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**In the District Court, 96th Judicial District
Tarrant County, Texas**

GERALD S K AND)	
ELIZABETH K)	
)	
Plaintiffs,)	
)	
vs.)	Cause No. 96-185990-01
)	
WOODFORD LIVESTOCK TRANSPORT,)	
GARRY BOWLING, AND CATHY COLVIN)	
SNEED,)	
)	
Defendants.)	

Affidavit of Gerald Casenave, PhD

COMES NOW, Gerald Casenave, PhD, being first duly sworn upon his oath states the following:

Defense has filed a motion to exclude my testimony and the testimony of Terrence Clauretie, PhD, CPA. This motion centers around the following key areas:

1. Fit of the Opinion to the Facts of the Case
2. Use of Statistical Averages

Each of these points is refuted in the discussion that follows. Since defense’s objections refer to issues on which I will be testifying, the response will be solely from me.

1. Introduction

Defense notes that expert opinion should be relevant and reliable. We agree. They object to my opinions, however, feeling that they “are highly subjective, have a huge potential rate of error, and ignore critical facts that are specific to Plaintiff Gerald S K ’s situation.” Specifically, they feel that I should have based my opinions regarding earning capacity and worklife expectancy on Mr. K ’s work history, and also that the statistics I used are overly broad and meaningless. As shown in the remainder of this document, defense’s arguments are not consistent with a proper lost earnings analysis.

1.1. Analyzing Future Loss

What defense seems to want is absolute knowledge of Mr. K ’s future. This, of course, is not possible for anyone. In the absence of a crystal ball, it is necessary to estimate based on

Affidavit of Gerald Casenave, PhD

appropriate population statistics that are applied to the facts of Mr. K [redacted] '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. My opinion deals with the future of a human being, something that can never be known with absolute 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.

My education and experience provide me with specialized knowledge pertaining to the immediate and ongoing needs of persons with disability in finding and maintaining employment (see Attachment A). In addition, data are available from the U.S. Census Bureau that pertain specifically to the earnings and worklife expectancy of persons with and without a work disability. This combination of education, experience, and technical data enables me to assess the loss of lifetime earnings of Mr. K [redacted] in a way that is beyond the realm of common knowledge.

1.2. Reliability of the Methodology

Defense contends that my opinion is not valid because it is based on unreliable methodology and on flawed government data. They state that my methodology is too general to rise above the level of speculation and that my opinion contains generalizations and averaging that make the opinion unreliable. These contentions make it obvious that the defense does not understand the nature of a lost earnings analysis or the data upon which such analyses are based. In fact, the methodology I employed was explicitly addressed in a recent peer-reviewed article specifically addressing assessment of earning capacity (Tierney and Missun, 2001, “Defining Earning Capacity: A Process Paradigm;” see Attachment B). The article discusses the assessment of annual earning capacity, worklife expectancy, and lifetime loss.

When I am retained as an expert witness for cases such as Mr. K [redacted] 's, I am asked to estimate the loss of earning capacity that plaintiffs will sustain over their lifetimes as a result of work disability. As noted by the U.S. Supreme Court, this is not an exact calculation; at best, the estimate is a “rough approximation.” What is necessary in this case is that I consider specifics relating to Mr. K [redacted] (e.g., age, education, work-related limitations) in

Affidavit of Gerald Casenave, PhD

combination with relevant population statistics to derive the most reasonable estimate possible. This is what I have done in estimating Mr. K _____'s lost earnings.

As an expert witness in this case, I have been asked to assess Mr. K _____'s loss of earning capacity resulting from a (medically determined) permanent disability sustained in July of 2000. In conducting this assessment, therefore, the most relevant issue is Mr. K _____'s loss of lifetime earnings considering this work disability. The most relevant data, then, must be those that specifically address this issue, those that measure the differences in earnings and employment between people with and without work disabilities. This is what I have done in this assessment. Doing this ensures that my analysis addresses the needs of the court.

2. Fit of the Opinion to the Facts of the Case

Defense notes that my application of the methodology and data must fit the facts of the case. I agree. The sections below will describe the nature of such an assessment and how my analysis fits with the facts regarding Mr. K _____.

2.1. Nature of a Lost Earnings Assessment

In conducting an assessment of loss of lifetime earnings, an expert needs to consider a variety of factors, some of which are age, education, previous work experience, work-related limitations, and the lifetime effects of these impairments on ability to work and earn money. When conducting the assessment, it is essential that the expert take important vocational factors into consideration.

One of the essential tasks of a vocational economic analyst is to determine whether to use actual earnings or some proxy to estimate earning capacity. Actual earnings are generally used only for individuals whose job pattern appears to reflect a stable, mature career path. For other individuals, the analyst may gauge expected earnings by using education level, general learning ability, a set of specific defined aptitudes, or a specific occupation, if that is established (e.g., a person who has achieved journeyman status in a field). Use of a proxy to determine earning capacity is very common and is supported by both vocational and economic experts (see Attachment C).

In addition to these considerations, the expert's post-injury estimate of earning capacity must consider the effect of the impairment on lifetime ability to work and earn money. The presence of a permanent, partial disability is widely known to affect both earnings and worklife expectancy. This finding is documented in results from various surveys, including the decennial Census, the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) from the Census Bureau,¹ the National Health Interview Survey (NHIS)

¹ 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>

Affidavit of Gerald Casenave, PhD

from the National Center for Health Statistics,² and the N.O.D./Harris Survey of Americans With Disabilities.³ The disability effect is the cause of such events as the passage of the well-known Americans with Disabilities Act (ADA),⁴ the existence of the Department of Labor's Office of Disability Employment Policy,⁵ and the practice of rehabilitation counseling, just to name a few.

For the purpose of assessing loss of earnings for Mr. K _____, I have used data from the CPS. 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. 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.⁶

Private research (Yelin, 1996;⁷ Yelin and Trupin, 1997;⁸ Gibson, 2000 and 2001, see Attachment D) 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 (Gibson, 2000 and 2001, see Attachment D; also see U.S. Census Bureau website⁹). The

² One example is a study by Stapleton, et al. (1997) that accesses data from the NHIS. <http://aspe.hhs.gov/daltcp/reports/eshcclit.htm>

³ <http://www.nod.org>

⁴ <http://www.usdoj.gov/crt/ada/adahom1.htm>

⁵ <http://www.bls.gov/odep>

⁶ 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>.

⁷ <http://www.gotowork.org/906387174.html>

⁸ <http://www.gotowork.org/907099906.html>

⁹ <http://www.census.gov/hhes/www/disable/disabcps.html>

Affidavit of Gerald Casenave, PhD

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.

My assessment of the impact of injury on Mr. K _____'s loss of future earnings is based on facts known regarding the employment experience of real people meeting the definition of work disability.

2.2. Defense Examples

Defense's lack of understanding regarding the issues important to an assessment of lost earnings becomes obvious in their discussion of pre-injury earning capacity. In discussing our use of an average education-based dollar for Mr. K _____, they state that we "would reach the same pre-injury number if [we] were doing an analysis of the pre-injury earning capacity of an [sic] 64 year-old Mississippi elementary school janitor and the president of Microsoft Corp., Bill Gates." (Defense motion, page 5) This is obviously wrong.

As noted previously, some cases use actual earnings and some use a proxy to estimate earning capacity. For the 64-year-old janitor, actual earnings would likely be the appropriate choice based, if only in part, on his age and education level. I note that the janitor is probably not a college graduate, which would change the results of our methodology even if actual earnings were not used. Bill Gates' earning capacity would obviously be actual earnings also. He is well-established in his occupation and earning at a level so far above the average, that use of an average would be absurd. .

Defense's lack of understanding continues to become obvious in their discussion of worklife expectancy. They again provide absurd examples in attempting to discredit our use of statistical averages to represent worklife expectancy. They note, "The same number could apply to a professional football player, a stuntman, a high-rise construction worker-occupations that common sense dictates likely do not provide a very long worklife expectancy." (Defense motion, page 6-7)

Worklife expectancy is a representation of the number of years, *in total*, that an individual can be expected to work over a lifetime. Just because a man is able to play professional football for only a few short years does not mean that he will never work again. He would certainly have the capacity to work in another occupation once his football days are over. His worklife expectancy would be the total number of years he could work over his lifetime *in all occupations*. The same would be true of the other two occupations mentioned.

These examples provided by defense are so far-reaching that they apparently either do not understand the important issues involved in a lost earnings assessment or they are attempting to divert attention from the realities of Mr. K _____'s case and to discredit well-respected government data.

2.3. Fit to Mr. K

In deciding the most appropriate measure of earning capacity, it is necessary to consider many factors, such as age, education, and work history. Use of actual earnings is preferred when

Affidavit of Gerald Casenave, PhD

appropriate, such as with an older worker or with a worker well established in an occupation. For younger workers, homemakers, and people not well established in an occupation, however, actual earnings are rarely a reasonable representation of *lifetime* earning capacity.

As experts, we were asked to assess Mr. K _____'s *lifetime* loss as a result of injury, not just the loss that occurred during a short period of time. Mr. K _____ is still young and has many years ahead of him that the injury and resulting limitation will impact.

Mr. K _____ was in his twenties when he was injured, and his work career was immature and undeveloped. He had only recently completed his baccalaureate at the time of his injury. Mr. K _____'s work history was consistent with other young males who work their way through college. These people often job-hop, and their early career patterns do not predict their eventual career patterns. Generally, when they reach their late 20's to early 30's, or when they begin to build families, they may settle into a more stable pattern. According to the Bureau of Labor Statistics,¹⁰ for instance, the average U.S. worker has more than nine employers just between the ages of 18 and 36. Because of this, it would be inappropriate to use Mr. K _____'s work history to predict his future earning capacity as defense wishes us to do.

Because of his age and recent completion of a college degree, the most appropriate measure of Mr. K _____'s earning capacity is a proxy related to education level (i.e., using statistics for people like him) in that it includes a wide variety of work opportunities available. Using Mr. K _____'s actual, historical earnings would be irrelevant and misleading and would not provide a fair assessment of his earning capacity.

Defense objects to my use of statistical averages to estimate Mr. K _____'s earning capacity and worklife expectancy. When estimating an individual's *lifetime* capacity to work and earn money, average figures are generally most appropriate. This is especially true when an individual is not yet established in the given field, as is the case with Mr. K _____. Mr. K _____'s age and education status make the use of statistical averages especially appropriate for him. Use of such averages is discussed further in Section 3.

The career development process is conceptually related to the concept of the Age-Earnings Cycle. There is a high correlation between age and earnings, in that as we become older our earnings tend to increase. As we develop experience in a particular task, we become more productive in that task, and the labor market pays a premium for enhanced productivity. One's ability to be productive is based upon the acquisition of skills, the intellectual and physical aptitudes that one brings to the marketplace, and, of course, the level of educational attainment achieved by the worker.

Researchers have broken this process into stages. The first of these stages, exploration, recognizes an early time period where a worker may have sporadic employment and earnings in the process of establishing a career. Mr. K _____ was clearly in this category. As such, it is clearly improper to gauge his lifetime earning capacity upon his limited employment history at the time of his injury.

¹⁰ <ftp://ftp.bls.gov/pub/news.release/nlsoy.txt>

Affidavit of Gerald Casenave, PhD

The figure used to represent Mr. K [redacted] 's earning capacity is a *lifetime* average, the average earnings for males with a college degree who are between ages 25 and 64. It is not meant to represent a figure that he can earn immediately. Consistent with the age-earning profile described above, he would earn less in his younger years and more in his advanced years. Since my analysis addresses his lifetime earnings, a lifetime average makes no net impact. (This is based on the total offset method performed by Dr. Clauretie for calculating present value.)

In assessing Mr. K [redacted] 's post-injury earning capacity and worklife expectancy, I considered the effects of his injuries and the impact that these limitations are likely to have on his capacity to work and earn money in the future. The impact of his injuries will make it more difficult for Mr. K [redacted] to find and maintain the types of employment usual for the average male with a college degree. Therefore, the most relevant estimates of Mr. K [redacted] 's earning capacity and worklife expectancy consider this critical change. Pre-injury estimates are based on averages for male college graduates without a work disability. Post-injury estimates are based on averages for male college graduates with a work disability, who nonetheless are capable of working year-around, full-time.

At the time of my original analysis in September 2002, it was my opinion that Mr. K [redacted] 's post-injury worklife expectancy was like that of an average male college graduate with a nonsevere work disability. In other words, a worklife expectancy for those who have a work disability but who are likely to work.

A second analysis was also conducted based on the possibility that Mr. K [redacted] 's condition will worsen. If this happens, he will have an even harder time finding and maintaining employment. For this analysis, it was my opinion that Mr. K [redacted] 's future worklife expectancy would be like that of an average male college graduate with any level of work disability.

The second analysis was based on my interview with Mr. and Mrs. K [redacted] last September. During the interview, they noted that they had been told that there was a possibility that Mr. K [redacted] would develop arthritis and experience decreased function in the future. Since that time, I have received additional medical records. One of these, an April 16, 2003, office note from Dr. M. Michael Robertson, states that Mr. K [redacted] has developed arthritis at multiple sites.

The two analyses of Mr. K [redacted] 's loss are based on a reasonable estimate of the range of his future functioning. Based on his actual experience in the future, his loss of lifetime earnings can be expected to fall somewhere between these two points.

3. Use of Statistical Averages

Defense argues that my analysis is inappropriate because it did not consider any information specific to Mr. K [redacted] , but instead restricted the analysis to a few variables that encompass huge groups of persons, using the average income and worklife expectancy of these large populations.

Affidavit of Gerald Casenave, PhD

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 post-injury earning capacity and worklife expectancy statistics used for Mr. K 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. K'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.

Defense's desire for impairment-specific data on earnings and 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 conducting my analysis on Mr. K, I considered the effect of impairment on Mr. K's future ability 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. 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 nonsevere work disability, should one use an average of all people or of males with a nonsevere work disability?

Based on Mr. K's status at the time of my original analysis in September 2002, I determined that he was like an individual with a nonsevere disability, as defined by the Census Bureau. In doing this, I excluded from consideration all of those people whose disabilities are severe or prevent them from working altogether. In this way, I applied to Mr. K only those statistics that are for people similar to him—those who have a work disability but are still able to work. For the second analysis, assuming his condition worsens, I determined that he would be like the average individual with a work disability. This range of worklife

Affidavit of Gerald Casenave, PhD

expectancies enables a more proper analysis of the range of possible lifetime effects of Mr. K's work disability.

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. I have the knowledge and experience necessary for performing such a calculation (see Attachment A).

FURTHER, THE AFFIANT SAYETH NAUGHT.

Gerald Casenave, PhD
Vocational Economic Analyst

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

Notary Public

My Commission Expires _____