

Transferable Skills Analysis: A Common Sense Approach

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Abstract. This article reviews the history of transferability of skills based on government data and offers suggestions for contemporary analysis of future work potential in forensic settings. The article concludes that the O*Net is not a method for transferability of work skills and the rehabilitation professional will continue to rely upon the Dictionary of Occupational Titles and related resources. Further, the basis of transferability is, and will continue to be, a variation of the methodology used for determination of Social Security Disability Insurance benefits.

Transferable Skills Analysis: A Common Sense Approach

Background

The analysis of transferability of skills (generally referred to as TSAs) has been a procedure, in one form or another, that has been utilized by rehabilitation and job specialists for decades. Perhaps the most prominent user has been professionals related to the SSDI (disability insurance) of the Social Security program (Blackwell, Field, & Field, 1992; Field, & Weed, 1988; Hannings, Ash, & Sinick, 1972). Transferable skills analysis, or transferability, is the process by which similar, related, or new jobs are identified for a person following injury or disability. These jobs are both consistent and compatible with previous work experience and fall within the range of residual post-injury functioning of the claimant. The return-to-work movement of the 1980's (mostly through state legislatively mandated rehabilitation programs) also utilized various notions of transferability for the injured worker. A

natural extension of these legal mandates was the utilization of TSA procedures in the determination of reduced and/or lost employment and the diminution of wages in cases involving personal injury cases. In this author's opinion, the main referent and foundation of the transferability process has always been and will continue to be the disability determination program (SSDI) of the Social Security Administration.

For purposes of this discussion, the "Social Security model" will serve as the standard (or benchmark) frame-of-reference for both the definition of transferability and how the process can be applied to most cases. There are several reasons for selecting the Social Security program as a major referent. First, the Social Security program has a rich and long history of addressing disability issues, including the consideration of whether or not a person can work with or following injury. Second, the number of people who have been "processed" through the SSDI program is now in the millions. A very substantial process for determining disability and the capacity of a person to be able to work has been

implemented for over forty years. Third, the Code of Federal Regulations (Part 404, in particular) defines in great detail issues related to disability, and the disability determination process. The language is exact and provides a well-defined guideline in arriving at the outcome of the process. The SSA program is generally considered the “granddaddy” of many rehabilitation (or return-to-work) programs, and has served as a benchmark from which other related state and federal programs have been developed. For these reasons, the SSA regulations for the SSDI and SSI (supplemental security income) programs will be a major referent for this discussion on transferability. Before the central issue of transferability is addressed, consideration and review must be directed to information related to the disability determination process, the legal basis for transferability, and relevant sources of occupational and employment information.

The Disability Determination Process

The process for determining disability within the SSA context is presented in the Federal Register (1995, 404.1520, p. 322-323). The process consisted of five sequential steps:

- Step 1:** Is the claimant currently engaging in substantial gainful (404.1510/1572)?
- Step 2:** Does the claimant possess a severe impairment (404.1505/1511)?
- Step 3:** Does the claimant possess one or more impairments that meet or exceed the listings of impairments (404.1525)?
- Step 4:** Can the claimant perform past relevant work (404.1560)?
- Step 5:** Can the claimant do any other work (404.1545/1560)?

The steps in the determination process are sequential. For example, if the answer to the question of Step #1 is “no,” then you would proceed to Step #2 – and so forth. The work of the vocational expert relates to both Step 4 and 5, at the request of an administrative law judge. The question of transferability is directly related to Step 5, and may be relevant to Step 4.

Legal Basis for Transferability (Definition)

Reference Part 404 of the Code of Federal Regulations, 20: 1995.

(d) Skills that can be used in other work (transferability)...the skills that can be used in other jobs, when the skilled and semi-skilled work activities you did in past work can be used to meet the requirements of skilled and semi-skilled work activities of other jobs or kinds of work. Transferability is the most probably and meaningful among jobs in which (i) the same or a lesser degree of skill is required; (ii) the same or similar tools and machines are used; and (iii) the same or similar raw materials, products, processes, or services are involved.” (Part 404.1568, p. 341)

Part 404.1566 provides administrative notice *(d)* of the *Dictionary of Occupational Titles* and the *Occupational Outlook Handbook*, both Department of Labor publications as “reliable job information” to be used in the determination process. (p.340).

Part 404.1566 also establishes the use of a vocational expert *(e)* “if the issue in determining whether...your work skills can be used in other work and the specific occupations in which they can be used.” (p. 340).

Occupational and Employment Information

The Dictionary of Occupational Titles

The DOT was last published in 1991 in the form of a 4th revision. The publication (two volumes) consists of 1404 pages containing job listings (a specific DOT title and code for each job) and descriptions with only a few defined characteristics for each title. Specifically, the DOT contains 12,741 titles which are organized by occupational categories, divisions, and groups and a selected few worker traits for each job title.

The 1977 version of the Dictionary of Occupational Titles incorporated the arrangement of the “worker traits” as a means of identifying both the capacities of the worker (implied) and the characteristics of a job. While the DOT (a product of the U.S. Department of Labor) was intended for a wide assort-

ment of occupational uses, much of the information served well those who needed to routinely complete TSAs as part of their employment duties. Perhaps the single largest user of the DOT was the Social Security Administration in the determination of disability, under the Social Security Disability Insurance (SSDI) program. A detailed presentation and discussion of each of the 72 worker traits is available in the Revised Handbook for Analyzing Jobs (1991). For a complete listing of all worker traits associated with each of the DOT titles, consult the COJ 2000 (Field, & Field, 1999).

Occupational Outlook Handbook

The OOH is a Department of Labor publication that lists approximately 250 occupations, including descriptions of the occupations, employment trend data, annual and projected wages, and related source data for each of the occupations.

Related Occupational Arrangements

The primary database of the DOT (1991) is related or cross-referenced to several other arrangements of occupational information. The following are some of the more useful ones for transferability and finding related jobs. The work field and interest arrangements are suitable for transferability, while the Census, SIC, and SOC are widely used in employment and wage surveys. Other codes and arrangements, which may also be useful for the professional in transferability and the identification of jobs, exist at both the local and national levels.

Work Fields: All DOT titles are clustered within one of the 100 work fields. The work field code is discussed in the Revised Handbook for Analyzing Jobs (1991b) and displays an arrangement for grouping similar jobs by work tools, materials, aides, and behaviors. A more detailed presentation of the Work Fields, plus a listing of sedentary and lights jobs, can be found in Work Fields: Codes and Definitions (Field, & Field, 1993). This code is considered (by T. Field) as the most valuable and useful for transferable skills analysis, since the jobs are essentially clustered by work skills.

Guide to Occupational Exploration: The GOE arranges all DOT titles, according to “interest” clusters. There are twelve major interest areas, 66 work groups, and 348 sub-groups. When interest becomes an important factor in return-to-work issues, the GOE arrangement is very useful.

Census: The Census code is a survey code consisting of 501 titles each of which is cross-referenced to each title in the DOT. Workforce data are collected annually by the U.S. Bureau of Census and are available for the geographical areas of states, counties, metropolitan statistical areas, and cities. The survey data are also matched with annual median weekly earnings from the Bureau of Labor Statistics (annualized databases available separately, see References).

Standard Industrial Classification: The SIC code has been the mostly widely used code and arrangement for labor market surveys, both at the state and federal levels. The SIC classifies establishments by the type of work activity in which workers are engaged. The COJ 2000 provides a complete cross-reference between the SIC (establishments) and the DOT (job titles). Furthermore, the SIC arrangement has been widely used to classify manufacturers and businesses within states — usually published by each state’s Chamber of Commerce.

Standard Occupational Classification: The revised 1998 (SOC) system contains 822 detailed occupations and is designed to provide a universal occupational classification system. These occupations are combined to form 23 major groups, 96 minor groups, and 449 broad occupations. For years, the Bureau of Labor Statistics (BLS) has generated occupational and wage surveys using an OES (Occupational Employment Statistics) code, which will eventually be replaced by the 1998 SOC classification system. The

SOC, in turn, will more accurately correspond to the new O*Net occupational classification system.

The Occupational Network Service (O*NET™ 98)

During the last decade, the federal government, including the U.S Department of Labor, decided to not

create a 5th edition of the DOT (Mariani, 1999). As an alternative, a new format of occupational information was planned and developed through a contractual arrangement, primarily with the Utah Department of Economic Security and the American Institutes of Research (see Table 1).

The O*NET 98 Database was developed within a “content model” that arranges occupational information into one of six groups (Weed, & Field, 2001). Of the original 1,172 occupations (currently @ 1000) listed in the O*NET™ 98 database, each occupation has the potential to be rated on approximately 450 “elements” (depending on how one counts) which are scattered across the six groups. Each element, which is roughly equivalent to the old worker traits, is generally rated on *Level* of ability to perform (0 - 7); *Importance* of the ability (0 - 5), and how *Frequent* the activity is performed (1 - 4). This general O*NET structure and the large number of elements make it virtually impossible for the rehabilitation consultant to complete a transferable skills analysis within the context of the regulations set forth by the SSDI regulations. Involving many interested parties, an effort is currently underway (Cannelongo, 2001) to revise and adapt the O*NET database by a more direct utilization in the TSA process. The format does provide a considerable amount of information; however, there is too much information that is characterized (or rated) in a qualitative manner.

For this reason, it is recommended that the worker traits of the 1991 edition of the DOT still be used in transferability. The COJ 2000 is formatted in such a way as to permit the use of the O*NET 98 codes and titles, while providing access to the DOT worker traits. The following chart presents a comparison of the two database systems. The DOT was developed along the lines of the trait-factor approach to analyzing behaviors and measuring these behaviors in a quantitative manner. The O*NET, on the other hand, emphasizes a dynamic and “open-ended” approach to changes that occur in peoples’ lives, as well as the local and national labor market. The O*NET system is not given readily to the measurement of the factors utilized in describing occupations.

America’s Job Bank

America’s Career Information Network

Along with the development of the O*NET, the federal government has also developed two online resources that are consistent with the fluid and dynamic rational for future development in occupational information. The AJB is a listing of jobs that are available for workers in all geographical areas of the nation. Employers (those who list job openings), as well as potential employees (job seekers), have free and easy access to this ever-expanding database. The ACINET

Table 1
Comparison of DOT vs. O*NET

DOT	vs.	O*NET
12,741	Titles	@1,000
72 Worker Traits	Factors	@450 Elements
Scaled Ratings	Measures	Some Scaled Ratings
Generally Quantitative		Very Qualitative
General Testing	Vocational	Testing/Assessment
Applies	Assessment	Somewhat Impossible
Assessment, Evaluation	Applications	Guidance & Counseling
Transferability, Job		America’s Job Bank
Matching, Guidance		America’s Career InfoNet
GOE, WF, SIC, SOC	Linked Codes	SOC, MO, Census
Census		AJB, ACINET
Growing Obsolescence	The Future	Dynamic, Revision in Progress

Adapted from Weed, & Field, (2001), p. 105.

contains a wealth of information about existing jobs, wage surveys by geographical areas, and demand and trend information.

Vocational Expert Testimony: DOT vs. O*Net

The work activity of the vocational expert has been obscured with recent confusion over continued use of the DOT versus the switch to the new O*NET. The transition between the old to the new has not been as smooth as administrators had hoped; furthermore, it appears that will take a few years before there is a satisfactory solution to the issue.

The Social Security Administration, which administers the vocational expert program under the Bureau of Hearings and Appeals, has relied heavily on the Dictionary of Occupational Titles (the resource is even listed in the Federal Regulations as a resource in determining SSDI cases) (Field & Huberty, 1997). With the growing obsolescence of the DOT, and a corresponding article in the Occupational Outlook Quarterly (Spring, 1999), DOL has announced that the “O*NET replaces the Dictionary of Occupational Titles” (M. Mariani, personal communication 1999). This announcement has created somewhat of a quandary for the SSA disability determination program. Since the new O*NET really did not provide a database that would effectively replace the old DOT, especially within the legal restraints of the regulations for transferability, what was SSA to do? Some vocational experts (VEs) began to offer testimony that was not always related to the constructs and language of the DOT. As a result, several Administrative Law Judges (ALJs) in various federal circuits issued rulings – sometimes allowing departures from the DOT, and sometimes not. In those cases where the DOT was allowed to be “rebutted,” the rulings were generally referred to a “acquiescence rulings” (ARs), which were binding in only that particular circuit. The most clearly stated AR was the case of vocational expert testimony and the Dictionary of Occupational Titles (Haddock v. Apfel, 1998). The court held that the “DOT {does not} trump a VE’s testimony when there is a conflict about the nature of a job. Rather, the court explained that it was merely holding that the ALJ must investigate and obtain a reasonable explanation for any conflicts found.” In other words, the SSA will continue to expect VE’s to use the

1991 Edition of the DOT in determining testimony, unless an ALJ is satisfied that any alternative system (e.g. O*NET) used by the VE is satisfactorily explained.

In a more recent ruling (SSR 00-4p), the Administration addressed the issue of resolving conflicts in the use of occupational information by the vocational expert. The DOT, which has been the standard bearer for occupational information in cases that require a determination by the Office of Hearings and Appeals (primarily in SSDI cases), the VE may use other occupational information – other than that information supplied by the DOT. However, when the VE’s information is in conflict with the DOT, the adjudicator must elicit a reasonable explanation for the conflict before relying on the VE’s evidence to support a determination or decision about whether the claimant is disabled.” Reasonable explanations for the conflict might include any of the following: (a) information about a particular occupation may not be included in the DOT, (b) information about a particular job’s requirements may not be included in the DOT, (c) requirements for a job may differ from workplace to workplace, and geographical region, and (d) other occupational data sources may provide more specific or complete information about a job. Other sources of information do not automatically “trump” the information in the DOT. On the contrary, when conflicting information is provided, the adjudicator must question the VE for a reasonable explanation for the alternate occupational information. A case in point might be the use of the O*NET database which provides occupational information quite differently when compared to the DOT. While the O*Net database does not lend itself easily to the process of transferable skills analysis (as has been traditionally processed with DOT data), the O*NET will eventually replace the DOT.

In the meantime, research is under way (involving both SSA and DOL) to resolve the problem of identifying selected factors from the O*NET that could be operationally defined and measured for the purpose of transferable skills analysis. This research endeavor will probably be completed within the next three to five years (Cannelongo, J., 2001).

The COJ 2000 with an O*NET™ 98 Crosswalk

For the rehabilitation professional, especially one who is involved in forensic issues, it is imperative that access to all current, reliable and relevant information be available for the formulation and development of opinions related to a case in question. One of the most critical issues confronting a forensic rehabilitation professional is the issue of a person's transferable skills analysis following an injury or disability. Historically, the rehabilitation professional has relied heavily on previous editions of the DOT (including the worker trait data) to formulate an opinion of a claimant's ability to return to work and earn wages. Unfortunately, the 1998 release of the O*NET 98 database does not permit an easy and logical way to determine the TSA of a person. As noted already, the O*NET 98 contains about 450 "elements" potentially related to a particular job. Furthermore, the vast majority of these factors have no rating, either quantitatively or qualitatively, thus making it virtually impossible to utilize these factors in the traditional sense with respect to Transferable Skills Analysis (TSA).

The 1991 DOT database and the full range of the worker trait factors, as presented in the 1992 edition of the Classification of Jobs (Field & Field, 1992), is still required in order for the rehabilitation professional to address issues related to job choice, transferable skills analysis, and estimation of earnings capacity. In one sense, it is unfortunate that the DOT is now somewhat dated, and secondly, that the new O*NET 98 database fails to provide the essential information needed to assist in making proper decisions. The future potential and utility of the O*NET 98 database may become more apparent as further development and subsequent releases are achieved. In the meantime, it seems apparent that the O*NET 98 database must be recognized for its officially sanctioned presence (by the federal government) and may be expected (and/or required) to be utilized in any work product by a rehabilitation professional. As a minimum, it is imperative that a rehabilitation professional know about and employ the O*NET 98 database as expeditiously as possible. The COJ 2000 (Field & Field, 1999) presents an approach that achieves two purposes: (1) the professional can use the O*NET 98 database to identify jobs (although admittedly in limited ways) and (2) the professional still has

access to the DOT database that has direct applicability to such issues as transferable skills analysis and job matching. The primary characteristics of the COJ 2000 are: (1) worker trait profiles of the 72 worker trait factors, each of which is rated for each of the 12,741 DOT titles with a complete crosswalk to the O*NET 98 database and (2) crosswalks to related databases or arrangements.

Transferable Skills Analysis: A Common Sense Methodology

Transferability of work skills is the foundation of any attempt to identify similar or related jobs that are consistent with or equal to the functional skill levels of a worker. The process of TSA is important to career counseling and to issues related to finding jobs for people within the U.S. economy. Job matching requirements are essential in government-sponsored programs, such as Social Security Disability Insurance, workers' compensation program within each state, and cases involving personal injury and/or product liability.

The transferable skills analysis is essentially a process by which jobs are identified that are consistent with the worker's capabilities and functional restrictions (the worker's capacity to perform work may be reduced by limitations imposed from the results of disease or injury). This method or approach has been presented over the years in several publications (Field, 1993, & 1999; Field & Field, 1999; Field & Sink, 1980; Field, Grimes, Havranek, & Isom, 2001; Field & Weed, 1988; McCroskey, Wattenbarger, Field, & Sink, 1977; Sink & Field, 1981; Wattenbarger, 1981; Weed & Field, 2001; Underwood, 1981), and is predicated on the 1991 Dictionary of Occupational Titles. The recent ruling (SSR 00-4p) acknowledges the continued use of the DOT by VEs, although the VE is allowed to use another occupational database (i.e. the O*NET). Differences, if they occur, between the DOT and the O*NET must be explained to the court's satisfaction. The TSA process, however, does not have to be complicated. The TSA method outlined below adequately meets the requirements implicit in Step 4 and 5 of the disability determination process. Following the seven basic steps will result in a quick and reasonably accurate analysis for matching jobs to a worker. The steps need to be followed in order:

Step 1: Identifying Jobs in a Person's Work History

Using the Transferable Work Skills Worksheet, identify all the jobs that are relevant and meet at least the SVP level for each job (frivolous or short-term jobs should be ignored).

Step 2: Select an Occupational Code and Title

Using the DOT (Vols. 1 & 2), or the O*NET™ 98 system from either the government issued CD ROM or the web service (<http://www.onetcenter.org/>), select a code and title for each job. A “base” or beginning code allows the user to now select secondary codes (for transferability and/or labor survey data). Using the alphabetical index in the DOT, look up the appropriate code and enter onto Worksheet. When using the O*NET™ 98 titles or codes, it is imperative to cross-reference back to the DOT database. This step is necessary since the worker trait information is required in order to complete a transferable skills analysis.

Step 3: Profile the Jobs

Fill in the appropriate columns of the worker trait factors, by looking up the DOT code in Section 1 of the COJ 2000, and profile out the desired worker traits onto the work sheet. At the same time, enter the Work Field code (or GOE code — depending on your preference) since this code will be useful during the TSA process. Also, make a notation of the WF, SIC, and/or Census codes for each job title. These three codes are used in labor market surveys — a step that will assist later in this process of identifying jobs that exist in the local labor market.

Step 4: Create an Unadjusted Vocational Profile (UVP)

Assuming that there are two or more jobs in the worker's job history, identify the highest level of demonstrated functioning from the work history profiles. For instance, if three different jobs had a strength rating of sedentary, light and medium, the letter “M” would be entered in the “UVP” line on the worksheet.

The same procedure would be used for all the worker traits.

Step 5: Creating the Residual Functional Capacity Profile (RFC)

The RFC is merely an adjustment of the UVP line, taking into consideration any restrictions imposed by disease or injury. For instance, a worker who has been able to work at medium jobs, pre-injury (an L 4-5 accident), now might be able to work only at sedentary jobs. Accordingly, the “M” factor would be adjusted to an “S” on the worksheet. The same procedure would be used in adjusting any or all of the other worker traits. Sources of information that would help decide any adjustment include medical or psychological reports, and/or vocational evaluations.

Step 6: Finding Related or Similar Jobs

Finding similar or related jobs for a worker following disease or injury is not an exact science. Rather, the TSA process can result in the selection of some reasonable and common-sense selections that would be appropriate for the worker. Finding jobs “that make sense” can be achieved by following these three logical steps:

First, stay within the same occupational area that represents the primary job history of the worker. This is accomplished by simply looking for jobs by the first digit of the DOT code. For example, if the worker has held 2 or 3 jobs in the “machine trades” (Area 06), then it makes good sense to attempt to find similar or related titles in the same “machine trades” area. This is a critical first step in assuring that new jobs will have the same general work requirements (aptitudes, knowledge, and capacities) as previous jobs. It does not make good sense, for example, to place a person in the “service” industry that has had 30 years of experience in “machine trades.”

Second, stay within the same work field (or one closely related). This will insure that a person with a good work history in machining (WF 057), for instance, will be able to transfer to similar or related jobs with the same or similar work skills (e.g., method of work or active work related verbs, machines, tools, equipment, and work aids). Remember, work skills are

best represented by aptitudes, knowledge, and capacities related to a specific area of work. Identifying a job or jobs for a person with the same work skills as previously demonstrated makes good sense.

Third, identify jobs within the same occupational area, and then the same work field, that are equal to or less than the requirements in the adjusted RFC profile.

By way of an example, assume that the worker has worked in a machine shop for the last thirty years and has sustained a back injury, which has prevented him from doing any work requiring exertion other than sedentary or light work. Proceed to the listing of Light and Sedentary jobs as arranged by the Work Fields in Section 2. Notice that the first column, Work Field code (WF), is arranged chronologically. Proceed through the pages until the "057" jobs appear on page 2-104. There are exactly 52 jobs that fall within the 057 Work Field. Next, identify the job that begins with the digit "6" which represents the machine trades; there are exactly 38 jobs. Next, identify jobs that fall within the RFC restrictions for this worker, namely, the "light" exertion range. Note that all 38 jobs in this listing are "light."

This procedural approach quickly permits the user to move from all 12,741 jobs listed in the DOT to 38 jobs that fall within the worker's range of experience, skills, capacities, and functional restrictions. From these 38 jobs, the user would select the most appropriate jobs, by taking into account other relevant worker trait data and the preferences of the worker (if possible).

Step 7: Finding Jobs in the Local Labor Market

At this point in the process, the jobs that are identified as job matches from following Steps 1 - 6 above are only possibilities and should be evaluated using common sense and good judgement regarding the appropriateness for the worker. Of special concern is the process of identifying a job that actually exists within the local labor market and meets the transferability requirement for the worker.

Continuing the example above, select a job that would seem appropriate. The job selected might be DOT 669.130.022 (O*NET 98 database code of 81008), Supervisor, Machining, light. The general SIC code for the title is 2421. By referencing the "manu-

facturing or industrial guide" for your state (these resources are arranged by SIC code), local businesses and industries can be quickly identified (the name of the contact person, address, and phone number are usually listed).

If the user is interested in obtaining an estimate of the number of workers in a particular labor force, the Census arrangement is another source to check. In this case, the Census code for machining supervisor is 628. Turning now to the listing of Sedentary and Light jobs arranged by Census in Section 2 (2-183 to 2-188), there are a total of 639 DOT titles in the 628 groups. 106 (@17%) of these titles fall within the "06" occupational machine trades, all of which are Light jobs. This approach is less exact than the Work Field approach, but it will provide a global estimate of the number of workers, men and/or women, in a particular geographical labor force when using a Census survey.

Another possibility, of course, is to log on to the O*NET website and follow the recommended procedures for matching OUs to the claimant by utilizing the revised 54 descriptors. Even more promising, at least for the time being, are the web sites of America's Job Bank and America's Career InfoNet. As these databases continue to expand, professionals and prospective employees alike will be able to identify appropriate occupations within selected geographical areas, including information of trends, descriptions, job openings, and wage information. For an illustration of these data (for the job title of machinist), reference the Knowledge, Skills & Abilities, Tasks & Activities, and Job List (generated from America's Job Bank), and the Occupational Report (from America's Career InfoNet).

Labor Market Access Plus:

First introduced in the early 1980s (initially as the Job Search program), the Labor Market Access Plus computer program (Field, 1999) has experienced major revisions on four different occasions (Field, 1984, 1987, 1992 & 1999). The LMA Plus (Cutler & Ramm, 1987; Field, 1987; Field, Choppa, & Shafer, 1984; Field, Vander Vegt, & Summitt, 1981; Field, & Weed, 1987; Weed, 1986a; Weed, 1986b; Weed, 1987a; Weed, 1987b; Weed, 1988) is a computer analogue program that is designed to process large amounts of occupational and employment data for the purposes of arriv-

ing at a reasonable level of transferability, and a pre to post analysis of employment and wage access and/or loss. Essentially, the rationale for the program is essentially that which is presented in Steps 1 - 7 of the Transferable Skills Analysis, discussed earlier. Consistent with SSA's legal basis for transferability, the LMA Plus program is DOT-based and incorporates the "work field" arrangements as a means of identifying work skills (work behavior, materials, tools, methods, and aides). The program is based on an "equal to or less than" search and match rationale, following input for the analysis with respect to occupational area, work fields, and worker trait factors (adjusted for restrictions).

As is the case with all of the "transferability" computer programs available in the commercial market, the LMA Plus is very reliable (multiple analyses of the same "input" will always result in the exact same "output"). With regard to the issue of validity, this program has no studies addressing the question of predictive validity. The issue of validity relates directly to the nature and scope of the occupational databases (DOT, Census, BLS), which are utilized in the program. A major assumption of this program (Field, J., 1999) is that the LMA Plus is designed to process large quantities of occupational information, the results of which provide a "reasonable approximation" of jobs that correspond to the worker's functional capacity. The LMA Plus is not a test or an evaluation measure. The program requires considerable skill and expertise on the user's part to enter correct and relevant information about the worker's job related capacities. The primary function of the program is to reduce the number of job possibilities to a reasonable and manageable few that will, in turn, require further judgement and clinical evaluation on the part of the user. The LMA Plus is a tool, or resource designed to assist the user in processing information as part of the decision-making process, which predicated on sound judgement, clinical experience, and common sense. Likewise, when using the on-line O*NET resource, the same attention to judgement and common sense should be employed.

Meeting the Daubert-Kumho Challenge

The admissibility of testimony by experts (including rehabilitation professionals) has become an impor-

tant consideration in the formulation of opinion involving litigated cases. Renewed emphasis is placed on reliable and relevant methodology as the basis for developing and offering expert opinion in legal settings. Taking into account the criteria, as set forth in *Daubert v. Merrill Dow Pharmaceutical*, and further discussed in *Kumho v. Carmichael* and the Federal Rules of Evidence (i.e. Rule 702), a rehabilitation professional should be very cognizant of these rulings when developing testimony (Field, et al., 2000). In this context, the following observations are presented as a guideline when employing transferable skills analysis as a method or approach to casework.

Standard of Practice: Transferability is a time honored and generally accepted approach with roots established by decades of rules, regulations, and practice of the Social Security Administration disability program. The same general method is also used by professionals in state VR agencies, workers' compensation programs, and in legal cases (Weed, & Field, 2001). This approach, as outlined in the seven steps discussed earlier, enjoys general and widespread acceptance in the broad rehabilitation community.

Specialized Knowledge: While TSAs cannot meet the strict requirements of scientific method and statistical error, the method does require technical and other specialized knowledge on the part of the professional rehabilitationist. In light of *General Electric Company v. Joiner* (1997), and *Kumho v. Carmichael* (1998), the Court held that the Daubert standards apply flexibly to all expert testimony – at the discretion of the trier of fact. Adopting and utilizing an accepted method for TSAs is critical to the development of expert testimony.

Peer Review: Countless papers, technical manuals, government guidelines, and journal articles have been published since the 1950's on both general and specific topics related to the transferable process. Both the degree of use and wealth of publications serve to substantiate the efficacy of methodologies related to transferable skills analysis.

Reliability and Validity: Reliability is established by the degree of consistency that is inherent in any method; any of the computer programs (consisting basically of algorithms) can easily demonstrate reliability. The issue of validity is basically established by the nature and content of the resources that are used in

the TSA process. The method or approach in finding similar or new jobs for a person following illness or injury, when accommodating previous work experiences and skills, is referred to as transferable skills analysis. This method is a process, requiring technical and specialized knowledge on the part of the professional. The process requires the review, organization, and synthesis of much information as a means to arrive at a conclusion. The Dictionary of Occupational Titles is the primary source of information used in the TSA process, including any of the computer job-matching programs. The concern about the DOT being obsolete (Mariani, 1999) or inadequate (A critical review of the DOT, 1980) certainly raises questions regarding its validity. However, the SSA Policy Interpretation (SSR 00-4p), at least for the near future, seems to suspend or neutralize this concern. In either case, clinical judgment of the professional should prevail in all decisions regarding TSAs.

Conclusion

Transferable skills analysis is a time-honored method for reasonably selecting similar or new jobs for people following illness or disability. The most critical ingredient in the determination process is the activity of the rehabilitation counselor. In cases where the on-line O*NET or a commercial computer program is used, information that is inputted to the program is basically determined by the counselor. Likewise, any report, including job recommendations, generated from the computer process need to be carefully scrutinized for relevancy and appropriateness. Ultimately, the TSA process is a method utilized by the professional for purposes of processing occupational information resulting in a reasonable conclusion.

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Relevant Web Sites

acinet.org	America's Career InfoNet
ajb.org	America's Job Bank
bls.gov	Bureau of Labor Statistics
census.gov	Bureau of Census
dol.gov	Department of Labor
doleta.gov/alms	America's Labor Market Information System
doleta.gov/programs/onet	O*NET
ssa.gov	Social Security Administration

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Timothy F. Field, Ph.D., formerly Professor and Coordinator of the Rehabilitation Counseling Program at the University of Georgia, is currently President and Co-owner of Elliott & Fitzpatrick, Inc. E & F, Inc. is a publisher of training materials and books for practitioners in the area of vocational rehabilitation, including the publishing of several journals in the field.

