered from 18,146 employees in 42 different hourly, entry-level jobs in predominantly retail settings suggests the existence of at least eight specific dimensions of generic work behavior: industriousness, thoroughness, schedule flexibility, attendance, off-task behavior, unruliness, theft, and drug misuse. These components were integrated with performance components identified in previous studies to develop a taxonomy of generic work behavior. Implications of this taxonomy for the measurement, prediction, and conceptualization of job performance are discussed.

Job performance is often treated as though it were a unidimensional construct despite a variety of theories and empirical evidence suggesting that it is multidimensional (Austin & Villanova, 1992; Campbell, 1990; Campbell, McCloy, Oppler, & Sager, 1993; Ghiselli, 1956). The persistent tendency to treat job performance as unidimensional may be due in part to the lack of adequate, empirically developed and tested taxonomies that clearly illustrate different dimensions of job performance. This is especially true for those aspects of job performance that are primarily dependent on differences in motivation as opposed to ability. Although taxonomies have been developed to describe job performance in terms of different ability requirements (Fleishman & Mumford, 1991),

there are no extensive, empirically validated taxonomies of non-ability dependent dimensions of job performance. Given the importance of job performance dimensions that are primarily dependent on differences in volition as opposed to ability (Borman & Motowidlo, 1993), a taxonomy of non-job specific, non-ability dependent job performance dimensions would have considerable practical and theoretical value. This study analyzed supervisor ratings of performance in a wide variety of hourly, entry level jobs in order to develop such a taxonomy.

For the purpose of this study, job performance is defined as "actions or behaviors relevant to the organization's goals" (Campbell, 1990, p. 704). This broad definition of performance includes both productive and counterproductive employee behaviors that contribute or detract from organizational goals, including behaviors that are often considered to be separate from performance, and behaviors that might be considered to be conditions of employment instead of aspects of job performance. For example, measures of absenteeism were included in this study because in a global sense, the act of not coming to work detracts from organizational goals. The current study was designed to focus primarily on non job-specific components of performance (Borman & Motowidlo, 1993; Campbell, 1990; Campbell, McHenry & Wise, 1990). This was done by limiting the study to the investigation of performance in hourly, entry-level jobs. Hourly, entry-level jobs are defined as jobs that require a relatively low level of job specific knowledge, skills, and abilities (KSAs), and by definition the performance of hourly entry-level jobs is largely dependent on non job-specific components of performance. As a result, most of the behaviors that influence the performance of hourly entry-level jobs are likely to exert some influence on the performance of most other types of jobs as well.

Hourly, entry-level jobs exist in both the manufacturing and service sector and include jobs such as kitchen workers, cashiers, stockers, and data processing clerks. Although it is difficult to determine precise figures, a review of U.S. Bureau of the Census (1994) data suggests that roughly 25 million jobs in the U.S. (20% of the civilian workforce) might be classified as hourly, entry-level positions. Although the sheer number of jobs that fall into the category of hourly, entry-level jobs would make the findings of the current investigation of general interest to many people studying employee behavior in the United States, an effort was made to develop a taxonomy of job performance that could be generalized to jobs other than hourly entry-level jobs. In a sense, the behaviors that exert the most influence on hourly entry-level job performance can be viewed as basic, core behaviors that employees are required to display to some degree in almost all jobs. Because of their general nature, these behaviors are referred to as *generic work behaviors*. The development

and evaluation of a taxonomy of generic work behaviors was the primary goal of this study.

Definition of Generic Work Behavior

Generic work behaviors are behaviors that influence the performance of virtually any job. Theft and attendance are good examples. An employee's generic work behavior is a function of the presence and absence of certain specific actions. For example, an employee's generic work behavior includes behaviors such as "*not* stealing merchandise" and "*not* working while under the influence of alcohol" as well as "treating co-workers civilly" and "maintaining personal hygiene." Generic work behavior includes both in-role and extra-role behaviors related to non job-specific performance, including behaviors that are extremely infrequent or are only displayed by the most exemplary or most deviant employees (e.g., working on a holiday, theft, or extra-ordinary customer service) (Orr, Sackett, & Mercer, 1989; Podsakoff, MacKenzie, & Hui, 1993; Werner, 1994). Although at some level all forms of generic work behavior enhance or detract from the performance of virtually all jobs, the influence and importance attached to different types of generic work behavior varies across jobs and organizations (Clark & Hollinger, 1983; Hodson, 1991a).

Generic work behavior encompasses or shares part of the construct space defined by several previously developed constructs including employee deviance, employee theft, organizational citizenship behavior, contextual performance, employee reliability, employee withdrawal, organizational spontaneity, prosocial behavior, and absenteeism (Borman & Motowidlo, 1993; Brief & Motowidlo, 1986; Clark & Hollinger, 1983; George & Brief, 1992; Greenberg, 1990; Hogan & Hogan, 1989; Katz, 1964; Martocchio & Harrison, 1993; Organ, 1988; Roznowski & Hulin, 1992; Smith, Organ, & Near, 1983). Three reasons underlie the addition of generic work behavior to this long list of constructs. First, many of the existing constructs related to generic work behavior were developed as parts of specific theories of employee performance and as a consequence are semantically linked to antecedents of behavior (e.g., employee reliability, employee withdrawal, and organizational citizenship [Hogan & Hogan, 1989; Hulin, Roznowski, & Hachiya, 1985; Smith et al., 1983]). The construct generic work behavior only represents the subset of employee behaviors related to non job-specific performance and implies no assumptions about the antecedents of these behaviors. Second, generic work behavior includes productive and counterproductive behavior and thus comprises a larger set of behaviors than those included in the construct space of most existing constructs. Last, it is felt that in comparison

to the names of existing constructs, the name *generic* work behavior more accurately conveys the concept of behavior that influences performance in almost all jobs.

Advantages of Developing a Taxonomy of Generic Work Behavior

Developing a taxonomy of generic work behavior would provide several advantages for measuring, predicting, and understanding the nature of job performance. A taxonomy of generic work behavior would both emphasize the inadequacies of treating job performance as a unidimensional construct and would provide a tangible alternative to general performance measures. Such a taxonomy could be used to ensure that measures of performance were designed to reflect the full range of possible behaviors relevant to job performance, or could be used to limit measures of performance to specific components of performance that are felt to be of the most interest in a particular study or application. By being able to refer to specific, well-defined dimensions of employee behavior it would be possible to call attention to behaviors that are or aren't relevant to various aspects of certain jobs. It would also allow one to determine whether certain aspects of behavior should be considered to be synonymous or separate. For example, theft and drug use are both considered to be forms of employee deviance (Hogan & Hogan, 1989). However, in the absence of an empirically validated taxonomy of employee behavior it is not clear whether one should assume that an employee who uses drugs is also likely to steal. Nor is it clear whether theft and drug use should be measured separately, or if they can both be accurately measured using a single measure of employee deviance.

A taxonomy of generic work behavior would assist the development of instruments designed to measure and predict job performance. For example, knowledge of different dimensions of performance would provide insight into whether specific performance measures reflect all or only some of the aspects of employee behavior that are relevant to performance (Ackerman & Humphreys, 1990; Roznowski & Hanisch, 1990). In addition, by identifying which dimensions of behavior have the greatest influence on employee effectiveness, researchers would be able to concentrate their efforts towards measuring and predicting those behaviors that have the most impact on overall employee productivity. Knowledge about the structure of generic work behavior would also improve one's ability to accurately match predictor constructs and performance criterion. For example, knowledge of whether employees who are reluctant to work overtime also tend to loaf on the job would provide insight into whether these two forms of behavior are dependent on

a single employee characteristic or two or more independent character-
istics.

Last, and perhaps most important, a taxonomy of generic work be-
havior would provide substantial insight into the nature of job perfor-
mance. Currently, no extensive empirical study has been designed and
conducted specifically to describe the structure of non job-specific per-
formance. Until such studies have been conducted and a more thor-
ough description of job performance has been developed, attempts to
develop general theories of job performance are largely limited to theo-
retical speculation regarding the nature of employee behavior at work.
The development of a taxonomy of generic work behavior would help to
address the question "How do employees behave while at work?" and
would provide substantial information towards answering the questions
"How is employee behavior related to job performance?" "How should
job performance be measured?" and "How can job performance be pre-
dicted, explained, and/or modified?"

An Investigation of the Dimensions of Generic Work Behavior

Dimensions of generic work behavior were identified by empirically
investigating supervisor ratings of employee behavior in a variety of
hourly, entry-level jobs. The general approach of this investigation was
of an exploratory but systematic nature, with primary emphasis placed
on identifying replicable factors underlying the covariance between su-
pervisor ratings of various generic work behaviors. The dataset used in
this study also allowed investigation into the interrelationships between
apparent dimensions of generic work behavior. Three assumptions were
made prior to beginning this investigation: that multiple dimensions of
performance exist, that the dimensions of performance are oblique, and
that a common factor model fit to covariance matrices of measures of
employee behavior would reflect these dimensions.

In order to develop a taxonomy of generic work behavior, it is neces-
sary to investigate measures of employee behavior from a wide variety
of jobs and job settings in order to insure that the identified dimensions
of behavior are not job or situation specific. These behaviors should sig-
nificantly vary across employees, and should constitute widely accepted
characteristics of good or poor job performance. It is also important that
the measures reflect a wide variety of non-job specific employee behav-
iors and not be restricted to narrowly defined performance components.
If the measures are designed to reflect a priori performance components
then one is likely to identify artificial, measure-specific performance di-
mensions. The current investigation made use of a large archival dataset

that met these aforementioned requirements. Although the complexi-
ties of the dataset used in this study do not allow for as straightforward
an analysis as might be hoped for in an ideal setting, the opportunities
this dataset provides for directly observing and describing employee be-
havior are felt to outweigh the disadvantages of working with a relatively
unstandardized dataset. Because of the complex nature of the dataset
used in this study, the data and analyses are only briefly summarized
here. The reader is referred to Hunt (1994) or Hunt, Hansen, and Paa-
janen (1994) for a more detailed description of this study. Copies of
these manuscripts are available from the author.

Method

Measures

The data used for this investigation consisted of supervisor ratings
of employee behavior collected by Personnel Decisions, Inc. (PDI) be-
tween 1985 and 1991 as part of an effort to monitor the validity of the PDI
Employment Inventory (EI). The EI is a self-report measure designed
to predict a wide range of productive and counterproductive behaviors,
and is primarily used as a selection tool for hourly, entry-level positions
(Johnson, 1991; Paajanen, Hansen, & McLellan, 1993). Prior to imple-
menting the EI in a new job setting, PDI constructs an Employee Rating
Form (ERF) used to generate supervisor ratings of employee behavior.
To construct an ERF job experts (usually job supervisors) select several
behavioral items that are felt to be particularly relevant to the job setting
(Paajanen et al., 1993). These items are selected from a large pool of be-
havioral items related to performance of hourly entry-level jobs. Most
of the items on the ERFs are associated with generic work behavior, al-
though some are fairly specific to jobs involving retail sales. Examples of
common ERF behavioral items include "come to work properly dressed
and groomed," "allow non-employees in unauthorized areas," and "will-
ingly work overtime when asked." When evaluating an employee, super-
visors use a rating scale to answer questions similar or identical to "How
often does the employee *exhibit this behavior*?" for each behavior listed
on the ERF. The ERFs used in this investigation contain a combined
total of 197 different behaviors. Although the same behaviors often re-
appear on several different ERFs, no single behavior appears on all of
the ERFs included in this study.

TABLE 1

Datasets Used in this Study

Job setting	Number of datasets	Average sample size (minimum–maximum)
Department stores	1	812
Discount retail stores	4	1278 (231–3317)
Quick service restaurants	2	254 (135–374)
Discount electronics retail stores	2	216 (107–325)
Drug stores	2	250 (39–211)
Car rental agencies	3	116 (63–229)
Jewelry stores	2	204 (204–205)
Convenience stores	1	484
Supermarkets	3	146 (89–233)
Amusement parks	1	125
Courier services	1	68
Nursing homes	1	109
Light manufacturing plants	1	116
Retail houseware stores	1	766
Retail clothing stores	2	322 (282–362)
Retail game stores	1	2248
Distribution warehouses	1	672
Combined sample drawn from department stores, specialty retail stores, home improvement centers, supermarkets, drug stores, hyperstores, clothing stores and theatre chains	3	829 (224–1399)

Sample

Table 1 summarizes the job settings and sample sizes of the various datasets used in the analyses. Supervisor ratings for 18,146 employees in 52 different job settings at 36 different companies were used in the analyses. Most of the job settings involved retail sales of clothing and housewares and all of the jobs were located within the continental United States. Three of the datasets consisted of aggregate samples created by combining supervisor ratings from different job settings that used ERFs containing identical behaviors. The total sample consisted of 32 different datasets with individual sample sizes ranging from 39 to 3,317. The mean sample size for the datasets is 540. Unique ERFs are associated with each dataset, with an average of 47 behaviors listed on each ERF. To allow for the use of replication to test the stability of performance dimensions across samples consisting of different employees and different job settings, some of the datasets were placed into one of three different groups depending on the sample size of each individual dataset. The first group consisted of six datasets that were used for the initial identification of various dimensions of performance. The second and third groups each consisted of nine different datasets that were used to test

whether the initially identified performance dimensions would replicate across different samples.

Analyses

Summary of Analyses

Exploratory and confirmatory factor analyses were used to identify possible dimensions of generic work behavior. Once a stable factor structure was identified, additional factor analyses were conducted to explore the relationship between specific behaviors and the hypothesized dimensions. Definitions were created for each dimension and the dimensions were tested for replication across additional datasets. Items on each ERF were then combined to create rating scales corresponding to different dimensions of generic work behavior. The intercorrelations between the scale scores were examined using multi-dimensional scaling to provide insight into how the different dimensions interrelate.

Identification of Dimensions

The conceptual approach underlying the initial identification of the dimensions of generic work behavior is similar to the act frequency method of trait identification (Buss & Craik, 1983). According to the act frequency method, a latent trait can be identified in terms of the tendency of people to exhibit prototypical and peripheral behaviors related to the trait. The goal of the factor analysis of ERF ratings was to identify clusters of behavior that tend to covary such that if one behavior in a cluster is displayed by an employee then that same employee is more likely to display the other behaviors in the cluster. Such clusters of behavior will tend to load on the same factors, and are hypothesized to reflect dimensions of generic work behavior.

Exploratory factor analysis. The initial identification of potential dimensions of generic work behavior was made via exploratory factor analysis. Although by its nature the use of factor analysis implies certain subjective assumptions (Gorsuch, 1983; Kim & Mueller, 1978), an effort was made to reduce the subjectivity of the criteria used for factor identification through emphasizing replication across different datasets as a means for identifying and testing the existence of factors. Six datasets that met the criteria for sample size suggested by Ferguson & Cox (1993) were used in the exploratory factor analysis. The ERFs for these datasets contain a combined total of 100 different behavioral items, with the number of behavioral items in each dataset ranged from 30 to 60. Three of

the datasets consisted of ratings of employees in discount retail job set-
tings, one dataset consisted of ratings of department store employees
gathered from several stores within a single department store chain, and
two of the datasets comprised data aggregated from employees in sev-
eral different job settings. Although all of the datasets were well suited
for factor analysis in terms of sample size and average item intercorrela-
tions, 27% of the items included on the ERFs had skew coefficients that
exceeded the cutoff values recommended by Ferguson and Cox (1993).
The decision was made to include these highly skewed items in the anal-
ysis bearing in mind the possibility that they might lead to the identifica-
tion of spurious factors (Waller, 1989).

Principal axis factor analysis was used to identify the initial pattern
matrix. The pattern matrix was obliquely rotated to approximate sim-
ple structure using the direct oblimin method with a delta value of 0
(Harmon, 1976). Following a suggestion by Ferguson and Cox (1993), a
minimum ratio of at least two items per factor with loadings greater than
.3 was used as a guideline for identifying factors during the exploratory
analysis. Exploration of a variety of factor solutions suggested that a
minimum eigenvalue criterion of .85 seemed to provide fairly parsimo-
nious results in terms of simple structure after oblique rotation was per-
formed on the pattern matrix. Although the .85 criterion may lead to
the extraction of unstable factors, such erroneous factors should fail to
replicate across datasets. Because the ERF items are different in each
dataset, the factor solutions in each dataset were unique. However all
of the factor solutions accounted for at least 60% of the common vari-
ance among the items in each dataset. Seven distinct clusters of items
appeared to load onto similar factors across the datasets. The items asso-
ciated with each cluster were divided into "prototypical behaviors" and
"peripheral behaviors," depending on how often the items loaded on
similar factors in different datasets.

Confirmatory factor analysis. If the prototypical and peripheral be-
haviors identified in each cluster reflect underlying dimensions of generic
work behavior, then these behaviors could be used as "marker variables"
(Ferguson & Cox, 1993) to assist in the identification of factors reflect-
ing these dimensions. To test whether such use of these behaviors was
reasonable, the factor structure suggested by the clusters was tested us-
ing confirmatory factor analysis. Confirmatory factor analysis was con-
ducted using the RAMONA program developed by Browne and Mels
(1992). Nine datasets were used to test the factor structure. The sam-
ple sizes for individual datasets ranged from 282 to 2,248. Six of the
datasets were drawn from ratings of employees working in distribution
warehouses, supermarkets, and retail housewares, clothing, and game
stores. Three of the datasets consisted of random samples of supervisor

ratings that had been held out of the datasets used in the exploratory analysis. None of the data used in the exploratory analyses were used in the confirmatory analyses. Because confident assertions regarding the factor structure could only be made for the prototypical behaviors in each cluster, the correlation matrices used in the confirmatory factor analysis only included measures of prototypical behaviors.

The factor models to be tested were created by specifying that prototypical behavioral items associated with the clusters would load on to common latent factors. Every item was constrained to load exclusively on a single factor. No restrictions were placed on either factor intercorrelations or actual item loading values. Because the ERFs in each dataset are different, a different model was tested for each dataset. Root Mean Square Error of Approximation (RMSEA) was used to test model fit. A RMSEA below .08 is considered to indicate that a model provides a reasonable fit to the data, and a RMSEA below .05 is considered to indicate that a model provides a close fit (Browne & Cudeck, 1993). The 90% confidence interval of the RMSEA was either partially or completely below .08 for eight of the nine models. However, only four models had an RMSEA confidence interval that included .05. Although these values do not indicate a perfect model fit, overall the factor models were felt to have an adequate enough fit to justify the use of the item clusters as a starting point for further exploration of the structure of generic work behavior.

Factor refinement and interpretation. Six of the datasets used in the confirmatory and exploratory analysis were factor analyzed using the prototypical behaviors in each cluster as marker variables. The goal of this analysis was to create a set of "refined" item clusters that could be used to develop semantic definitions of the performance dimensions hypothesized to underlie each factor. The analyses followed the same procedures as those used in the exploratory analysis with two exceptions: The number of factors to be initially extracted was based on the number and type of prototypical behaviors contained in the dataset, and an item was considered to load on a factor only if the loading exceeded .4. Factors were added or removed until a factor structure was found that met the following criteria perfectly or nearly perfectly: The pattern matrix conformed to the principles of simple structure (Harmon, 1976), no factor contained prototypical behaviors associated with more than one item cluster, and at least two items loaded on each factor. The behaviors associated with the factors were then grouped into clusters and reviewed by three industrial-organizational psychologists in order to determine which clusters seemed to be related to similar latent dimensions of behavior, and to develop possible interpretations of the latent dimensions that appeared to underlie the clusters.

TABLE 2

Dimension Names and Associated Behaviors

Adherence to Confrontational Rules
  Prototypical behaviors
    Despite a long line of customers, take the time to check the price of an item as
      policy requires.
    Notice an error on a customer's check saving the store time and money.
    (As a cashier) check for concealed merchandise in a cart to prevent shoplifting.
  Peripheral behaviors
    (As a cashier) be alert for concealed merchandise to prevent shoplifting.
    Notice merchandise out of place and return it to the proper area.
    Receive approval and find someone to cover momentarily before leaving to use
      the restroom.
    Take the time to check the price of item if ticket differs from register or appears
      tampered with.
Industriousness
  Prototypical behaviors
    After completing one task need prompting before moving on to another.[a]
    Keep working even when other employees are standing around talking.
    Leave a job half finished in a rush to leave for home.[a]
    Take the initiative to find another task when finished with regular work.
    Let joking friends be a distraction and interruption to work.[a]
  Peripheral behaviors
    During a slow period help out in another area that is very busy.
    Consistently get the job done on time.
    Show willingness to be trained in more than one job task.
    Notice that an item is misticketed but ignore it.[a,b]
    Spend unpaid time learning about store procedures and merchandise.[b]
Thoroughness
Prototypical behaviors
    Pick up litter or debris which could cause a slip or fall.
    Notice merchandise out of place and return it to the proper area.
    Clean equipment thoroughly creating a more attractive display.
    Clean fixtures before setting up merchandise shelves creating a more attractive
      display.
    Clean up the work area before leaving so the next shift doesn't have to do it.
    Notice safety hazards such as a broken loading dock plate and alert the supervisor.
  Peripheral behaviors
    Even when off duty pick up fallen merchandise.
    Notice an error on a customer's check saving the store time and money.
    Stock merchandise according to guidelines.
    Turn in a friend who had shoplifted.
    When in doubt quickly check with the supervisor about setting up a merchandise
      display.
    Spend quiet time learning about procedures and equipment, etc.
    Report an equipment or maintenance problem to appropriate personnel.[b]
Schedule flexibility
  Prototypical behaviors
    Work flexible hours by accepting schedule changes when necessary.
    Offer to stay late when the store is extremely busy.
  Peripheral behaviors
    Refuse to come to work when extra help is needed.[a]

Table 2 (*continued*)

During a slow period help out in another area which is very busy.
Willingly work overtime when asked.
Show willingness to be trained in more than one job task.

Attendance

Prototypical behaviors

Be late for work without a good reason.
Skip work without calling in.
Use a weak excuse to stay home from work.

Peripheral behaviors

Refuse to come to work when extra help is needed.
Return from breaks and meals within the allotted time.[a]
Arrive at work on time.[a]
Work assigned daily schedule.[a]
Follow company policy exactly on time clock.[a]
Maintain good attendance.[a]

Off-task behavior

Prototypical behaviors

Use store phones to make personal unauthorized calls.
Conduct personal business during work time.

Peripheral behaviors

Let joking friends be a distraction and interruption to work.
Cheat on timecard by punching in before actually starting work.
Do personal shopping while working.
Leave a job half finished in a rush to leave for home.
Take an unauthorized break.

Unruliness

Prototypical behaviors

Make a mistake and blame another employee for it.
Threaten or bully another employee.
Refuse to take routine orders from supervisors.

Peripheral behaviors

Knowingly repeat a mistake and not correct it.
Fill out paperwork so sloppily it has to be re-done.
Take an unauthorized break.
Not cooperate with other employees.
Punch kick throw or damage something in anger at work.[b]
Use loud and harsh swearing or vulgarity.[b]
Loudly complain about minor work problems.[b]
Fly off the handle when something goes wrong at work.[b]
Show off by defacing or destroying company property.[b]

Theft

Prototypical behaviors

(As a cashier) under-ring the price of merchandise for a friend.
Advise friends how to steal merchandise.
Allow non-employees in unauthorized areas.
Fail to ring up a purchase and keep the money.

Table 2 *(continued)*

    Get into the habit of stealing small inexpensive merchandise.
    Hide merchandise until it goes on sale to buy it at a discount.
  Peripheral behaviors
    Cheat on reporting time worked.
    Outright steal money from a cash register.
    Take one candy bar from a bay on a shelf.
    Steal small inexpensive merchandise.
Drug misuse
  Prototypical behaviors
    Drink alcohol or take drugs on company property.
    Come to work under the influence of alcohol or drugs.
  Peripheral behaviors
    Carry a firearm or weapon to work.[c]
    Come to work with an apparent hangover.[b]
    Possess sell or take drugs or alcohol on company property.[b]

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[a] Negatively loaded behavior.
[b] Behaviors identified during factor replication analyses.
[c] Behavior was dropped from the dimension after the replication analysis.

The clusters in each dataset appeared to reflect similar latent dimensions. In addition, two additional clusters were identified that appeared to reflect lower order factors that had been subsumed within two of the factors identified in the exploratory analysis. Table 2 lists the prototypical and peripheral behaviors associated with each cluster. Although none of the items contain the same prototypical behaviors, prototypical behaviors for some dimensions may be peripheral behaviors for other dimensions. The dimensions have been assigned the following names: adherence to confrontational rules, industriousness, thoroughness, schedule flexibility, attendance, off-task behavior, unruliness, theft, and drug misuse. In some of the datasets the dimensions industriousness and thoroughness appeared to have merged into a single higher order dimension called work ethic. The dimensions unruliness, theft, and drug misuse, also occasionally merged into a single higher order dimension called employee deviance.

Replication of Dimensions

The robustness of the factor structure suggested by the dimensions listed in Table 2 was tested using nine previously unanalyzed datasets. These datasets consisted of ratings of employees working in a variety of retail stores and quick service restaurants. The sample sizes of these

datasets range from 204 to 484, with an average sample size of 276. Confirmatory factor analysis was not used to test for replication of dimensions because of the low sample size of some of these datasets, and because the items in these datasets were often substantially different from the items included in the datasets in the factor identification sample, and as a result the relationship of these items to the hypothesized factor structure was not always clear. Instead the dimensions were tested for replication using a method loosely modeled on the recaptured-item technique developed by Meehl, Lykken, Schofield, and Tellegen (1971). This technique allows several raters to make independent judgments regarding the semantic interpretation of clusters of items that load on common factors. The fundamental assumption of this analysis is that if a latent behavioral dimension that exerts influence on the factor structure of the ERFs both exists and has been adequately defined, then factors related to that dimension should be identifiable by multiple raters interpreting data from different job settings. Low sample size was not considered to be a problem when using this method because low sample size would only tend to obscure the true factor structure, and would thereby provide a more rigorous test of the influence of the underlying dimensions.

Short definitions of each of the dimensions listed in Table 2 were developed based on the items associated with each dimension. The nine datasets were then factor analyzed following procedures similar to those used in the earlier factor refinement analysis, and the behavioral items in each of the datasets were grouped into clusters based on their associations with different factors. These clusters were given to five raters along with a list of the names and definitions of the dimensions. None of the raters had been involved in any of the previous analyses. For each cluster, the raters indicated the dimension(s) they felt most closely reflected the behaviors in the cluster. The raters also supplied a rating from 1 to 3 to indicate their confidence in the association between each cluster and the dimension they felt it reflected (1 = *low confidence*, 3 = *high confidence*). Raters were encouraged to create new dimension names if they felt that any of the clusters represented an aspect of behavior substantially different from the provided dimensions. Raters were also allowed to identify clusters as "garbage" if they felt that the behaviors in the clusters did not represent any cohesive dimension.

A dimension was considered to be replicated if at least four raters assigned the same dimension to a particular cluster. The number of times each dimension was identified by four or more raters was compared to an expected number of replications based on how many of the datasets contained two or more prototypical behaviors related to each dimension. The expected number of replications was not shown to the raters. Based

on this comparison, the following five dimensions appear to have repli-
cated extremely well: thoroughness, schedule flexibility, attendance, un-
ruliness, and drug misuse. The dimensions industriousness, off-task be-
havior, and theft appear to have shown moderate replication. The di-
mension adherence to confrontational rules had a far lower number of
replications than expected, and was identified by four or more raters in
only a single dataset despite the fact that five datasets contained two or
more prototypical behaviors related to this dimension. The mean con-
fidence level in the ratings made for clusters with inter-rater agreement
of four or more is 2.53. This is significantly higher ($p < .001$) than the
mean confidence level of 2.12 for the ratings made for clusters for which
there was little inter-rater agreement. This suggests that those clusters
with high inter-rater agreement clearly reflect specific hypothesized di-
mensions.

The datasets used in the replication analysis contain several behav-
iors that are not included in any of the datasets used in the previous
analyses. Several of these new behaviors appeared to be associated with
prototypical and peripheral items for the previously identified dimen-
sions, and were added to the item clusters for each dimension. These
additional behaviors are listed in the right-hand column of Table 2. A
behavior was classified as being associated with a dimension if it consis-
tently appeared in clusters that were classified by the raters as reflecting
that dimension. In addition, the behavior "Carry a firearm or weapon at
work" was removed from the peripheral behavior list for the dimension
drug misuse because it failed to appear in any of the clusters that were
identified as drug misuse in the replication analysis.

Relationships Among Dimensions

To investigate the interrelationships among the different dimensions,
prototypical and peripheral behaviors contained in 27 of the datasets
were combined into scales designed to measure each of the dimensions
in Table 2. A total of 227 different scales were constructed with the
number of scales contained in each dataset ranging from 3 to 9. All
scales were required to contain at least two behaviors and had to have
an average interitem correlation of at least .3. Eighty-five scales were
found to have average interitem correlations below .3. Many of these
scales appeared to have low interitem correlations as a result of the
extreme skew of some of the items. In addition, 52% of the datasets
(i.e., 14 datasets) accounted for 90% of the scales judged to be unsound.
The tendency of certain datasets to be associated with more unsound
scales suggests the possibility of interrater differences, and so to avoid
confounds due to possible differences in rater behavior, only the scale

TABLE 3

Average and Corrected Scale Score Intercorrelations

	1	2	3	4	5	6	7	8	9
1		.43(.13) 8	.55(.15) 8	.38(.10) 7	-.40(.14) 8	-.28(.13) 8	-.32(.09) 8	-.27(.08) 6	-.22(.10) 5
2	.39(5010)		.71(.08) 13	.61(.09) 12	-.57(.11) 12	-.51(.12) 11	-.50(.10) 12	-.34(.10) 9	-.22(.09) 8
3	.52(5912)	.91(6943)		.56(.13) 12	-.54(.08) 12	-.38(.12) 11	-.43(.11) 12	-.27(.13) 9	-.22(.12) 8
4	.38(5707)	.76(6734)	.74(7636)		-.46(.14) 11	-.30(.08) 9	-.33(.08) 11	-.25(.09) 9	-.13(.08) 8
5	-.36(5688)	-.73(6517)	-.69(7419)	-.60(7214)		.55(.08) 10	.55(.06) 12	.45(.13) 9	.33(.12) 8
6	-.23(5678)	-.67(5253)	-.53(6155)	-.43(5950)	.76(5931)		.59(.12) 11	.58(.17) 9	.39(.19) 8
7	-.40(2595)	-.68(3424)	-.53(4326)	-.45(4121)	.66(4102)	.71(2839)		.63(.16) 9	.45(.18) 8
8	-.31(2388)	-.50(1611)	-.34(2513)	-.33(2513)	.52(2289)	.70(2280)	.74(2513)		.46(.19) 7
9	-.18(1574)	-.28(1149)	-.19(2051)	-.11(2051)	.26(1827)	.42(1818)	.44(2051)	.52(1701)	

Dimensions: 1 – Adherence to Confrontational Rules; 2 – Industriousness; 3 – Thoroughness; 4 – Schedule Flexibility; 5 – Attendance; 6 – Off-Task Behavior; 7 – Unruliness; 8 – Theft; 9 – Drug Misuse

Upper right hand entries: mean r, standard deviation of r, and number of datasets used to compute r

Lower left hand entries: average corrected r weighted by sample size, total sample size of datasets used to compute r.

scores from datasets that contained less than two unsound scales were included in the subsequent analyses. Although not reported here, most of the subsequent analyses were also computed using all of the datasets, and there is little difference between the results of those analyses and the results reported here (Hunt, 1994).

   Scale score intercorrelations. Scale scores were computed by averaging the ratings of the items contained within each scale. Some of the items in the scales were reverse coded so that all of the item ratings within each scale would imply either productive or counter-productive behavior. Higher scale scores imply productive behavior with the exception of the scales designed to measure attendance, off-task behavior, unruliness, theft, and drug misuse. The average scale intercorrelations across all the datasets are listed in the upper right triangle of the matrix in Table 3. The standard deviation of the correlation coefficients across all of the datasets are listed in parentheses next to each coefficient. The number of datasets used to compute the average correlation are also listed in the cell containing the coefficient. An average, corrected correlation coefficient was computed for each scale pair weighting the coefficients by sample size and correcting for unreliability using the formula supplied in Allen and Yen (1979) and utilizing alpha measures computed for each scale. The corrected, weighted average coefficients are listed in the cells forming the lower left triangle of Table 3. Each cell in the lower left triangle also contains the total number of employee ratings used to compute each coefficient. All of the scale intercorrelations were in the expected directions (i.e., scales reflecting productive work behaviors were negatively correlated with scales reflecting counterproductive work behaviors). The highest absolute level of correlation is between the scales measuring industriousness and thoroughness (corrected $r = .91$) and the lowest is between schedule flexibility and drug misuse (corrected $r = -.11$).

   Multidimensional scaling analysis. Multidimensional scaling was used to illustrate the relationships between the different dimensions (Davison, 1983). A proximity matrix was developed by setting the distance between dimensions to 1 minus the absolute value of the corrected correlation coefficient. Although one might question the meaning of interpreting correlation coefficients as distances, this procedure has been previously used to illustrate the relationship between several different, correlated constructs (e.g., Snow & Lohman, 1984). A graphical representation of the association between dimensions of generic work behavior based on the multidimensionally scaled solution for the corrected correlation coefficients is displayed in Figure 1. The dimensions seem to lie along a rough continuum of productive and counterproductive behaviors, with dimensions related to productive behaviors being relatively
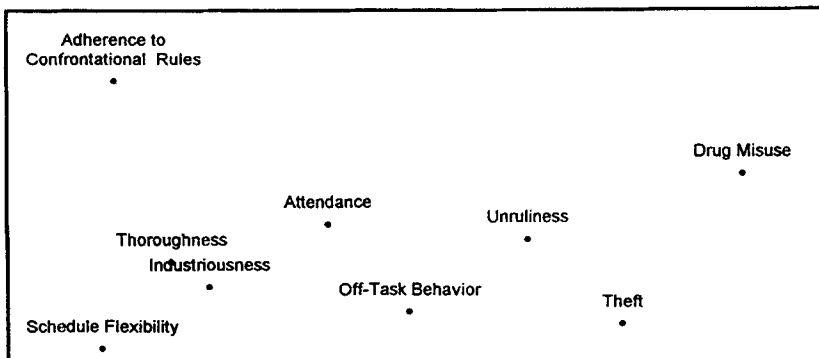
Figure 1: **Associations Between Dimensions of Generic Work Behavior**
The distances in this figure are based on the absolute value of the corrected correlation coefficients between different scales consisting of behaviors associated with each dimension. The values of the corrected correlation coefficients ranged from .91 (between industriousness and thoroughness) to .11 (between drug misuse and schedule flexibility). The distances between points can be interpreted as a rough approximation of the relative association between the dimensions . This figure represents a two-dimensional representation of an eight-dimensional space and should be interpreted conservatively.

independent of dimensions related to counterproductive behaviors. The dimensions industriousness and thoroughness are located fairly close together, as are the dimensions theft, unruliness, and drug misuse. This provides some support for the possible existence of the two higher order dimensions work ethic and employee deviance that were suggested during the initial factor identification.

Discussion and Results

Analysis of data from over 18,000 employees suggests that most of the behaviors measured by the ERFs can be grouped according to nine different dimensions: adherence to confrontational rules, industriousness, thoroughness, schedule flexibility, attendance, off-task behavior, unruliness, theft, and drug misuse. Limitations of the current analyses are discussed followed by a more detailed discussion of each of the nine dimensions and their apparent relationships to previously identified components of job performance.

Possible Study Limitations

Given the rigor of the analysis and the quality and quantity of the data, substantial confidence is placed in the existence of the nine dimensions listed in Table 2. However, the results of the analyses undoubtedly reflect some peculiarities of the sample and measures used in the study. These potential limitations are discussed, followed by a discussion of possible unidentified dimensions, the fit of the factor model, and the lack of replication of some of the dimensions.

Restrictions due to the sample. Given the homogeneity of the sample, it is possible that the dimensions identified in this study might be largely peculiar to hourly, entry-level jobs in the retail sector. However with the exception of adherence to confrontational rules, the dimensions identified in this study do appear to reflect generic work behavior, because at some level, most if not all of the behaviors associated with each dimension would influence the performance of virtually any job, although the magnitude, consequences, and interrelationships of these dimensions undoubtedly varies across job settings. For example, tolerance and incidences of theft vary substantially across organizations and job settings (Clark & Hollinger, 1983; Hollinger, Slora, & Terris, 1992). Furthermore, although these dimensions are likely to have some influence on overall job performance for practically any job, the effects these dimensions have on the performance of some jobs may be trivial in comparison to the effects due to job-specific knowledge, skills, and abilities.

Restrictions due to the method of measurement. The fact that this study utilized a single measurement method can be viewed as both a strength and a limitation. Because the methods used to measure behavior introduce a significant amount of variance into the actual measures themselves, factor analysis of correlations between measures collected using different methods often result in the identification of factors that reflect different methods rather than different types of behavior (Borman, 1992; Campbell et al., 1990; Klimoski & London, 1974). For this reason, the use of a single method of measurement has been suggested as the preferred approach for identifying the structure of performance (Campbell et al., 1993). However the use of a single method is likely to have substantially inflated the apparent association between the different dimensions of performance, and the dimensions may actually have less of an association than is suggested by the correlations between the different scales reflecting each dimension. In addition, because the measures used in this study were developed and implemented by a single company (PDI), the results of this study might be influenced by the way this particular company approaches performance measurement.

The use of factor analysis to interpret supervisor ratings of specific behaviors raises several possible limitations to the current research related to the identification of spurious factors caused by inapplicable items, skewed items, and halo error (Borman, 1992; Schmitt & Stults, 1985; Waller, 1989). Given the fairly narrow, yet meaningful semantic relationships found between the items associated with each dimension, it is unlikely that any of the dimensions are based on spurious factors caused by either inapplicable items, skewed items, or halo error. However it is quite possible that the intercorrelations between the different scales may have been reduced as a result of inapplicable or skewed items, or raised as a result of halo error. This is especially likely for the scales measuring adherence to confrontational rules, unruliness, theft, and drug misuse as all of these scales contained items that were either specific to employees with certain job roles or were extremely skewed.

One could argue that the factor structures of the ERFs are primarily a result of implicit personality theories of the supervisors instead of true variance in behavior (Landy & Farr, 1980; Schneider, 1973). It would be very difficult to refute such an argument empirically. However, if this argument is accepted as true then it implies that hundreds of supervisors from a wide variety of job settings and organizations all hold the same implicit theories. If an implicit theory is that resistant to situational and individual influences it seems probable that it must be at least partially based on some actual observance of behavior. Even if such an implicit theory is not related to actual behavior, the identification of such a robust implicit theory would have important ramifications on efforts to measure employee behavior.

Unidentified dimensions. Several behaviors included on the ERFs did not show any association with the identified dimensions. These behaviors may reflect additional dimensions of generic work behavior that were not identified in the current study due to peculiarities of the rating instruments or the statistical criteria used to identify factors. In addition, it is possible that certain dimensions of generic work behavior may not have been identified in the current study because it simply may not be possible to adequately measure certain dimensions of performance using supervisor ratings. For example, although it was possible to identify the dimension theft using supervisor ratings of behavior, it is likely that the actual frequency with which theft occurs is not adequately reflected in this study due to the tendency of employees to hide such obviously counterproductive behaviors from supervisors (Sackett & Harris, 1984). Last, because the ERFs were designed to measure aspects of job performance that are predicted by a specific selection instrument, it is possible that certain portions of the construct space encompassed by generic work behavior may not be reflected in the behaviors included in this study. In

particular, the ERFs are not likely to reflect aspects of generic work be-
havior that may be partially dependent on basic skills such as reading or
communication.

   Poor model fit. Although the dimensions appear to provide a reason-
able fit to most of the data, the model did fail to fit one of the datasets.
Because model fit was tested nine times and the likelihood of an insignif-
icant finding increases with each significance test performed, it is not im-
probable that this ill fit is due purely to chance. However, it should be
noted that although the model provided a reasonable fit (RMSEA < .08)
for eight of the nine datasets tested, it only showed close fit (RMSEA <
.05) for a single dataset. This finding suggests that it may be possible to
identify behaviors that are even more prototypical of latent dimensions
of generic work behavior than those behaviors included in the current
study.

Definition of Specific Dimensions

   A literature review was conducted in an effort to identify similar-
ities between the nine dimensions identified in this study and perfor-
mance components and behavioral constructs suggested or identified in
previous empirical and theoretical research. This review included six
theories of employee behavior that postulate the existence of multiple
non job-specific components of performance (Borman & Motowidlo,
1993; Campbell et al., 1993; Hodson, 1991b; Katz, 1964; Organ, 1988;
Roznowski & Hulin, 1992) and 17 previous empirical investigations of
the interrelationships between behaviors related to non job-specific per-
formance (Bolanovich, 1946; Campbell et al., 1990; Creager & Harding,
1957; Ewart, Seashore, & Tiffin, 1941; Hausman & Strupp, 1955; Hogan
& Hogan, 1989; Klimoski & London, 1974; Lance, Teachout, & Don-
nelly, 1992; McQuitty, Wrigley, & Gaier, 1954; Paajanen & McLellan,
1993; Ronan, 1963a, 1963b; Ryans & Wandt, 1953; Seashore, Indik, &
Georgopoulos, 1960; Smith et al., 1983; Snell, Stokes, & Cooper, 1994;
Turner, 1959). In addition, several psychological constructs were identi-
fied that appeared to resemble some of the dimensions of behavior sug-
gested by this study (Albanese & Van Fleet, 1985; Clark & Hollinger,
1993; Frese, Kring, Soose, & Zempel, 1994; George, 1992; Hackett &
Guion, 1985; Hollinger et al., 1992; Kidwell & Bennett, 1993; Latané,
Williams, & Harkins, 1979; Martocchio & Harrison, 1993; Mowday,
Porter, & Steers, 1982; Williams & Karau, 1991).

   Adherence to confrontational rules. Adherence to confrontational
rules appears to reflect an employee's willingness to follow rules that
might result in a confrontation between the employee and a customer
(e.g., checking for shoplifting). Two previously identified components

might be related to adherence to confrontational rules at a very general level: ability to fulfill minimum job requirements and organizational rule following (Bolanovich, 1946; Borman & Motowidlo, 1993; Ewart et al., 1941). However neither of these components are felt to reflect generic work behavior, and it is likely that adherence to confrontational rules may be a dimension reflecting a specific component of some of the jobs included in this study. Specifically, adherence to confrontational rules may be primarily relevant to cash register work. Given this possibility, this dimension will be omitted from subsequent discussions of generic work behavior, although it is undoubtedly of great importance for many hourly entry-level jobs.

Industriousness. The dimension industriousness appears to reflect constant effort and focus towards work while on the job. Industriousness bears a close relationship to the empirically identified factors effort and leadership, effort, willingness for work, and industriousness (Campbell et al., 1990; Hausman & Strupp, 1955; Klimoski & London, 1974; McQuitty et al., 1954). The theoretical components demonstrating effort, enthusiastic compliance, conscientiousness, enthusiasm and extra effort also appear to bear a loose relationship to industriousness (Brief & Motowidlo, 1986; Campbell et al., 1993; George & Brief, 1992; Hodson, 1991a; Katz, 1964; Organ, 1988). Industriousness may also be similar to the theoretical construct initiative (Frese et al., 1994).

Thoroughness. Thoroughness is related to the quality of an employee's work. Many of the prototypical behaviors associated with thoroughness reflect cleaning behaviors, and it may be the case that thoroughness is manifested in many hourly entry-level jobs as cleanliness at work. Thoroughness appears to be related to many of the same theoretical components related to industriousness including demonstrating effort, enthusiastic compliance, conscientiousness, and enthusiasm and extra effort (Brief & Motowidlo, 1986; Campbell et al., 1993; Hodson, 1991a; Organ, 1988). However, it appears to be related to a different set of empirically identified components including personalizing job responsibilities, ability above and beyond minimum job requirements, conscientiousness, and sense of responsibility (Bolanovich, 1946; Ewart et al., 1941; McQuitty et al., 1954; Paajanen & McLellan, 1993).

Schedule flexibility. Schedule flexibility is associated with employees' willingness to change their schedules to accommodate demands at work. Employees high in schedule flexibility tend to be more willing to work overtime and to come to work when extra help is needed. At a general level many of the components related to industriousness and thoroughness, such as civic virtue, altruism, and sportsmanship might also be related to schedule flexibility (Organ, 1988). However, schedule flexibility appears to reflect a fairly unique dimension of performance. There

is a meaningful difference between working hard during one's assigned schedule and being willing to work additional hours above and beyond one's schedule.

Attendance. Attendance is associated with employee absenteeism and punctuality. Behaviors associated with attendance include coming to work when scheduled, arriving to work on time, and not taking extended breaks from work. Previously identified empirical components closely associated with attendance include absences and absenteeism (Hogan & Hogan, 1989; Seashore et al., 1960). Theoretical components associated with attendance include withdrawal, maintaining personal discipline, and behavioral job withdrawal (Campbell et al., 1993; Hodson, 1991a; Roznowski & Hulin, 1992). Because the behaviors related to attendance are primarily forms of unexcused and/or unjustifiable absences, attendance appears to more closely related to the concept of voluntary absenteeism as opposed to involuntary or justifiable absenteeism (Hackett & Guion, 1985; Martocchio & Harrison, 1993; Mowday et al., 1982).

Off-task behavior. Off-task behavior reflects effort expended towards non job-related tasks while at work. To identify off-task behavior it is necessary to measure task-irrelevant behavior performed while on the job. Such measures did not appear to be included in any of the previous empirical studies of job behavior. Two theoretical components that appear to bear some resemblance to off-task behavior are footdragging and attempts to increase job outcomes (Hodson, 1991a; Roznowski & Hulin, 1992). Off-task behavior may also be related to the constructs social loafing, free riding, and propensity to withhold effort (Albanese & Van Fleet, 1985; George, 1992; Kidwell & Bennett, 1993; Latané et al., 1979; Williams & Karau, 1991).

Unruliness. The dimension unruliness appears to reflect minor deviant tendencies as well as abrasive and inflammatory attitudes towards co-workers, supervisors, and work itself. Previously identified empirical factors that appear to be similar to unruliness include maintaining personal discipline, controlling negative behaviors, adjustment, weakness of character, reactive versus composed, mechanic's reaction to supervisor, troublemaker, negative sanctions, and delinquency (Campbell et al., 1990; Hausman & Strupp, 1955; Hogan & Hogan, 1989; McQuitty et al., 1954; Paajanen & McLellan, 1993; Ronan, 1963a,b; Ryans & Wandt, 1953). Related theoretical components include gossip and infighting and sabotage (Hodson, 1991a).

Theft. Theft is associated with taking money or merchandise from the organization and with helping friends to steal from the organization. Despite empirical evidence for the prevalence of theft in the workplace

(Clark & Hollinger, 1983; Greenberg, 1990), none of the previous em-
pirical studies of performance identified factors specifically related to
theft. It is possible that the failure to identify any components reflect-
ing theft is due to the difficulty in detecting behaviors related to stealing
(Sackett & Harris, 1984). The theoretical components sabotage and at-
tempts to increase job outcomes appear to be partially associated with
theft (Hodgson, 1991a; Roznowski & Hulin, 1992). Theft is also simi-
lar to the construct property deviance developed by Clark & Hollinger
(1983). There is evidence that behaviors related to theft can be di-
vided into personal property deviance and altruistic property deviance
(Hollinger et al., 1992). Personal property deviance reflects acts of theft
intended to benefit the employee directly while altruistic property de-
viance reflects acts of theft intended to benefit friends or relatives of the
employee (e.g., giving unauthorized employee discounts to friends). The
theft dimension identified in the current study is associated with behav-
iors resembling both personal and altruistic property deviance.

Drug misuse. The dimension drug misuse reflects the inappropriate
use of drugs and alcohol. The most closely related theoretical compo-
nents to drug misuse are withdrawal and psychological job withdrawal
(Hodson, 1991a; Roznowski & Hulin, 1992). No previously identified
empirical components reflect behaviors related to drug misuse and most
of the previous studies did not even include behaviors related to drug
use. All of the behaviors associated with drug misuse included in this
study referred to the use of alcohol as well as illegal drugs, and it should
be noted that the use of alcohol is far more prevalent in the workplace
than the use of illegal drugs (Cropanzano & Konovsky, 1993).

Interrelationships Between Dimensions of Generic Work Behavior

A fundamental assumption underlying the analyses in this study is
that different dimensions of performance are interrelated to some de-
gree. All of the dimensions of generic work behavior identified in this
study appear to be associated and several may be subsumed by higher
order dimensions. Figure 2 contains a possible hierarchical structure of
generic work behavior based on the relationships between dimensions as
suggested by the results of the factor, scale score, and multidimensional
scaling analyses. Evidence both from the factor analyses and the scale
score analyses suggests that industriousness and thoroughness might be
subsumed by a higher order dimension called work ethic. Work ethic re-
flects an employee's willingness to exert effort over and above the min-
imum standards required by the job. The results of the factor analyses
and to a lesser degree the scale score analyses, also suggest that unruli-
ness, theft, and drug misuse might be subsumed by a single higher order
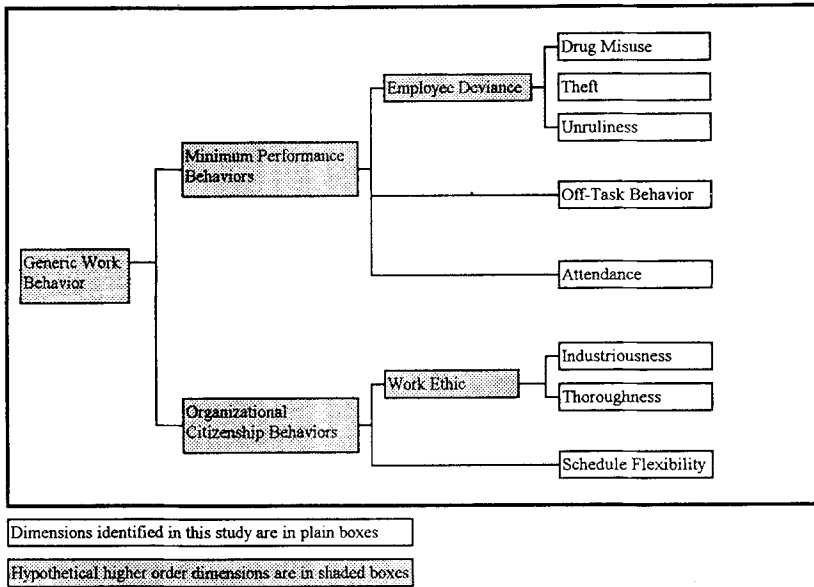
Figure 2: **Proposed Hierarchical Structure of the Dimensions of Generic Work Behavior**

dimension called employee deviance. Employee deviance reflects employee behaviors that directly hinder, disrupt, or otherwise damage the organization, and in many cases are considered to be socially unacceptable and/or illegal.

The relationships among the dimensions illustrated in Figure 1 suggest that productive and counterproductive dimensions of generic work behavior are fairly independent and may form two higher order dimensions. In Figure 2 these dimensions are labeled "minimum performance behaviors" and "organizational citizenship behaviors." Minimum performance behaviors are behaviors that an employee must exhibit (e.g. attendance) or refrain from exhibiting (e.g. theft) in order to retain their position with the organization. Organizational citizenship behaviors are associated with an employee's willingness to exert extra effort towards job performance beyond the minimum prescribed job roles (Organ, 1988; Smith et al., 1983). Whereas employees who fail to exhibit minimum performance behaviors tend to be fired, employees who exhibit organizational citizenship behaviors tend to be promoted. Although these two higher order dimensions appear to be weakly related, it is suggested that the failure of an employee to exhibit organizational citizenship behavior is not grounds for the assumption that the employee will fail to exhibit minimum performance behaviors as well.

Dimensions of Generic Work Behavior Not Identified in the Current Study

A literature review of theoretical and empirical studies dealing with performance dimensions and taxonomies resulted in the identification of four additional performance components that are felt to reflect dimensions of generic work behavior, and that were not identified in the current study. These dimensions have been labeled teamwork, problem solving, safety, and personal appearance. Although other dimensions of generic work behavior may exist, it is felt that these four additional dimensions along with the eight dimensions identified in the current study cover most of the construct space encompassed by generic work behavior. However it is not clear how these four dimensions relate to each other or to the eight dimensions identified in this study, and it is quite possible that these four dimensions may be broken into lower order dimensions or subsumed within higher order dimensions. Last, although generic work behavior is posited to be primarily dependent on individual differences in volition, some of these additional dimensions clearly indicate that some aspects of generic work behavior are undoubtedly influenced by differences in ability.

Teamwork. It seems likely that performance of most jobs is at least partially dependent on working with others to obtain a common goal. Previously identified components that appear to be related to teamwork include interpersonal proficiency, engaging others, employee relations, social intelligence, relations with co-workers, social relations, courtesy, helping co-workers, and helping (Bolanovich, 1946; Borman & Motowidlo, 1993; Creager & Harding, 1957; George & Brief, 1992; Hausmann & Strupp, 1955; Katz, 1964; Lance et al., 1992; Paajanen & McLellan, 1993; Turner, 1959). Teamwork may be partially related to the dimension unruliness identified in the current study, with teamwork reflecting productive interpersonal behavior and unruliness reflecting counterproductive interpersonal behavior.

Problem solving. The ability to solve or adapt to problems would affect performance of all but the most routinized jobs. The dimension problem solving is reflected in the previously identified components handling information and solving problems effectively, open-minded, and (through a negative association) failure to use knowledge effectively (McQuitty et al., 1954; Paajanen & McLellan, 1993; Ryans & Wandt, 1953). Problem solving is also related to the theoretical component making constructive suggestions (George & Brief, 1992; Katz, 1964). The dimension problem solving may underlie much of the predictive validity associated with measures of general ability (Hunter & Hunter, 1984), and is likely to become an increasingly important dimension of generic

work behavior as the need for continuous learning grows in the work-place (Howard, 1995).

Safety. Although the risk of accidents varies widely across job set-tings, a failure to attend to safety concerns could potentially affect any job. The world is inherently a dangerous place, and unsafe behavior in any job setting can lead to decreased performance resulting from injuries to workers or damage to company property. The dimension safety is reflected in the empirically identified components accidents and safe worker and the theoretical component protecting the organization (George & Brief, 1992; Katz, 1964; Ronan, 1963a,b; Seashore et al., 1960). The concept of safety as a unique dimension of employee be-havior is also suggested in research investigating the antecedents and processes that lead to accidents (Hansen, 1989).

Personal appearance. When physical appearance deviates from so-cietal norms beyond a certain level (e.g., excessive body piercing or tat-toos) it may exert an influence on the nature and quality of interpersonal communication. Because most if not all jobs require some level of in-terpersonal communication, physical appearance is considered to be a component of generic work behavior. Physical appearance appears to be related to the previously identified components physical fitness and mili-tary bearing, appearance, and meticulousness (Bolanovich, 1946; Camp-bell et al., 1990; Ryans & Wandt, 1953).

Suggestions for Future Research

Much of the research studying job performance appears to have taken place in the absence of any systematic efforts to observe employee behaviors that directly influence job performance. It is not uncommon to read studies in which job performance is operationalized as a single vari-able, with little thought put into how different aspects of behavior may influence this variable. However, to truly know how and why job per-formance is influenced by employee or organizational characteristics, it is not enough to know how these characteristics influence aggregate measures of job performance; we must identify how these characteris-tics affect well defined dimensions of behavior. The current study calls attention to the importance of distinguishing between different dimen-sions of job performance and provides insight into what some of these dimensions are. The dimensions of generic work behavior identified in this study could serve as the focal point for a variety of research investi-gating measures, antecedents, consequences and interrelationships be-tween different dimensions of performance.

The most obvious research question raised by the results of this study is "will the dimensions of generic work behavior identified in this study

be replicated in other studies?" Because many of the dimensions identi-
fied in this study appear to have similar counterparts in previous studies
this question has already been partially answered. However, it would
be useful to determine if the use of different measurement methods,
datasets, or methods of analysis would result in the identification of sim-
ilar performance dimensions. It would be of particular interest to see if
similar dimensions could be identified in job settings that do not involve
hourly entry level jobs, and if the same dimensions would be found in
studies using measures other than supervisor ratings of behavior.

The findings of the current study could be used to evaluate the mean-
ing and utility of other measures of performance. For example, there is
evidence that suggests that supervisors often base global performance
ratings on the presence or absence of certain specific behaviors that are
interpreted as signals of good or bad performance (Ilgen, Barnes-Farrell,
& McKellin, 1993). The findings of the current study call attention to the
importance of identifying what these signal behaviors are, lest supervi-
sors base global performance ratings on dimensions of behavior that are
relatively unimportant for job performance in general. For example, if a
supervisor interprets staying late on the job as a sign of an exemplary em-
ployee (an aspect of schedule flexibility in the current taxonomy), then
the supervisor's performance ratings may not reflect potentially impor-
tant dimensions of behavior such as industriousness and thoroughness.

Although some of the dimensions in the current taxonomy of generic
work behavior have received a substantial amount of attention in the re-
search literature (e.g., attendance), others appear to have gone fairly
unnoticed (e.g., schedule flexibility, off-task behavior). Additional and
better measures should be designed to assess behaviors related to spe-
cific dimensions of generic work behavior, particularly those that have
been relatively unnoticed in the extant literature. These measures could
be used to further explore differences in the antecedents and conse-
quences associated with each dimension. In addition, future research
could more fully investigate the relationships between different dimen-
sions. It would be particularly interesting to explore possible causal re-
lationships between dimensions.

Conclusion

The current study represents an attempt to go "into the field" to look
for findings that are relevant to the theoretical development of personnel
psychology (Dunnette, 1990). By taking advantage of existing data ini-
tially collected for other purposes, it was possible to develop a taxonomy
that provides a fairly detailed description of the various types of work
behavior displayed by hourly employees and perhaps employees in other

types of jobs as well. Fleishman and Quaintance (1984) recommend that taxonomic systems be evaluated on three dimensions: *"internal validity,* whether the system is logical and parsimonious within itself,... *external validity,* whether the system is capable of accomplishing its intended purpose, [and] *use rate,* whether the system is actually used by scientists and technologists in the field of interest" (p. 82, italics theirs). The empirical and theoretical evidence for the various dimensions of generic work behavior suggest that the proposed taxonomy meets the criterion of internal validity. Although external validity was not investigated in this study, recent research suggests that this taxonomy does have utility for making meaningful distinctions between different dimensions of performance (Hunt, Hansen & Paajanen, 1995). However, whether this taxonomy will meet the criteria of use rate cannot be determined by a single study or researcher, but instead will depend on whether other people decide that this taxonomy is useful for their own research and practice. Job performance is perhaps the most important construct in industrial and organizational psychology (Guion, 1990). This study is felt to significantly contribute towards research on job performance by providing a more accurate model of how employees truly behave while at work, and the taxonomy of generic work behavior presented in this paper is offered with the hope that it will help others in their attempts to measure, predict, influence, and understand job performance.

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