

PARSING THE DATA POINTS

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(A Critical Rewrite of Step 7 in *The Transitional Classification of Jobs, 6th Edition* (2004) as published in **FORENSIC REHABILITATION and ECONOMICS**, a Journal of Debate and Discussion, Vol. 5, No. 2, 2012.

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 are possibilities only and should be evaluated using common sense and good judgment 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. Assume that the job of “Model Maker” (DOT#693.380-010) was selected.

693.380-010 MODEL MAKER (clock & watch)

Sets up and operates machines, such as modelmaker's lathe, milling and engraving machines, and jig borer to make working models of watch parts and complete watches: Makes bridges, plates, and wheels, cutting teeth on wheels and pinions, and working from blueprints to extremely close tolerances. Makes and threads screws. Assembles complete watches. May design and fabricate own tools.

GOE: 05.05.07 STRENGTH: L GED: R4 M3 L4 SVP: 7 DLU: 77

In order to find this job in a particular labor market, go to Section 1, page 1-152 in order to locate 693380010 and the corresponding O*NET-SOC code and title (51-4061.00 Model Makers, Metal and Plastic).

Next, go to www.bls.gov/oes (Occupational Employment Statistics) for wage and employment information at the national, state, metropolitan or nonmetropolitan level. Metropolitan areas of the United States are defined by the Federal Office of Management and Budget and can include one county, several counties, or cross state lines. Whether a metropolitan statistical area (MSA), consolidated metropolitan statistical area (CMSA) or primary metropolitan statistical area (PMSA) represents a distinct labor market or a combination of labor markets is beyond the purview of this section. The answer is dependent upon economic developments, geographic and population data, including, for example, mean travel time to work (U.S. Census demographic profiles). The May 2011 OES employment and wage estimates for the Milwaukee-Waukesha-West Allis, WI (four county) MSA shows employment of 110 for Model Makers, Metal and Plastic with a mean wage of \$23.94 and a mean wage relative standard error (RSE) of 5.6% (the 95% confidence interval being $\$23.94 \times 5.6\% = \$1.34 \times 2 = \$2.68$ +/- the mean wage or \$21.26 to \$26.62). Clicking the occupational title hyperlink brings up a national industry-specific profile for this occupation, most notably the five industries with the highest levels of employment in this

occupation. For Model Makers, these include Motor Vehicle Parts Manufacturing (NAICS 3363); Metalworking Machinery Manufacturing (NAICS 3335); Aerospace Product and Parts Manufacturing (3364); Motor Vehicle Manufacturing (NAICS 3361); and Plastic Product Manufacturing (NAICS 3261). NAICS stands for the North American Industrial Classification System which replaced the old Standard Industrial Classification System or SIC in 1998*. These industries can be matched to the labor market, or at least to the county level through U.S. Census Bureau County Business Patterns (CBP) or even Zip Code Business Patterns (ZBP). While the most recent data for OES is May 2011, the CBP data, although updated annually, is from an earlier year (2009 at the time of this writing). The strength of the CBP data is in the number of establishments. The employment-size class data is not directly comparable to OES employment numbers.

The CBP link begins at www.census.gov/econ/cbp/index.html. The state of Wisconsin, for example, links to Milwaukee County which has detail buttons for all the NAICS codes. The details for industries in Milwaukee County includes the information that there are 11 establishments under NAICS 3363; 40 establishments under NAICS 3335; and 38 establishments under NAICS 3261. The number of paid employees is also given for the latest reference period (the week including March 12, 2009). No establishments were identified in Milwaukee County under the NAICS codes for Aerospace Product and Parts Manufacturing or Motor Vehicle Manufacturing (no one source is perfect). However, further down the details page is NAICS 336991 for Motorcycle, Bicycle & Parts Manufacturing which lists four establishments. The four establishments could actually all be part of Harley-Davidson Motor Company. A business with four separate physical locations will show up as four establishments (just as four Wal-Mart stores in a county will show as four retail establishments in the county).

A “reality check” is the Occupational Employment and Wages series from U.S. Department of Labor Bureau of Labor Statistics. This irregular series, last updated for May 2008, lists the 10 largest occupations by industry from the Occupational Employment Statistics survey (on the national level). Having already noted that there are only an estimated 110 Model Makers in the four county MSA, it is not surprising that the occupation is not listed among the top 10 occupations for any of the five industries. Occupations that are listed that may be of further interest for analysis include team assemblers, inspectors, and computer software engineers.

Exhibit 1. In March 2012, Harley-Davidson Motor Company announced the retirement of Chief Styling Officer Willie G. Davidson following nearly 50 years of service as the company’s foremost designer. In the beginning it was just Davidson and a self-taught model maker in the styling department, according to an interview in HOG© magazine. “The biggest single change over all these years is the advent of the computer. Back then we would work in clay. I would make a drawing, and that

would be interpreted in clay, and when we got the surfaces where we wanted them we would reverse-engineer them using templates and create the final mold. It was a long process; it's much shorter today," Davidson said. Currently there is a diverse group of fabricators, model makers, and designers in the Styling department, according to Davidson.

A list of possible employers can be obtained online through many of the state Labor Market Information (LMI) websites. A state labor market information contact list is maintained by the Bureau of Labor Statistics as well as the Labor Market Information Training Institute (funded by the U.S. Department of Labor). Many state LMI websites, including Wisconsin, allow an employer search by NAICS code or company name (producing address, telephone number, contact name, and employment size estimate). These links allow for construction of a labor market search list (the Wisconsin LMI link, which utilizes the Infogroup database from Gale Publishing, does identify Aerospace Product and Parts Manufacturing employers in Milwaukee County although CBP does not). An employer locator based on the Infogroup database is also available through CareerOneStop (www.careerinfonet.org) for all 50 states. The time and effort expended on the occupation-specific search will depend on the strength of the occupation-industry profile. Drawing the borders of a job search and "energy preservation" are more important now in this age of information overload than ever before (Dalton, 2012).

Exhibit 2. The Wall Street Journal 2012 Analysts Survey begins with the headline "What Makes a Great Stock Analyst? They parse many data points, do shoe-leather research, upward of 100 days on the road, attending industry conferences, visiting companies and plants. One telecommunications analyst has his team visit or call 40 cellphone stores a week. What do vocational experts do? In a recent study, vocational experts used existing (printed/Internet) resources at a significantly higher rate than personal contacts with employers (Neulicht, Gann, Berg & Taylor, 2007). Prepping a contact list of 30-35 employers is considered realistic by some practitioners. Steve Dalton (supra, 2012) recommends beginning with a target list of 40 employers from one or more industries. One labor market expert's reporting example is to ideally have at least in-depth information on 5-10 solid contacts as well as a summary of the labor market search and findings. Cold calling is difficult and time-consuming, as is creating a call list. This may require multiple resources or databases. Vocational experts are advised to use proven sales leads techniques, e.g., chaining oneself to the desk and making one call after another until all contacts on the list are attempted or completed, avoiding self-defeating cognitions or "awfulizing" about unproductive calls and taking a coffee break, etc.

In the case of the Model Maker, the reader may want to revisit the Dictionary of Occupational Titles and note that DOT#693.380-010 has the DOT industry designation of (clock & watch) and was last updated in 1977. The reader may then want to revisit the 38 occupations identified in step 6 and evaluate the transferability/placeability of the other occupations to some of the industries, occupations and occupational groups identified in step 7.

Exhibit 3. Model Makers, Plastic and Metal appear as a stub to Metal and Plastic Machine Workers in the Occupational Outlook Handbook, 2012-13 edition. The OOH is a good source of contacts for additional information, e.g. The Association for Manufacturing Technology. Wikipedia is an alternative, if not always reliable, source for clues to changes in technology and contacts, e.g. Association of Professional Model Makers. For example the latest revision as of 31 August 2011 states that “Some model makers also use increasingly automated processes...cutting parts directly with digital data from CAD plans on a CNC mill or creating parts through rapid prototyping. The history tab for the Wikipedia article on Model Makers shows that “rapid prototyping” first appeared in the revision of 12 May 2007 as “even using rapid prototyping.” That phrase was replaced with “or creating parts through rapid prototyping” in the revision of 16 February 2008. Wikipedia has a separate article on rapid prototyping (the first techniques of which became available in the late 1980s).

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 (Field, 2007). Occupational information is needed in a variety of settings and transferability when applied to legal cases takes on an even broader application (Field, supra). Traditional transferable skills analysis does not give full weight (e.g., the average four-year college curriculum counted as two years of SVP) to observable educational attainment or to the dilemma faced by an educated person reentering the workforce, or the educational attainment/human capital of person who has had marginal or weak attachment to the labor force in the past. Years of education are often observable while educational quality, perseverance, problem solving skills and innate ability are not (Abowd, Haltiwanger, & Lane, 2008). Highest grade completed, course of study (academic or workforce education), grade point average, obsolescence of college education, reason for leaving school, educational requirements for suitable jobs, and anticipated hiring for suitable jobs are among the core variables, as well as skills learned on the job, to be considered in vocational earning capacity assessment in legal-forensic settings (Robinson, Pomeranz & Young, 2012). An overreliance on aggregate statistical data that gives short shrift to individual characteristics - drivers and inhibitors - can lead to a depersonalization of an analysis (Shahnasarian, 2010). Ability to apply prior skills is just one of 14 inhibitors and drivers identified by Shahnasarian.

The TSA process is a highly effective tool in establishing if the worker has skills that can be transferred to another similar, related, or new job that is both consistent and compatible with previous work experience and fall within the range of residual post-injury functioning of the injured worker. The vocational consultant who ignores the resources available through the U.S. Department of Labor's Employment and Training Administration (O*NET, RAPIDS, AmericanJobCenter, Competency Model Clearinghouse, CareerOneStop, etc.) and Bureau of Labor Statistics (Occupational Outlook Handbook, Occupational Outlook Quarterly, Employment Projections, Occupational Employment Statistics, etc.) may be by-passing some very valuable and relevant information on occupations that could prove helpful to the job search, rehabilitation plan, or earning capacity assessment.

Transferable skills include sector specific skills and firm specific skills. However, in the present and future economy, cognitive adaptability and flexibility is one of the broad competencies for which there is a growing demand. For decades now (since the last update of the DOT which has thousands of job titles for production occupations), the labor market has experienced increased demand for highly skilled analytical workers (performing abstract tasks requiring problem solving, intuition, and persuasion). Job opportunities are declining not only in middle-skill, blue-collar production, craft, and operative occupations but in middle-skill, white-collar clerical, administrative, and sales occupations, according to David Autor, a professor of economics at the Massachusetts Institute of Technology and faculty research associate for the National Bureau of Economic Research. A leading explanation for job and earning losses focuses on the consequences of ongoing automation and offshoring of middle-skilled "routine" tasks that were formerly performed by workers with a high school diploma but less than a four-year college degree. Routine tasks are characteristic of bookkeeping, clerical work, and repetitive production tasks. These routine tasks are increasingly codified in computer software and performed by machines or, alternatively, sent electronically to foreign worksites. The process raises relative demand for nonroutine manual tasks requiring situational adaptability. Examples of workers engaged in these occupations include janitors and cleaners, home health aides, construction laborers, security personnel, and motor vehicle operators. In today's information society, the opportunities for males displaced economically, mentally, or physically from manufacturing jobs are likely to be found in lower-paying service occupations (Autor, 2010).

Exhibit 4. A visualization of BLS data points for a single occupation (team assemblers). Note that in O*NET Online the occupational code crosswalks to only two DOT titles. One title with a suffix ending in a code of 500 or above reflects an individual job description assigned through the occupational code request process. No data was collected on the occupation. The other DOT title is assigned to the automobile manufacturing industry and last updated in 1990. A vocational expert

wrote in a report that “the position of team assembler is one that is classified in the automobile industry. Such jobs are rare in the Phoenix labor market.” Did he parse all the data points? Did he have an understanding of the local labor market? Examine the employment number and industries below:

Team assemblers OES/SOC/O*NET 51-2092

A high school diploma or equivalent is the typical education needed for entry in the occupation. Moderate-term on-the-job training is the typical OJT needed to attain competency in the occupation. Educational attainment: 21.6% have less than high school diploma; 48.6% have high school diploma or equivalent; 19.3% have some college, no degree; 5.4% have an associate’s degree; 4.4% have a bachelor’s degree; and 0.7% have a master’s degree or higher. The unemployment rate is VERY HIGH and the percent part-time VERY LOW compared to all other occupations. (2010 National Employment Matrix last modified 12/06/11; Table 1.11, 2009 update; Table III-1, Occupational Projections and Training Data, 2008-09 edition, USDL, BLS, February 2008).

May 2011 **Phoenix MSA** Employment and Wage Estimates (www.bls.gov/oes)

Employment: 11,870

Median wage: \$11.53

Industries with the highest levels of employment in this occupation (**May 2011** National OES):

*Ranking of occupation within industry
& percentage of industry employment*

Ten largest occupations for each industry (PDF) May 2008
USDL, BLS, Occupational Employment Statistics)

**Establishments in
Maricopa County
2009 County Business
Patterns**

(www.census.gov/econ/cbp)

- | | |
|---|--------------|
| • Employment services (NAICS 5613) | 800 #3, 5.1% |
| • Motor vehicle parts manufacturing (NAICS 3363) | 53 #1, 16.1% |
| • Motor vehicle manufacturing (NAICS 3361) | 2 #2, 17.9% |
| • Medical equipment and supplies manufacturing (NAICS 3391) | 149 #2, 9.9% |
| • Plastics products manufacturing (NAICS 3261) | 119 #2, 6.6% |

The Bureau of Labor Statistics (BLS) has a new system including categories for education, experience, and training assignments that give a detailed explanation of the usual requirements for entering and attaining competency in an Occupation (OOQ, Fall 2011). The BLS OJT assignments (short-term on-the-job training, moderate-term on-the-job training, and long-term on-

the-job training) are replicated in the Occupational Outlook Handbook. No classification system is perfect and the BLS system is different from the Job Zones, developed by the Employment and Training Administration (ETA), for O*NET. It is worthwhile for the reader to study the differences. The BLS system adheres more closely to the skill level of occupations (unskilled, semi-skilled, skilled) as detailed in the Vocational Expert Handbook (1990), Office of Hearings and Appeals, Social Security Administration.

BLS once defined occupational entrants (Gruenert, 1999) as persons who entered their current occupation from a different occupation. These entrants are the majority. The remainder were either unemployed or outside the labor force. In 1995-96, the leading occupations of job entrants aged 16 to 24, aged 55 and older, and those less than a high school diploma included Cashiers at number one. Cashier, a gateway job for many occupational entrants or reentrants, may not show up on a computerized TSA that is bracketed by work field and/or specific vocational preparation above SVP 2. While “less than high school” is the typical education needed for entry into the occupation and short-term on-the-job training is the typical OJT needed to attain competency in the occupation (per the National Employment Matrix last modified 12/06/11), the vast majority of job incumbents have at least a high school diploma and more than 1 in 10 have at least a bachelor’s degree. It is an occupation that is accessible to many rehabilitants as a gateway, transitional or final placement.

When occupational projections are updated every two years, BLS typically charts the 20 occupations that top various criteria. For example, the Winter 2011-12 Occupational Outlook Quarterly presents ready-reference charts for the 2010-20 projections:

- Fastest growing occupations (percent growth in employment)
- Most new jobs (numeric growth in employment)
- Most job openings (due to growth and replacement needs)
- Graduate degree (occupations that have the most growth or job openings and master’s and above as the typical education needed to enter the occupation)
- Bachelor’s degree (occupations that have the most growth or job openings and have a bachelor’s degree as the typical level of education needed to enter the occupation)
- Associate degree or postsecondary non-degree award (occupations that have the most growth or job openings and have an associate’s degree or postsecondary non-degree award as the typical level of education needed to enter the occupation)
- High school diploma or equivalent (occupations that have the most growth or job openings and have a HS diploma or equivalent as the typical level of education needed to enter the occupation)

- Less than a high school diploma (occupations that have the most growth or job openings and have less than a high school diploma as the typical level of education needed to enter the occupation)
- Most job losses (decline in employment in thousands of jobs)
- Most self-employed (occupations with the most self-employed jobs)

These occupations or occupational units (OUs) can be reexamined at the DOT level in Section 1 and Section 2. Many OUs are one-to-one translations of DOT occupations, whereas other OUs comprise hundreds of DOT occupations.

Finally, the References in Section 3 of this resource provides the reader with additional sources on the topic of transferability, labor market information, and how decision-making can be applied in various settings.

*Some industrial directories still use the SIC codes, such as Ward's Business Directory (Gale Publishing); including the 55th edition released June 2012.

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