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**State of South Dakota, County of Minnehaha
In Circuit Court, Second Judicial Circuit**

TROY SCOTT and JILANN SCOTT,)	
)	
Plaintiffs,)	
)	
vs.)	Civ. 00-1640
)	
MICHAEL PYN,)	
)	
Defendant.)	

Affidavit of David S. Gibson, MBA, CPA

COMES NOW, David S. Gibson, MBA, CPA, being first duly sworn upon his oath states the following:

As president of Vocational Econometrics, Inc., the publisher of *The New Worklife Expectancy Tables* (the Tables), I have been asked by Mr. N. Dean Nasser, Jr. to offer background information on the validity of the tables and their underlying data. This affidavit centers around the following key areas:

1. General Acceptance
2. Use of Statistical Averages
3. Peer Reviewed Articles
4. Court Cases
5. Rate of Error

After providing a background on how the Tables are derived, each of these points will be discussed.

1. Derivation of the Tables

The Tables were originally developed in 1987 to examine the impact of work disability on the expected number of years of employment for an individual, given his or her age, gender, and level of education. Expected years of employment over a person’s remaining life expectancy has been classified by government and forensic economists as “worklife expectancy.” The worklife expectancy statistics contained in the Tables are derived using reliable government source data in a peer-reviewed methodology accepted among forensic economists. The definition of work disability used in the Tables, including the definition of nonsevere disability (used in the case at hand), was created and is specifically defined by the Census Bureau.

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1.1. Underlying methodology

The method used in developing the worklife expectancies contained in the Tables is known as the Life, Participation, and Employment (LPE) model. This model computes a person's probability of working in any particular year by combining the probability that a person will be alive (L) at each future year with the probabilities he or she will be active in the labor market (P) and employed (E). The individual probabilities for each year are then summed to derive a worklife expectancy.

The LPE method is one of the methods generally accepted among economists for computing worklife expectancies. It was developed by Michael Brookshire and William Cobb (1983) and was further refined by Brookshire, Cobb and Gamboa (1987). In a 1991 article in the *Journal of Legal Economics*, Gary Albrecht applied this methodology to assessments of earnings for partially disabled individuals. In addition, a 1999 publication by Richards and Abele, *Life and Worklife Expectancies*, looks at several generally accepted ways of computing a statistical worklife, including the LPE model used in the Tables. These and other publications dealing with the LPE method can be found in Attachment A.

The methodology is further supported by a 1982 appellate decision, *O'Shea v. Riverway Towing*,¹ which recommended a method of estimating expected earnings that involves probability statistics. After listing Mrs. O'Shea's limitations, the court noted that:

It seems unlikely that someone in this condition could find gainful work at the minimum wage. True, the probability is not zero; and a better procedure, therefore, might have been to subtract from Mrs. O'Shea's lost future wages as a boat's cook the wages in some other job, discounted (i.e. multiplied) by the probability – very low – that she would in fact be able to get another job.

In commenting on the analysis performed by the economist, Judge Posner notes that:

No allowance for the fact that Mrs. O'Shea, whose health history quite apart from the accident is not outstanding, might very well not have survived – let alone survived and been working as a boat's cook or in an equivalent job – until the age of 70. The damage award is a sum certain, but the lost future wages to which that award is equated by means of the discount rate are mere probabilities. If the probability of her being employed as a boat's cook full time in 1990 was only 75 percent, for example, then her estimated wages in that year should have been multiplied by .75 to determine the value of the expectation that she lost as a result of the accident; and so with each of the other future years. The economist did not do this and by failing to do this he overstated the loss due to the accident.

In this decision, the court defined a "better procedure" for estimating future expected earnings, that of utilizing probability statistics to better define future expected earnings in assisting the trier of fact. The procedure is identical to the method used in the Tables for estimating worklife expectancy.

¹ 677 F. 2d 1194 (1982)

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1.2. Government source data

The probability of life is extracted from the *United States Life Tables* developed by the National Center for Health Statistics.² The life tables are published annually and are widely used for determining life expectancy.

The data used to project the probability of employment were developed by the U.S. Census Bureau from its Annual Demographic Survey, as published on the Census Bureau website.³ The Annual Demographic Survey is conducted by the U.S. Census Bureau as a supplement to its monthly Current Population Survey (CPS). In March of each year since 1981, the CPS has been expanded to collect more information on income and employment. The March supplement to the CPS provides participation and employment rates of persons with and without work disability through expanded questions that specifically address work disability.

The CPS survey is the primary source of employment data for persons in the United States, and the source of the government's monthly unemployment rates that are widely quoted by the media. The CPS is generally accepted as a valid source of data regarding the employment experiences of people with and without a work disability. Section 2.2 briefly discusses some of the research conducted that uses the CPS for employment-related disability research (see also Attachment B).

1.3. Definition of disability

The definition of work disability used in the Annual Demographic Survey can be found on the Census Bureau web site.⁴ This definition was created and is controlled by the Census Bureau. As part of this definition, the government also created the sub-categories of severe and not severe disability. The Census Bureau defines work disability as existing when a person meets one or more of the following conditions:

² <http://www.cdc.gov/nchs/products/pubs/pubd/lftbls/life/1966.htm>

³ <http://www.census.gov/hhes/www/disable/disabcps.html>

⁴ <http://www.census.gov/hhes/www/disable/cps/cpsworkd.html>

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CPS Work Disability Criteria
Not Severe
Identified by the March Supplement question “Does anyone in this household have a health problem or disability which prevents them from working or which limits the kind or amount of work they can do?”
Identified by the March Supplement question “Is there anyone in this household who ever retired or left a job for health reasons?”
Received VA disability income in previous year.
Severe
Identified by the core questionnaire as currently not in the labor force because of a disability that is expected to last for at least the next six months.
Identified by the March Supplement as a person who did not work at all in the previous year because of illness or disability.
Under 65 years old and covered by Medicare in previous year.
Under 65 years old and received Supplemental Security Income (SSI) in previous year.

A person who answers “yes” to at least one of the three questions listed under Not Severe, but “no” to all of the last four will be defined as having a nonsevere work disability. Anyone who says “yes” to any of the four questions listed under Severe will be defined as having a severe work disability. These Census Bureau definitions are used in developing the worklife expectancies found in the Tables.

2. General Acceptance

In their Brief in Support of Motion to Exclude Testimony of Ostrander and Brown, defense claims that the Tables do not have general acceptance in the relevant scientific community. Forecasting a plaintiff’s future earnings stream is not an exact science. If defense implies that “general acceptance” requires universal or majority usage in the scientific community, they are incorrect. There is no single step in the loss computation process that enjoys universal acceptance in the economic community. As such, it is predictable that experts may disagree on the method for computing lost earnings. This is true of defining earning capacity, computing worklife expectancy, projecting earnings growth, and determining discount rates. However, the pursuing discussion will demonstrate that the Tables, their underlying data, and the computational methodology all have substantial (general) acceptance throughout the vocational, economic, and disability research communities.

The worklife tables, as well as the data and methodology underlying them, have been the subject of many articles, lending credence to their overall acceptance (see Attachment C). In addition, Section 1 describes articles pertaining to the LPE methodology used in developing the Tables. The following sections provide support for the CPS data underlying the Tables and discuss the use made by various researchers of the data used to derive worklife expectancy.

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2.1. General support

The presence of a disability is widely known to affect both earnings and worklife expectancy. This finding is documented in results from various surveys, including the 1990 and 2000 decennial Census, the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) from the Census Bureau,⁵ the National Health Interview Survey (NHIS) from the National Center for Health Statistics,⁶ and the N.O.D./Harris Survey of Americans With Disabilities.⁷ The disability effect is the cause of such events as the passage of the well-known Americans with Disabilities Act (ADA),⁸ the existence of the Department of Labor's Office of Disability Employment Policy,⁹ and the practice of rehabilitation counseling, just to name a few.

For the purpose of developing the Tables, data from the CPS were used. The CPS is the primary source of employment data for persons in the United States, the source of the government's monthly unemployment rates that are widely quoted by the media.

In addition, government and private (nonforensic) researchers use CPS data to study employment patterns of the U.S. population with work disabilities as support for governmental policy decisions (see Attachment B). This includes work funded by the Department of Education, National Institute on Disability and Rehabilitation Research and conducted by researchers at Cornell University. They have published multiple papers using the CPS to study the effects of work disability on earnings and employment.¹⁰

Private research (Yelin, 1996; Yelin and Trupin, 1997 see Attachment B; Gibson, 2000 and 2001, see Attachment C) has shown that employed persons with a work disability, both not severe and severe, are more likely to become unemployed than persons without a work disability. If unemployed, they are less likely to find employment. These differences become more profound with age.

Even if persons with a work disability find employment conducive to their disabilities, they face ongoing struggles to cope with their disabilities. These struggles may intensify with age, continuously making it more difficult to compete with their counterparts without disability

⁵ Data from the decennial Census, CPS, and SIPP can be found on the Census Bureau website at <http://www.census.gov/hhes/www/disability.html>

⁶ One example is a study by Stapleton, et al. (1997) that accesses data from the NHIS. <http://aspe.hhs.gov/daltcp/reports/eshclit.htm>

⁷ <http://www.nod.org>

⁸ <http://www.usdoj.gov/crt/ada/adahom1.htm>

⁹ <http://www.bls.gov/odep>

¹⁰ The Cornell papers can be found at <http://www.ilr.cornell.edu/extension/ped/RRTC/papers.html>. A related article published by the Federal Reserve Bank of San Francisco can be found at <http://www.frbsf.org/econsrch/wklyltr/2000/el2000-28.html>.

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(Gibson, 2000 and 2001, see Attachment C; also see U.S. Census Bureau website¹¹). The impairments will place the individual at a disadvantage in the labor market compared to those without disability, and likely cause the person to have a harder time finding and/or maintaining comparable employment.

2.2. Use of the underlying data by disability researchers¹²

Various independent researchers use CPS data in research on the employment experiences of persons with a work disability. In a presentation before the National Association of Forensic Economics (NAFE) in November 2000, John McNeil, a special assistant for disability statistics for the U.S. Census Bureau, now retired, reaffirmed the application of CPS data for the study of persons with a work disability. As part of the presentation, he produced a study entitled "Employment and Earnings of Individuals 18 to 64 by Disability Status: Data from the March 2000 Current Population Survey." The study explores the participation and employment rates for persons with work disability using the same data used in *The New Worklife Expectancy Tables*. In addition, he signed an affidavit (Attachment D) stating he sees no reason why the CPS data for work disability cannot be used in the manner applied by Vocational Econometrics. He also authored an article further supporting use of CPS data for studying worklife issues for people with a work disability (McNeil, 2002).

Herman Miller functioned as the chief of the Population Division of the Census Bureau. He has also signed an affidavit (Attachment E) noting that the CPS data are "the most appropriate source for studying the employment experiences of people with a work disability."

In addition, both government and non-government researchers rely on the CPS employment rates and earnings figures for non-forensic purposes. Burkhauser, Daly, and Houtenville (2000), for example, used data from the March supplement of the CPS to compare the employment experience of people with and without disability during the 1990s business cycle. This paper was published through the Rehabilitation Research and Training Center (RRTC) for Economic Research on Employment Policy for Persons with Disabilities at Cornell University. The Cornell RRTC has also published several other papers using CPS data on persons with a work disability. These include papers by Houtenville (2000) that studied the prevalence, employment rates, and household income of people with disability, as well as a paper by Burkhauser, Houtenville, and Wittenburg (2001) that compared the employment trends of persons with work limitations using the CPS and two other government surveys.

Daly, Burkhauser, and Houtenville (2000) published a paper through the Federal Reserve Bank of San Francisco that used CPS data to study the work and income of men with disability. Acemoglu and Angrist (1998), both with the Department of Economics at MIT, published a paper through the National Bureau of Economic Research that used CPS data to study the impact of the ADA on the employment of people with disability.

¹¹ <http://www.census.gov/hhes/www/disable/disabcps.html>

¹² Unless otherwise noted, all articles described in this section can be found in Attachment B.

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Researchers at the University of California, San Francisco, also use CPS data to study persons with a disability. This work includes an article published in the U.S. Bureau of Labor Statistics' *Monthly Labor Review* (Yelin and Katz, 1994) that used both the CPS and the National Health Interview Survey to study the participation trends of people with and without disability during the period from 1970 to 1992. Yelin (1996) and Yelin and Trupin (1997) used the CPS to study the participation and employment of people with and without disability during the mid-1990s.

Government researchers have also used CPS data to study the experiences of people with and without work disability. The U.S. Census Bureau measured the participation and employment rates and average earnings of people with and without disability and published the results in two key documents (1983 and 1989). In 2001, the Census Bureau issued a press release that included basic information from the CPS on the prevalence, employment, earnings, and education of people with a work disability.

The research list above is not meant to be complete. It does, however, give an idea of the variety of researchers using CPS data. The use of the CPS by this sampling of government and non-government researchers corroborates the validity of the CPS for the purpose of studying the work experience of people with a work disability. Independent researchers from various institutions and with various purposes would not all use the CPS data unless the data were meaningful.

3. Use of Statistical Averages

In their brief, defense objects to Mr. Ostrander's use of the worklife expectancies in the Tables in part because he "simply does not know what will happen to Troy Scott in the future." They object to the use of a statistical average for people with a nonsevere work disability because it contains persons with virtually no disability to those with disability close to severe.

Defense correctly observes that the population of those with a work disability is quite diverse. However, they incorrectly surmise that this precludes the use of a statistic drawn from this population. The following sections discuss this issue in more detail.

3.1. The uncertain nature of calculations of lost future earnings

What defense seems to want is absolute knowledge of Mr. Scott's future. This, of course, is not possible for anyone. In the absence of a crystal ball, it is necessary to estimate based on appropriate population statistics that are applied to the facts of Mr. Scott's case. As Marcia Angell noted in *Science on Trial* (1997, p. 115):

Courtroom trials are not about populations, they are about individuals. . . . We have no basis, at least in the current state of knowledge, for making a judgment about a particular woman. We therefore must appeal to epidemiological data – that is, studies of populations.

Perhaps defense is frustrated by lack of a scientific formula to precisely predict the future employment of the plaintiff and calculate the resulting earnings impact. Worklife expectancy deals with the future of a human being, something that can never be known with absolute

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certainty. The U.S. Supreme Court acknowledges this uncertainty in a 1983 decision (*Jones and Laughlin Steel Corporation v. Howard E. Pfeifer*, 462 U.S. 523):

By its very nature the calculation of an award for lost earnings must be a rough approximation. Because the lost stream can never be predicted with complete confidence, any lump sum represents only a “rough and ready” effort to put the plaintiff in the position he would have been in had he not been injured.

The Court went on to deride attempts at coming up with such statistics:

We do not suggest that the trial judge should embark on a search for “delusive exactness.” It is perfectly obvious that the most detailed inquiry can at best produce an approximate result.

3.2. Statistical averages

Defense attempts to negate the usefulness of the worklife statistics by quoting an article by Everett Dillman: “One cannot go to a table and find some precise number.” This statement was taken out of context. When he says this, Dr. Dillman is talking about an individual’s ability to compete in the open labor market, not about worklife expectancy. He notes that an expert cannot go to a table and find a number to represent a change in competitiveness due to injury. Other parts of this article, in fact, note the importance of considering a reduction in worklife expectancy due to injury.

As noted in the previous section, it is not possible to give a precise number representing a person’s future worklife expectancy. Defense is incorrect, however, when they note that this is an automatic rejection of the statistical averages found in the Tables.

The consternation seems to stem from a need for a very precise formula to apply these population statistics to an individual plaintiff. Averages from various populations have long been accepted as a means for prediction – life expectancy, earnings, and others. No statistic, no matter how fine-tuned, can provide an exact predictor of an individual’s future. This is as true of worklife expectancies as it is of various measures of annual earnings and growth and discount rates. The expert must use available statistics about populations and mold them to meet the specifics of the case.

Defense objects to the worklife expectancy statistics because they are not specific to particular conditions or types of impairment. In short, they object to the fact that the statistics are derived from an average for males with a work disability and an education level equivalent to Mr. Scott’s. They feel the groups used are too broadly defined. They offer no alternative measures that meet their condition-specific criteria. There are none.

Economists, actuaries, insurance companies, and gambling establishments use population averages when making rational bets on human outcomes. The basic belief is that in the absence of more specific and precise information, the best predictors of outcomes are statistical averages or relative frequencies. Following this, disability data do not have to be segregated by type, severity, or duration of disability in order to be reliable or meaningful.

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The desire for impairment-specific data on worklife expectancy makes no sense when looked at from a vocational rehabilitation perspective. Many different types of conditions can result in identical work-related impairments (e.g., both a knee injury and a lung ailment can result in a restriction to sedentary work). Also, the same condition may have varying work-related impacts on different people. (An attorney and a construction worker with less than a high school degree would have widely different impacts from the loss of use of a non-dominant arm.) Impairments from non-injury related causes can result in work disability of varying degrees, with minimum to maximum impact. What is relevant is the effect of the impairment, whatever the cause, on a person's capacity to work and earn money.

In the field of statistics and actuarial sciences, probabilities are derived by determining the average of a statistical cohort, that is, the average performance of those persons most like the person being predicted. Mr. Ostrander determined that Mr. Scott was most like an individual with a nonsevere disability, as defined by the Census Bureau. In doing this, he excluded from consideration all of those people whose disabilities are severe or prevent them from working altogether.

When predicting the height of a 5-year-old boy, should one use an average of all people or of 5-year-old boys? Similarly, when predicting the employment experience of a male with a non-severe work disability, should one use an average of all people or of males with a non-severe work disability? In conducting his analysis, Mr. Ostrander applied to Mr. Scott only those statistics that are for people he determined were similar to Mr. Scott—those who have a work disability but are still able to work.

What the criticism does point to, however, is the fact that statistics of all sorts must be used responsibly and applied by persons familiar with the world of work and career development theory. When assessing persons with disability, the user should be familiar with the effects of impairment on ability to work and earn money as well as the experiences of persons with disability in the labor market.

4. Peer Reviewed Articles

Defense notes that articles have been written that favor the Tables, but dismisses them because they were written by people related in some way to Vocational Economics, Inc. In contrast, they note two articles criticizing the Tables that they feel “prove that they are an unreliable indicator of worklife expectancy.” Their argument, however, is both misleading and incomplete. Defense fails to mention, for instance, that two noted Census Bureau officials (unrelated to Vocational Economics) have supported use of CPS data for studying the effects of disability on work (see Attachments D and E).

By discounting the favorable articles, defense misinterprets the peer review process. The articles alluded to by defense underwent a blind peer review process and were accepted for publication. By definition, this means that others in the profession, also unrelated to Vocational Economics, have found the articles to have scientific merit. The fact that many of these articles are authored by persons associated with Vocational Economics should not be a

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surprise. After all, the persons most likely to write about a science are the researchers that lead innovations in that science.

The worklife tables and the CPS data underlying them are the subject of multiple articles. The bibliography (see Attachments A and C) is a partial listing of these articles and includes listings of articles pertaining to the worklife tables themselves and to the methodology underlying them. Articles supporting use of CPS data are noted in Attachment B. The bibliographies show that the worklife tables have been reviewed in professional journals and that the CPS data have been used by researchers for both forensic and non-forensic purposes.

The following sections deal with the articles discussed by defense and why each is used inappropriately for the issues involved in this case.

4.1. Skoog and Toppino article

In discussing an article by Skoog and Toppino (S&T), defense claims that “The National Association of Forensic Economics recently published a study highly critical of the Gamboa tables.” This is misleading in that it implies that the article reflects the collective opinion of the association, which is not true. It was accepted by the people involved in the peer review process for inclusion in a journal published by the association, not by the association at large.

This journal (the *Journal of Forensic Economics*) is not intended as an authoritative publication. It publishes multiple contrasting opinions and approaches of the forensic community. Defense fails to mention a subsequent article that was published in the same journal as a response to the S&T article. This article (Gibson and Tierney, 2000, in Attachment C) underwent the same peer review process as the S&T article. A fuller version of this article is also available (Gibson, 2001, in Attachment C).

The S&T article was also rebutted by an article by John McNeil (2000; see Attachment B). As mentioned previously, McNeil is the retired Special Assistant for Disability Statistics from the Census Bureau. While employed there, he was responsible for producing the disability-related data from the Bureau’s various surveys. In addition, he and another former Census Bureau employee, Herman Miller, have signed affidavits supporting use of the CPS for the purpose of studying the worklife expectancies of persons with a work disability (see Attachments D and E).

Specifically, S&T object to the CPS data stating that since the disabilities in the data are self-reported and without independent verification, the resulting data are unreliable. This does not negate the usefulness of the CPS data, as discussed in previous sections and in the attached article by Gibson and Tierney.

4.2. Rodgers article

Defense also notes an article by Rodgers, who objects to the worklife expectancy statistics contained in the Tables because they are not injury specific. The article also notes that the CPS may not be the most appropriate source of disability data.

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The Census Bureau website contains a page dedicated to disability data.¹³ In it, the Bureau notes three sources for disability statistics for the United States workforce: CPS, SIPP, and the decennial census. Here, in terms of the disability questions asked, it notes that the sources range from limited (decennial census) to most expansive (SIPP). Most importantly, the site notes that the CPS focuses on work disability – the pivotal measure for disability-specific worklife expectancy computations necessary in forensic settings.

Both government and non-government researchers rely on the CPS disability employment rates and earnings figures for non-forensic purposes. Section 2.2 describes some of this research and supports use of the CPS for studying the work experiences of people with a work disability. Section 3 addresses the use of statistical averages and their validity in assessing an individual's future worklife expectancy.

The existing evidence, then, is quite contrary to Rodgers' stated opinions.

5. Court Cases

Defense uses four court cases in a further attempt to invalidate the Tables. Three deal specifically with the Tables and the fourth with worklife expectancy generally. Each is dealt with below.

It is important to note that these decisions refer to previous versions of the Tables. Five editions of the Tables have been published, beginning with the first in 1987. This sometimes causes confusion in the courts. The current 2002 edition is not substantially different than the 1998 edition used by Mr. Ostrander in the case at hand.

5.1. Phillips v. Industrial Machine

Defense uses a Nebraska Supreme Court opinion in an effort to invalidate use of employment statistics for estimating worklife expectancy. I happen to agree with the Nebraska decision *within the context of that case*.

In *Phillips*, there was no medical opinion supporting the expert's opinion that the plaintiff had a disability. The court stated that "without any evidence that Phillips was in fact disabled, Marchisio's opinion, which relied on the conclusion that Phillips was disabled, lacked foundation and probative value."

The worklife tables used by the expert in *Phillips* were an older version of the tables that did not break out disability into severe and not severe categories. Despite an apparently minor disability, the expert in *Phillips* used an average disabled statistic without regard for how the plaintiff may differ from that statistic, in stark contrast to the guidance printed in the tables.

¹³ <http://www.census.gov/hhes/www/disable/intro.html>

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Therefore, based on an insufficient medical foundation and on his inappropriate use of the worklife tables, his opinion was not relevant to the case.¹⁴

5.2. Michels v. U.S.

Defense also uses a federal case from Iowa, *Michels v. United States*, in an attempt to discredit use of the worklife tables. In *Michels*, the court disallowed the use of the Tables by an economist. This was mostly due to the fact that the economist used the Tables to quantify a loss of worklife expectancy, despite a vocational rehabilitation expert opinion that there was no loss of worklife expectancy in the case.

In addition, the court objected to the worklife publication used by the economist because it was an older version produced before the passage of the Americans with Disabilities Act (ADA). The court's concern is no longer relevant, as all of the data now used were gathered after passage of the ADA (showing no improvement from pre-ADA periods).

The court also stated that the Tables used data for persons with at least a 5% whole body impairment or who were eligible for Social Security benefits. The court was misinformed on this point. The U.S. Census Bureau's definition of work disability¹⁵ does not consider percent of whole body impairment, and eligibility for Social Security is only one factor out of seven that are included in the definition.

5.3. Hough-Scoma v. Wal-Mart

Defense also mentions *Hough-Scoma v. Wal-Mart*, noting that the Tables were excluded in this case because there was an insufficient foundation laid for their inclusion. This was not an opinion on the validity of the Tables, merely the lack of data to allow the court to pass judgment on their validity.

Though medical evidence existed that the plaintiff's restricted range of motion might be permanent, no work restrictions were placed on her. Plaintiff's expert used *The New Worklife Expectancy Tables* as part of his testimony. The Second Circuit overturned the jury award on future lost wages that was based partly on the Tables. The court, however, notes that the Tables were not submitted into evidence and as a result that "the record is insufficient to establish that these tables are applicable under the circumstances present in this case." No evidence was submitted on such supporting information as the government's definition of work disability or on the peer review of the tables and the Current Population Survey data. This support does exist. The court simply did not have the information necessary for making an informed decision.

¹⁴ The data used by Mr. Ostrander are newer and have specificity lacking in the *Phillips* analysis, allowing for more a precise estimation of worklife expectancy.

¹⁵ <http://www.census.gov/hhes/www/disable/cps/cspworkd.html>

5.4. Strickland v. Roosevelt County

The fourth case noted by defense deals with the issue of worklife expectancy more generally (not the Tables specifically). The passage quoted by defense on page 16 of the brief seems to criticize use of any general worklife expectancy statistic. Two issues are important here.

Based on the quote, the expert in *Strickland* used a worklife statistic for all males of Mr. Strickland's age. In addition to these parameters, the statistics contained in the Tables are also specific to education level and work disability status. Therefore, the data available to Mr. Ostrander are specific to people like Mr. Scott and address very directly the key issue in the case, the effect of the injury on his ability to work.

In addition, the apparent opposition to the use of any worklife expectancy statistic is in direct contrast to the wide use of worklife expectancy statistics by forensic vocational and economic experts. Regardless of the method used, use of worklife expectancy is essential to an appropriate assessment of lifetime earnings. The decision also contradicts the *O'Shea* decision (see Section 1.1) that recommends the use of probabilities in the assessment of lifetime earnings, and *Daubert* and *Kumho* which require a scientific foundation for an opinion. Without reliance upon statistics derived from a relevant population, the expert opinion would be pure opinion with no science.

6. Rate of Error

Defense objects to the lack of an error rate for worklife expectancies. In making this argument, defense has focused on an isolated *Daubert* factor, claiming that if the Tables do not meet this one factor, they are invalid. This is not in keeping with either the *Daubert* decision or a companion decision not mentioned by defense.¹⁶ In both *Daubert* and *Kumho*, the court noted that not all factors may apply with every case, especially in the social sciences.

Based on *Daubert* and *Kumho*, the trial court is left as the gatekeeper using the four factors as flexible guidelines to assure that the expert employs the same level of intellectual rigor as he or she would outside the courtroom when working in the relevant discipline. None of the factors mentioned, including rate of error, is meant to be used in isolation to qualify or disqualify an expert or his methodology.

The error rate criterion is primarily intended to apply to the "hard" sciences in conjunction with the testing performed there (e.g., reliability of a bolt securing a heavy sheet of metal). There simply is no way to test how a particular plaintiff will fair in the future against a prediction.

One can, however, compute the standard error of a worklife expectancy using the formula for the standard error of a probability. Due to the large sample size of the CPS, one could show that the standard error of a worklife expectancy would not exceed 3% of the estimate (Gibson,

¹⁶ *Kumho Tire v. Carmichael*, 526 U.S. 137 (1999)

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2001; see Attachment C). Thus, statistically measured standard errors of the worklife expectancy statistics are insignificant.

FURTHER, THE AFFIANT SAYETH NAUGHT.

David S. Gibson
President, Vocational Econometrics, Inc.

Subscribed and sworn to before me, a notary public, in this ____ of August, 2003.

Notary Public

My Commission Expires _____