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CHAPTER 20

O*NET's Theoretical Contributions to Job Analysis Research

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The purpose of this chapter is to draw some conclusions about the Occupational Information Network's (O*NET) theoretical contributions. It is not a discussion of the results, which have been explained quite well in previous chapters. Instead, it is more of a commentary on the conceptual or theoretical issues. Nor is it a complete summary of all the theoretical issues. Many have already been adequately discussed. Instead, it comments on an eclectic combination of topics, including those that have not been previously described and those for which a different perspective might be helpful. Finally, it does not repeat the details of the content model or various theoretical findings. Instead, it draws conclusions about the theoretical contributions and sometimes attempts to extend the ideas.

It should be noted at the outset that the authors of this chapter were not subcontractors on the O*NET project. We may be the only such exceptions in this book. The first author was the technical advisor for the U.S. Department of Labor (DOL) on the O*NET project, whereas the other two authors were not previously involved in any capacity. As such, our opinions are independent and perhaps more impartial in some ways. This compels us to offer some critique, along with the many accolades, and to raise some issues that were not addressed.

THE THEORETICAL IMPORTANCE OF O*NET

Develops Job Analysis Theory

The O*NET is the most important theoretical development in job analysis in recent times. Job analysis has not traditionally been considered a strongly theoretical area of research. In fact, it has often been considered rather atheoretical, consisting largely of techniques and loosely integrated terminology. Accordingly, the content model and its associated descriptors is a significant contribution to theory in the field of job analysis.

The content model was conceived by the Advisory Panel for the Dictionary of Occupational Titles (APDOT), especially Ken Pearlman, Marilyn Gowing, and Anita Lancaster. We owe a great deal of thanks to their insights. The model was then brought to life through the efforts of the editors of this book and their many associates, as reflected in the writings by the authors of the previous chapters. They both filled out and operationalized the general concept and made it a reality. Their efforts have been outstanding.

As a model or preliminary theory, the content model does many things. It provides a comprehensive, and perhaps nearly exhaustive, listing of all the possible descriptors of occupations and workers. Furthermore, the descriptors are not merely lists but taxonomies of conceptually independent and theoretically grounded constructs that fully delineate each descriptor domain. The model also depicts the hierarchical relationships among the descriptors by showing how lower level (and more specific) constructs relate to higher level (and more general) constructs.

Synthesizes Job Analysis Research

The O*NET reflects the cumulative knowledge of more than 50 years of research on job analysis. The project was specifically commissioned with the goal of amassing all the current knowledge on job analysis, both theoretically and methodologically, and then reflecting the sum of all of that knowledge in the design of the O*NET. As is readily apparent from the citations in this book, a huge amount of literature provided input to the descriptors and methodology chosen. If a relevant citation is not included, it is probably because space did not allow it rather than because it was not considered.

It is no surprise that the people selected to lead this project included many researchers whose life's work has been devoted to determining taxonomies of human performance or job analysis measurement. In fact, all of the contractors and the various advisors on this project have substantial records of contribu-

tions to job analysis research, the details of which are too numerous to mention here.

Supported by Data

The empirical results provide solid support for O*NET. The contractors (i.e., the authors of the other chapters) are obviously very enthusiastic about the success of the O*NET project, and it shows in their conclusions. Looking beyond that, it is our independent conclusion that the empirical results generally do provide good support for the system. Specifically, with some exceptions, the measures turned out to be reasonably reliable for job analysis instruments, the measures were able to distinguish well among different occupations, and the factorial dimensionality of the descriptor taxonomies made reasonable sense in terms of rational appraisal and past research.

Sets New Standard for Job Analysis

O*NET will set the standard for job analysis for years to come. This is perhaps the greatest implication of the project. It will likely become a widely used database and methodology in the field. It may even become the standard of excellence against which other approaches are compared. We draw this conclusion for several reasons. First, as noted above, it represents a sort of "best practices" when it comes to job analysis, both in terms of reflecting the collective knowledge of the field and in terms of its sheer comprehensiveness. That is, you cannot disagree with it, because it includes everything. Second, like the *Dictionary of Occupational Titles* (DOT) before it, the O*NET will be used by every government agency as the primary source of occupational information and classification (as explained elsewhere in this book). Partly because of its widespread governmental use, it will have a great impact on private sector research and practice as well. Third, unlike the DOT, the O*NET provides a highly usable and inexpensive methodology for analyzing jobs. The structured self-report questionnaire format of the rating scales in the O*NET are much easier to use than the analyst-based and largely narrative format of the DOT. Because of its government funding and sponsorship, the O*NET instruments and data are both available and encouraged for use by the general public.

SOME CAVEATS

Before we become too confident of O*NET's wonderful achievements, we must note some important caveats. We describe these caveats more as "sobering realities" than criticisms because they typically are not the fault of the contractors but are instead limitations due to the current state-of-the-art in job analysis research or due to factors beyond the contractors' control.

Theoretical Status

The content model is not yet a theory. At this point, the content model is little more than a framework of relevant variables. Although it is fairly comprehensive, it still lacks all of the other attributes of a theory. For example, it does not specify relationships among the domains of descriptors, it does not describe any antecedents or consequences of the descriptors, and it does not make any testable hypotheses. It is an excellent start, but only that. It must be much more fully developed before it can be considered a theory of job analysis.

Low Response Rates

The low response rates are problematic. The plural term "rates" is used because there are many ways to calculate the response rate in this project and there were several different data collections. Nevertheless, one must conclude that low response rates (such as 16% for the total mailout of employees) are problematic. The chapter on the research methods documents the response rates and does an excellent job of trying to explain them. Many ideas emerged as to how the response rates might be increased. We favor those that involve reducing the prohibitive length of the questionnaires, somehow avoiding the "gatekeeper problem," providing meaningful incentives, and developing a mixed strategy in which a variety of different data collection approaches might be used, based on the occupation, the setting, and the opportunities available. Regardless of the approach, the response rate problem is a major impediment to realizing O*NET's full potential.

Sample Inclusiveness

The current incumbent-based sample contains only a small number of occupations. This is due, in part, to the low response rate, but it creates two additional sobering realities. First, many of the key analyses are based on $n = 29$ occupations. This violates the rules of thumb for required sample-to-item ratios. We realize that these 29 occupation-level data points are based on the aggregation of a sample of more than 2,000 respondents, and thus are much more stable than individual-level data. Nevertheless, the results must be viewed with caution until much more data are collected.

Second, with data collected on only 29 out of more than 1,000 occupations, we still have a long way to go before the O*NET database is adequate for operational use. This is a major data collection effort

that is far from complete. Although the analyst-based data can be used to fill in for some short-term purposes, they do not provide a long-term solution to the need for incumbent-based data.

OTHER THEORETICAL ISSUES

This section is devoted to a collection of issues that have three things in common. First, they are somewhat theoretical in nature. Second, they have not been fully discussed elsewhere in this book. Third, they are neither strengths nor weaknesses of O*NET per se. They apply to O*NET, but they also apply to the entire enterprise of job analysis research.

Common Language in Job Analysis?

It may be time for a common language in job analysis (Campion, 1995a). Common language is important to the development of science because it promotes unambiguous communication of concepts and ideas. The key philosopher of science who first discussed this issue was Thomas S. Kuhn (1970). Simply put, he said that individuals in different paradigms (e.g., disciplines) find it difficult (if not impossible) to communicate because they do not speak the same language. Research programs develop and proceed with little awareness of others' efforts, in part because a common language does not exist.

There are good examples of the beneficial effects of common language in other fields. For example, in chemistry they have the periodic table, as well as common symbols for expressing equations. In psychology, the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) is used for diagnosing mental health problems in clinical settings. The field of statistics also uses a fair amount of common language and symbolism.

There are examples of common language in every science. A key purpose of the scientific process is the development of concepts and terminology. They not only reflect key ideas in that science, but they promote efficient communication through common usage. The key question is not whether a particular field of scientific investigation should have a common language, but when is it ready to have a truly common language?

The question of readiness depends on several factors. First, it depends on whether there has been sufficient research to define enough terms to enable a common language. This is an issue of not only the number of terms but also the degree of research proof for the value of the constructs to which the terms refer.

Second, it depends on whether different researchers are ready to accept the common language. This is a function of many factors, including the usefulness of the common language, the agreement among researchers within the field on the common language, the degree to which institutions (e.g., publication outlets) require the use of the common language, and other factors.

Third, it depends on whether the enhanced clarity of communication made possible by common language outweighs the stifling effects common language may have on creativity. Common language is a form of standardization, thus limiting the pursuit of new ways of conceptualizing a field. If a science standardizes its language prematurely, it may retard rather than promote the advancement of the science.

The DOT itself was a sort of common language, and that is probably one reason it had such an impact on the field of occupational analysis. It gave each job an "official" title, it described the tasks in a standardized manner, and it measured the job requirements on a common set of scales. The O*NET is an important opportunity to promote common language again in the field of occupational analysis.

Benefits of a Common Language

There are many obvious benefits of common language in this context:

- All the many different users of the O*NET will be able to communicate with one another (e.g., employers, job candidates, vocational counselors, rehabilitation counselors, occupational analysts, labor market analysts, trainers, policy planners, and others). In fact, due to this diversity of users, a common language is especially important. Without it, an integrated system of occupational information to match people with jobs may have little realized value.
- Common language will allow computerization of the information. If the same terms are used, then the computer can easily link huge databases to make vast amounts of occupational information easily available to large numbers of people for multiple purposes.
- Common language would provide integration across government projects and between the public and private sectors. This would promote efficiencies by encouraging synergistic partnerships and avoiding duplication of effort.
- Common language in the form of the O*NET might also spread to research and practice outside the government, just as the DOT did in the past.

*Reasons for Adopting O*NET as the Common Language*

There are many factors working for the adoption of the O*NET as a common language for describing occupations.

- There is some precedent established for a common occupational language by the DOT. Many people

are used to a standardized terminology in this context.
- Use of the O*NET language will be required if people want to take advantage of this system. This applies more to those who have no other choice but to use the O*NET (e.g., employment service counselors, candidates using government services, etc.) than to others who may have alternatives (e.g., employers, labor market analysts, etc.).
- Most of the descriptors in the O*NET are supported by substantial research on job analysis. Thus, they already enjoy some familiarity and acceptance by the job analysis community of users.
- Some key linkages have already been established between the O*NET and other related governmental initiatives.

*Reasons for Not Adopting O*NET as the Common Language*

There are also a number of factors working against the adoption of the O*NET as a common language for describing occupations.

- There are more choices today than when the DOT was developed. At that time, the field of job analysis was not very well developed. Today, there are many more alternatives in terms of job analysis instruments and taxonomies. These alternatives are widely accessible from either the extensive published literature or the large number of consulting firms that sell such systems.
- There is not a consensus in the field of job analysis today on common language. Although the O*NET adopted some of the most popular terminology in the field today, there are still large numbers of scientists and practitioners who could offer some evidence and substantial opinion in support of language other than that used in the O*NET. That is, some choices had to be made in the development of the O*NET, and others in the field of job analysis might not agree with those choices.
- Potential users of the O*NET are numerous and highly diverse. Encouraging any large and diverse group to use the same system is difficult.
- The users do not all share a common discipline that might have laid the groundwork for a common language. The users include many people who have some training in occupational analysis, but they also include counselors with training in other areas of psychology, labor market analysts with training in economics, planners and other users with training in completely different areas, and many lay-persons without any professional training.

The bottom line, however, is that O*NET provides a wonderful opportunity to adopt a common language for occupational analysis. The promotion of O*NET as a common language should be encouraged.

O*NET and High Performance Organizations

Although O*NET is a job analysis database and not an organization analysis database, it may help us understand high performance practices (HPPs) in organizations. One of the goals in the development of the organizational context descriptors of O*NET was to collect information on HPPs. According to a DOL report (1993a), high performance organizations combine innovative human resource practices with organizational structures that facilitate employee involvement and flexibility, in order to adapt effectively to highly competitive business environments. The relationship between human resource practices and organizational performance is of great interest to practitioners and academics alike. A former Secretary of Labor went so far as to argue that people-related practices may be the only source of sustainable competitive advantage (Reich, 1990).

In this section, we first briefly review both theoretical and empirical work linking human resource practices to competitive advantages. Then, the potential contribution of O*NET to this field of inquiry is considered.

Many theoretical writings support the assertion that organizations can gain and maintain competitive advantages through effective human resource practices (Barney, 1991; Jackson & Schuler, 1995; Lengnick-Hall & Lengnick-Hall, 1988; Snell, Youndt, & Wright, 1996; Wright & McMahan, 1992). For example, the typology articulated by Barney (1991) describes three categories of firm capital: physical, organizational, and human. Any of these types of resources can be a source of sustained competitive advantage as long as it is valuable, rare, imperfectly imitable, and no strategically equivalent substitutes exist. Human resource practices can be selected that add firm-specific value. For example, when employees are molded within the company instead of being purchased ready-made in the labor market, they are both less likely to leave the organization and more difficult for other firms to duplicate. Another overriding feature of these typologies is that they emphasize the critical and often neglected link between human resource practices and organizational goals.

The relationship between human resource practices and organizational performance has been demonstrated in several studies. For example, Terpstra and Rozell (1993) studied the use of five staffing practices: the use of follow-up studies of recruiting sources to determine the best sources of high-performing employees; the use of validation studies of selection systems; the use of structured interviews for selection; the use of cognitive aptitude tests for selection; and the use of biographical information for selection. The results indicated that the staffing practices were associated with higher annual profit, profit growth, and overall performance.

Another study by Huselid (1995) used survey data and publicly available financial figures to ascertain the relationship between high-performance work practices (as defined by DOL) and organizational performance and effectiveness: Results showed that a one standard deviation increase in HPPs was associated with a 7% relative decrease in turnover, and per-employee increases of $27,000 in sales, $19,000 in market value, and $4,000 in profits.

It must be kept in mind that any research using cross-sectional data should be interpreted with caution, as association does not prove causality. It is entirely possible (and perhaps likely) that some HPPs are associated with successful organizations simply because those organizations can afford such practices. However, as Terpstra and Rozell (1993) argued, in light of the extensive literature documenting the effect of high-performance work practices on individual performance, it seems plausible that the causal chain begins with the adoption of such HPPs and then leads to increased organizational performance.

In summary, the organizational context descriptors in O*NET will provide important preliminary information on the extent to which firms use innovative human resource practices. O*NET may also help identify the knowledges, skills, abilities, and other attributes prevalent in high performance organizations. Perhaps employees in these organizations differ from those in more traditional organizations, or perhaps certain employee attributes may be emphasized in successful companies. Such attribute differences may also mediate the relationship between human resource practices and high performance.

Potential Sources of Inaccuracy

There are many potential sources of inaccuracy in job analysis data. O*NET is an impressive job analysis system in terms of both scope and rigor. There are, however, a number of unknowns with respect to the accuracy of job analysis data in general. The purpose of this section is to briefly describe a critique of the potential sources of inaccuracy in job analysis recently conducted by Morgeson and Campion (1997) and then to illustrate some of these sources on the O*NET system. These issues were partly addressed in chapter 15.

The core of Morgeson and Campion's (1997) framework is the identification of the psychological processes that underlie inaccuracy. Shown in the first column of Table 20-1, the framework consists of two primary sources of inaccuracy: social and cognitive. Social sources of inaccuracy are created by normative pressures from the social environment and reflect the fact that individuals reside in a social context. Cognitive sources, on the other hand, reflect problems that primarily result from the person as an information processor with distinct limitations. The social sources are further subdivided into inaccuracy due to

TABLE 20-1
Social and Cognitive Sources of Inaccuracy and Their Likely Effect on Job Analysis Data

Source of inaccuracy	Likely effect on job analysis data: Interrater reliability	Interrater agreement	Discriminability between jobs	Dimensionality of factor structures	Mean ratings	Completeness of job information
Social sources						
Social influence processes						
1. Conformity pressures	X	X				
2. Extremity shifts		X		X	X	X
3. Motivation loss			X	X		X
Self-presentation processes						
4. Impression management					X	
5. Social desirability					X	X
6. Demand effects		X			X	
Cognitive sources						
Limitations in information processing						
7. Information overload	X		X	X		X
8. Heuristics			X	X	X	X
9. Categorization			X	X		X
Biases in information processing						
10. Carelessness	X		X	X		
11. Extraneous information					X	
12. Inadequate information	X					X
13. Order and contrast effects				X	X	X
14. Halo				X	X	
15. Leniency and severity				X		
16. Method effects	X*					

*Refers to internal consistency reliability in this case.

social influence versus self-presentation processes, whereas the cognitive sources are further subdivided into inaccuracy due to limitations versus biases in information processing. Nested within these are 16 psychological processes that constitute the specific sources of inaccuracy.

As noted in the chapter by Childs et al., the research design of the O*NET data collection does not allow a test of the presence or absence of these sources of inaccuracy. Thus, the discussion below is speculative. It asks, What data or methodologies in the O*NET project are consistent with (or might allow the operation of) these sources of inaccuracy? This analysis is only illustrative and not exhaustive. Several sources of inaccuracy that *could* operate in the O*NET data collection are discussed. Recognize that this discussion is not a critique of the O*NET system. We believe that O*NET is the state-of-the-art in job analysis. Our purpose is only to raise awareness of potential problems inherent in the entire job analysis measurement paradigm that exists today.

Impression Management

One source of inaccuracy that is likely to occur in job analysis is impression management, which refers to people attempting to present themselves in a favorable light (Schlenker, 1980). Impression management is more likely to occur during a job analysis data collection when people are encouraged to self-monitor (as incumbents are when describing their jobs), when the audience is high status (as when a management-sponsored study, such as a job analysis, is conducted), when the situation is evaluative in nature (as when a person's own job is being analyzed), and when there is some degree of ambiguity concerning the true state of affairs (as is true by definition in job analysis). A common finding across O*NET descriptor categories is that incumbents rated their jobs more highly than did analysts. These differences were quite large, averaging about 1 scale point. Findings such as these are consistent with an impression-management effect because incumbents are more likely than analysts to inflate their responses.

Socially Desirable Responses

These findings are also consistent with socially desirable responding (Marlowe & Crowne, 1961). In attempting to gain the approval of others (e.g., researchers, supervisors, senior managers), incumbents may distort responses in such a way as to portray their job as having relatively more socially desirable features. Again, the comparatively higher incumbent ratings are suggestive of this phenomenon because analysts are less likely to evidence socially desirable responding (Smith & Hakel, 1979). This source of inaccuracy is particularly likely when rating such desirable-sounding attributes as knowledges, skills, and abilities. Thus, it is noteworthy that the O*NET data for incumbents showed higher mean levels compared with analysts' data for all these descriptor domains.

Information Overload

Another source of inaccuracy likely to occur in job analysis is information overload, which occurs when individuals are confronted with large amounts of information or complex judgment tasks. There is evidence to suggest that when faced with such situations in job analysis contexts, respondents fail to make fine distinctions, in order to simplify the rating process (Friedman, 1990; Sanchez & Fraser, 1992). One common finding in the O*NET data that is consistent with this simplification process is that the various response scales are very highly correlated. It is common to find the Level and Importance scales correlated in the low .90s. Theoretically, these scales should be more independent. It is possible that incumbents sometimes simplify the rating process by giving the same response to each scale.

Categorization

Categorization is another source of inaccuracy that refers to reliance on summary judgments about a job. It is likely to result when information-processing demands are high, when there is a small amount of information available, when information provided is category-consistent, or when respondents automatically process information. Analysts would be more likely to succumb to this problem than incumbents because they are less familiar with the jobs, and they are basing their judgments on the DOT narrative descriptions. They may rely more on simplifying heuristics by basing their ratings on general impressions of the job (e.g., overall complexity or status). One common effect of categorization is reduced dimensionality of factor structures. As the O*NET data demonstrate, analysts consistently produced less dimensionally complex factor structures than did incumbents (e.g., skills, knowledges, etc.).

Method Effects

One final illustrative source of inaccuracy is *method effects*, which refer to the spurious covariation among responses that occurs when data are collected with the same instrument. This results in observed correlations reflecting both shared method variance and shared trait variance (Spector, 1992). Method effects are more likely when a common response format is used, the questionnaire is long, or items make very fine distinctions—all common methodologies in job analysis. Given the previous chapters' predominant findings of very large correlations among descriptors and relatively less complex factor structures than theoretically expected, it is likely that method effects occurred in the O*NET data to some degree.

This presentation of potential sources of inaccuracy is meant to challenge the thinking of future job analysis researchers. There is substantial evidence documenting the deleterious effects of each of these sources of inaccuracy in social and cognitive psychology. Thus, their operation in industrial psychology applications is likely. Historically, job analyses results have simply been assumed to be accurate. It may be time to question this assumption and devote more research to validating job analysis methodologies.

Levels of Job Analysis Research

The O*NET project has expanded the levels of analysis in job analysis research. What is the appropriate level of analysis for job analysis? Obviously, it is the job, and also the occupation. However, O*NET has expanded the relevant levels of analysis to include not only the traditional individual level (e.g., skills and abilities) and the occupational level (e.g., education and licensure) but also the organizational level (e.g., formalization and centralization), the industry level (e.g., type of industry), and the economic level (e.g., labor market information). Unfortunately, there is a price for this expansion of the levels of analysis in terms of ambiguity in the meaningfulness of some of the data as occupational descriptors.

Traditionally, data are gathered at the individual incumbent or job level and then aggregated to the occupational level. Other times, the data are simply collected with reference to the occupational level. Differences are typically treated as random error and reduced through the aggregation process (Harvey, 1991b).

There must be both a conceptual and an empirical justification for aggregation (e.g., Glick, 1985; James, 1982). That is, it must make sense to aggregate, and the data must converge within an occupation. This is the case for most of the individual- or job-level domains in the content model (e.g., skills, knowledges, generalized work activities, abilities, etc.). Other domains explicitly involve the occupational level (e.g., education, training, experience, and licensure variables) or use the job as the frame of reference (e.g., work context variables).

On the other hand, some content model domains contain constructs that may be better theoretically articulated and empirically validated at levels of analysis other than the occupational level. For example, occupational interests and values, as well as work styles, have been typically conceptualized at only the individual level, with corresponding measurement instruments designed to measure individuals rather than occupations. Thus, it is not surprising that these descriptors demonstrated relatively lower levels of interrater reliability and differentiation among occupations when compared with the other descriptors.

Descriptors in the organizational context domain also contain constructs that are difficult to interpret at the occupational level. For example, culture is commonly recognized as an organizational-level variable (Schein, 1992). Such variables cannot logically differentiate among occupations within an organization, or show correspondence within an occupation across organizations. As another example, leadership is difficult to conceptualize at the occupational level. That is, although some researchers have suggested leadership is dyadic in nature (e.g., Dansereau, Graen, & Haga, 1975), others highlight the group-level effects (e.g., Fleishman, 1973), and still others have discussed more macro-organizational-level influences (e.g., Bass, 1985; Burns, 1978). None have suggested that it is meaningful at the occupational level. As a result, it is not surprising that organizational context variables were relatively less able to differentiate among occupations than the other descriptors.

This may be an area where the content model needs additional conceptual development. This further conceptualization ultimately may expand the levels of analysis relevant to occupational description.

Job Analysis and the True Score Model

It may be time to revisit the applicability of the true-score model to job analysis research. The dominant paradigm in job analysis is that a "true score" exists for any particular occupation on any given descriptor. Because of this, it is assumed that measurement variation is error that can be reduced or eliminated through aggregation. Thus, reliable measurement is predicated on obtaining a reasonably large sample of respondents. O*NET also appears to be implicitly based on such assumptions. For example, it recognizes multiple sources of error, it uses averaged responses to calculate point estimates, it uses large numbers of raters to get accurate measures, and it estimates the reliability of its measures. These are all techniques characteristic of classical test theory and the true score model (Nunnally, 1978).

Although these assumptions are very applicable in many measurement contexts, perhaps the true score model should be questioned in occupational analysis. For example, some have suggested that conceptualizing jobs as static entities is no longer tenable given the dynamic nature of work settings and environments (Carson & Stewart, 1996). New innovations, such as organizing work around teams with only loosely defined tasks and responsibilities, seem to preclude the notion of single true scores for each descriptor. Others have found that as individuals work in a particular job, they perform different tasks (Borman, Dorsey, & Ackerman, 1992). This highlights the fact that jobs may change over time and leads to the question of how much variability can exist within

an occupation before it is no longer considered a homogeneous entity. Relatedly, the notion of equifinality suggests that there are multiple ways to reach the same end. This is relevant to occupational analysis because there are different constellations of activities and tasks that make up the same occupation, and many may be equally effective. Finally, still others have suggested that the nature of work is changing (Howard, 1995a), which calls into question the very idea of an occupation.

As this brief review illustrates, there are many facts and recent developments that would seem at odds with the true score model. Future theorizing in job analysis might entertain alternatives that more accurately portray the nature of jobs. Generalizability theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) is a viable alternative with its ability to segment sources of variance into effects due to descriptors, respondents, occupations, organizations, and other factors relevant to the job analysis context. The O*NET database, with its comprehensive descriptors, multiple respondents, and wide sampling of occupations and organizations, may be ideally positioned to inform the discussion.

CONCLUSIONS

Government-sponsored projects are often criticized for not producing things of value or doing so very inefficiently. This project stands out as a shining counterexample. The O*NET serves many needs of many people, and it was developed fairly quickly and inexpensively. It is certain to provide many years of good service to the public, just as the DOT did. We would like to commend Donna Dye and the other DOL members for their vision, leadership, and support of this project.