

## 8 ECONOMIC LOSSES IN PERSONAL INJURY CASES INVOLVING PARTIAL DISABILITY

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### 8.1 Introduction

The past several chapters have focused upon economic loss calculations in wrongful death cases and in personal injury situations resulting in permanent and total disability. Personal injuries also lead to partial disability cases, in which the injuries have not eliminated earning capacity but have reduced the power to earn income in some degree.

Economic loss estimates in partial disability cases utilize many of the principles and techniques already discussed—for projecting wages and discounting, for estimating fringe benefits, and for calculating income tax effects. Yet, two streams of earnings, one for pre-injury earning capacity and one for post-injury earning capacity, usually must be projected and compared. The work of vocational experts may be required, differing treatment of work-life expectancy may be necessary, and other new issues emerge.

## 8.2 Major Approaches to Partial Disability Losses

### A. Use of Economist Only

Economists have been used to project as lost earning capacity the stream of discounted future earnings which could have been expected if the injury had not occurred. This projection is based upon the pre-injury track record of the individual, as would also be true in a wrongful death or permanent and total disability case. What about residual earning power after the injury? Especially where the injuries appear substantial, the plaintiff's attorney would argue to the jury that since such a low probability of post-injury earnings exists, they have been ignored. The economist is not really qualified to defend this assumption.

Alternatively, the economist may be asked to assume some lowered stream of post-injury earnings, such as minimum-wage-level earnings or average earnings in a particular vocation or locale. Economic loss is the difference between the present value of earnings had the injury not occurred and the present value of this residual earnings projection. Again, the economist is usually not qualified to defend the validity of a post-injury wage assumption.

This first approach saves money by minimizing the experts to be used and may lessen the complexity of explaining damages to the jury for the same reason. The major disadvantage is that a solid foundation for a projection of post-injury earning capacity has not been laid. Earning capacity in the absence of injury is not relevant *per se*. The real issue is the amount by which earning capacity has been *diminished* as a result of the injury.

### B. Medical Doctors With or Without Economists

Medical doctors may be used, of course, to say that little chance of post-injury work exists. Then, the plaintiff's attorney may either advance his own theory of the amount of losses or use an economist to project lost earning capacity as earning capacity in the absence of injury.

It has also been common for medical doctors to testify that the injuries have resulted in some percentage of physical disability of the body as a whole. Let us assume a 50 percent disability in a given case and further assume that an economist has estimated a \$400,000 present value of earning capacity had the personal injury not occurred. Can the economist then estimate lost earning capacity as \$400,000 times 50 percent, or \$200,000? Economists have, in fact, done so. We can find no logic in this approach, as a connection does not exist between the 50 percent disability pronouncement of the medical doctor and what earning capacity, given the injuries, will actually be. Projections from the world of medical science cannot be merged so simply with projections from the world of economics and labor markets.

By leaving out the vocational step, this approach may, again, save money and may appear to be straightforward. Yet, a foundation for establishing likely earnings given the particular injuries has not been adequately provided.

### C. The Vocational-Economic Approach

In most partial disability cases, it is the addition of a vocational/rehabilitation expert which resolves the major drawback of the first two approaches. This expert can review the reports of medical doctors and interview and test the client. He or she can combine this information with knowledge of requirements for various jobs in labor markets and the likely pay for such jobs. Thus, the vocational expert can

provide the economist with the data necessary to project a present value of earning capacity given the injuries, subtract this from earning capacity in the absence of such injuries, and arrive at the present value of economic loss.

The vocational expert can also estimate a necessary period of rehabilitation in certain partial, *temporary* disability cases. The economist will then know to close the stream of losses, whenever the injuries may be remedied and earning capacity is no longer diminished.

On the other hand, vocational experts have sometimes held themselves out as economists, despite their lack of training in mathematical and statistical techniques, wage and fringe benefit trends, price inflation, interest rates, and other areas. While the use of one expert to cover both vocational and economic calculations may appear to be an attractive option, a large “hole” exists in necessary proof when either vocational experts or economists stretch their expertise beyond reasonable limits. Such testimony is subject to legitimate attack.

The establishment of damage estimates with medical doctors, vocational experts, and economists is more expensive, time-consuming, and complicated than under the first two approaches or with only one damages expert covering two areas. It is also much more accurate and defensible. The sections which follow assume the use of a vocational-economic approach.

### 8.3 The Vocational Analysis

#### A. *One-Factor Vocational Report*

A sample vocational report is shown in Appendix 1 of this chapter. Traditional reports of vocational experts do not include the last three paragraphs of this sample. Rather, they focus upon one factor—the diminution of wages which can be earned when working—and ignore such factors as the diminished probability of actually working.

The vocational report in Appendix 1 returns to our Jack Doe example of the last several chapters, except that Jack is now assumed to have been injured rather than killed on February 14, 1989. The first several sections review data obtained by the vocational expert through interviews; medical reports; and tests of intelligence, manual dexterity and skills, etc. The work history of the plaintiff is outlined, along with mental, physical, and other requirements of the jobs performed prior to injury. The nature of injuries, as they relate to the range of jobs which can now be performed is then discussed. Keep in mind that if rehabilitation is possible in a temporary partial disability case, the report should outline when rehabilitation would be completed and the extent to which the ability to perform past jobs will be restored.

The specific information needed by the forensic economist appears in the third-from-the-last paragraph of Appendix 1, which would be the last paragraph if this were truly a one-factor vocational report. In such a final paragraph of a one-factor report, the vocational expert may first estimate pre-injury earning capacity. The economist may substitute his own judgment here. However, as in the example, the report states that pre-injury earning power is best represented by Mr. Doe’s actual earnings, so that the vocational expert has, in effect, yielded to the judgment of the economist. The important conclusion relates to the estimate of post-injury earning power, given the nature and extent of injury. The vocational expert will usually maintain a large data bank and will determine the jobs in the relevant labor market which can now be performed. He can then translate average wage data on this

range of jobs into a median earning potential for the injured plaintiff—\$400/week or \$20,800/year. The foundation has been laid for estimating a present value of post-injury earning capacity, given the extent and nature of the injuries.

#### B. *Two-Factor Vocational Report*

Appendix 1, excluding only the last paragraph, is an example of a two-factor report. The vocational expert has shown that diminished earning capacity does not encompass simply a drop in wage earnings potential from \$30,046 (See Chapter 3) to \$20,800 annually *when Mr. Doe works*. As an injured or disabled person, Mr. Doe may have less chance of working at any given time and earning his \$20,800 full-time-work potential.

Therefore, in the next-to-last paragraph shown in Appendix 1, the vocational expert discusses lowered probabilities of work force participation and employment for Mr. Doe, given his injuries. This is the second factor. The vocational expert has a data base, disaggregated by state and often by Standard Metropolitan Statistical Area, on work force characteristics of those who define themselves as having “a work disability.” This allows the expert in the sample case to compute a 38 percent participation rate, a 75 percent employment rate, and a 28 percent joint probability of participation and employment for average persons with disability. This is the all-disabled-person “PE” probability in terms of the “LPE” approach discussed previously.

The judgment of the vocational expert is then important as to whether the post-injury “PE” probabilities of the plaintiff are most like those of disabled persons, or of “all persons,” disabled or not, or somewhere in between. In the sample case, the vocational expert makes the specific judgment that Jack Doe’s post-injury probabilities of participation and employment are halfway (or at the 50th percentile) between those of average disabled persons and those of white males generally.

The addition of information on this second factor has been rare, perhaps because vocational and economic experts seldom talked with each other about work-life expectancy and other important matters. As will be seen, the second factor has a major potential impact on economic loss estimates.

### **8.4 Use of Vocational Report by Economist—Sample Case**

#### A. *Temporary Partial Disability*

The economist will first look to see if the vocational report envisions a rehabilitation program likely to ultimately restore the pre-injury workplace characteristics of the plaintiff. In the simplest case, the gap between earning capacity absent injury and earning capacity given the injury will close, and loss will cease, at a future time estimated in the vocational report.

In a less simple scenario, the vocational report will lead the economist to taper the lessening of economic loss over time to an ultimate elimination of loss. Or the vocational expert may have assigned probabilities to the likelihood of partial and complete rehabilitation. The economist might need to make a range of projections based upon these probabilities. It is also possible that complete rehabilitation will occur, but when the plaintiff is older and has lost seniority. Wage earning potential and/or employability factors may still be lower even with complete rehabilitation.

Whatever method of addressing temporary, partial disability is used, the

following issues of one- and two-factor calculations apply. These also apply to permanent, partial disability cases.

### B. *One-Factor Reports*

As the economist reviews the traditional report, he looks for the “bottom line” of hourly, weekly, or annual earning power absent injury and, especially, because of the injury. If the vocational expert has only talked in generalities about job limitations and has not produced specific dollar estimates, his report is of little use to the economist.

If a dollar estimate of pre-injury earning power has been made, the economist may or may not use this figure. The economist has the expertise, on his own, to look at a pre-injury earnings history and project a stream of earnings, assuming that the injury had not occurred. For this reason, the economist may request that the vocational expert not address this issue. On the other hand, in cases of minor children, or those with less well established earning histories, or those who just completed training programs prior to injury, the vocational assessment of earning power absent an injury may be very important and useful to the forensic economist in projecting the lump sum value of earning capacity, absent injury.

The vocational assessment of residual earning power, as a result of the injury, is always critical to the economist. This is the basis for the estimated present value of earning capacity, due to the injury, and for the differential between the two streams of earning capacity, which is net economic loss.

It should be noted that the economist prefers pre- and post-injury earning power estimates in dollars of the same year; therefore the year should be stated. He will then choose values for wage growth rates, discount rates, and fringe benefits. This is his area of expertise and not that of the vocational expert.

Appendix 2 is a comparative summary table of an economic report based upon the vocational report for Jack Doe (Appendix 1). With only a one-factor vocational report, the economist produces the \$149,636 economic loss estimate. He starts one earning capacity stream at the \$30,046 pre-injury figure (see Chapter 3); another stream at the \$20,800 post-injury figure; adds wage growth rates, discount rates, and fringe benefits; and assumes an end of work-life expectancy according to U.S. work-life expectancy tables or LPE tables. He has only considered the diminished earning capacity from lower earnings when Mr. Doe works. He may have used LPE-type probabilities to reduce pre-injury earnings levels for work-life expectancy, but how does he adjust post-injury earnings for LPE? The vocational expert has given him no help in differentiating pre-injury and post-injury work-life expectancy, either using U.S. work-life tables or under an LPE approach. The forensic economist, therefore, does not assume any lowering of work-life expectancy due to injury. Yet, it doesn't seem likely that Mr. Doe's P and E probabilities with his disabilities will be as high as those for average white males.<sup>1</sup>

### C. *Two-Factor Reports*

When the vocational report refers to the factor of lower earnings as well as the

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<sup>1</sup> See James W. Marlin, Jr., “*Estimating Monetary Loss Due to Personal Injury*,” *JOURNAL OF FORENSIC ECONOMICS*, May 1988, pp. 1-18 for a traditional approach that does not emphasize the vocational/economic interface nor deal with post-injury differences in work-life expectancy and other factors.

factor of reduced employability, then the economist can logically add the second factor of a reduced post-injury work-life expectancy to his estimate of economic loss.

To arrive at the two-factor \$33,670 net loss shown in Appendix 2, the forensic economist has lowered pre-injury earning levels to reflect LPE probabilities for average white males. In the next-to-last paragraph of Appendix 1, the vocational expert has given him a 28 percent PE probability, or that for average disabled persons. The vocational expert has further said that Jack Doe's post-injury LPE is halfway between this post-injury probability (the economist can add a normal "L" adjustment) and the post-injury LPE of average white males. The economist projects a \$221,362 present value of earning capacity using the 28 percent PE and an "L" adjustment and then adjusts the post-injury projection of a \$20,800 earning capacity by the LPE for average white males. Halfway between these two figures is the \$405,397 post-injury earning capacity. This is subtracted from the pre-injury earning capacity of \$739,067 to derive a net economic loss of \$333,670 in Appendix 2 under the two-factor technique. This is \$184,034, or 123 percent greater than economic loss under a one-factor technique. If Mr. Doe's injuries had left him at the 28 percent all-disabled average of PE probabilities, then the net economic loss would have been \$517,705, or 246 percent greater than the loss under a one-factor technique.<sup>2</sup>

#### D. Beyond Two-Factor Analyses

In the last paragraph of the sample vocational report (Appendix 1), the vocational expert has made general comments about other effects of Jack Doe's injuries upon post-injury earnings and household services compared to the pre-injury situation. Quantifying these effects in a form that can be used by forensic economists is a fertile area for future research and discussion. The potential exists for vocational and economic reports to interface on five or more factors in calculating economic losses due to partial disability. These factors are further identified in the next section.<sup>3</sup>

### 8.5 Other Issues in Calculating Partial Disability Economic Losses

#### A. Earnings Growth Rates and Discounting

The economist may simply increase the post-injury annual earning power estimate for either nominal or real wage growth by the same factor used to increase pre-injury annual earnings (absent the injury). However, the plaintiff may have been increasing his real wages, or purchasing power, before injury at an annual rate above, and maybe far above, averages for "all workers." The pre-injury earning power should usually be increased at this average annual growth rate, based upon the plaintiff's own track record absent injury.

Yet, the injury may have reduced the ability of the plaintiff to increase his

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<sup>2</sup> See Michael Brookshire, et. al., "Assessing Damages in Cases of Partial Disability Through Use of a Vocational/Economic Assessment of Work-Life Expectancy," TRIAL (February 1987), pp. 44-48. Also, see Anthony M. Gamboa, Jr., et. al., "Worklife Expectancy and Disability," JOURNAL OF FORENSIC ECONOMICS (April 1989), pp. 29-32, for an attempt by vocational experts at LPE-type work-life tables for disabled persons. It should be remembered that vocational experts should provide information to the economist on the work-life effects of specific injuries on a specific person. This input to the economist should be in a format that he can use in combination with his analysis of such variables as wage growth rates, inflation, and discount rates.

<sup>3</sup> Everett Dillman, "Interfacing the Economic and Vocational in Personal Injury Cases," JOURNAL OF FORENSIC ECONOMICS (April 1989), pp. 55-76, also provides useful information on the economic and vocational interface but focuses on the two factors of wage level and work-life expectancy differences.

post-injury earnings at so fast a rate. The economist might legitimately use an "all worker" historical average of real wage growth for the post-injury earnings stream, or even a zero rate of real wage growth. This would depend upon the facts of the particular case. In any event, the gap in pre- and post-injury earning power increases because of the difference in earnings growth rates, and net economic loss therefore increases. This is a "third factor" which may be quantified by vocational experts and forensic economists.

On the other hand, interest rates used in discounting to present value are derived from financial markets, rather than from pre- and post-injury differences in earnings streams. Defense attorneys should become suspicious if different (and higher) interest rates are used to discount post-injury earnings streams. Discount rates for each future year should be the same.

#### B. Fringe Benefits

Employer contributions to fringe benefits, as a percent of wages, can also be held the same as applied to pre- and post-injury projections of wage earning capacity. Such an assumption more commonly results in a conservatively low, rather than a liberally high, estimate of economic loss.

For example, let us assume the case of a person who, before injury, worked for a large national company. Employer contributions to fringes were 25-30 percent of wages. Assume that because of the injury, the plaintiff no longer works for this company and probably will not do so in the future.

If the injured person has an estimated wage earning power and expected employability (PE) on the general labor market, it may be unrealistic to assume that his fringe benefits will be as high as when he worked for the high-benefit employer. In the worst case, he can expect only legally-required fringe benefits. Or a national average of employer contributions to fringe benefits can be used.

To the extent that post-injury fringe benefits are less than pre-injury benefits, economic loss becomes greater. The increase can be significant. After all, loss is the difference between pre- and post-injury streams of both wages and fringe benefits. This "fourth factor" may also be quantified by forensic economists.

#### C. Household Services

Chapter 5 indicates that the value of household services is calculated by multiplying the hours of expected service to others by some valuation of each hour. Partial disability may reduce the hours of service given to the household, however they might be valued (see Chapter 5).

This potential area of economic loss has generally been neglected. Yet, in cases of significant physical injuries, and perhaps mental or emotional injuries, the family may lose more than what is expressed in earnings loss calculations. The economist may ask the family for pre-injury and post-injury estimates of average hours of non-labor-market work benefiting the household. Increasingly, vocational experts may aid in these assessments of the diminution of household work capabilities.<sup>4</sup> The economist would again develop pre- and post-injury streams of

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<sup>4</sup> See Tierney, et. al., "Addressing the Value of Household Services Through a Functional Vocational Analysis," JOURNAL OF FORENSIC ECONOMICS (May 1988), pp. 93-102. Again, vocational experts must provide a format for their opinions on a diminution of household services that can be used by the forensic economist. Vocational experts go beyond their expertise when they project growth rates of replacement wages or select discount rates, for example.

economic value, and economic loss would be the present value of the difference in the two streams. This might be considered a “fifth factor” affecting the amount of economic losses due to injury.

As an aside, the \$333,670 economic loss estimate for Jack Doe in Appendix 2 was, indeed, a two-factor estimate. If the vocational expert and economist had developed a sound justification for post-injury differences in wage growth, fringe benefits, and household services, then net economic loss would rise due to the consideration of these third, fourth, and fifth factors.

#### *D. Medical and Related Costs*

Medical costs are commonly estimated as part of the economic report, as was detailed in Chapter 6. In the case of partial disability, insured medical costs not paid by the plaintiff generally cannot be defended as this is part of his pre-injury fringe benefits and he has not lost this money. Yet, any costs incurred for non-insured, related items or for comfort related to the injury may be “costed” by the economist. And any rehabilitation costs not covered by other parties are definitely an area of recovery, especially if they lead to attaining a post-injury earnings stream that partially offsets the pre-injury earnings stream.

#### *E. Personal Consumption and Collateral Sources*

Personal consumption is a death case issue. The survivor only loses what the deceased would have brought in less what he would have spent only on himself. The personal consumption deduction is not relevant in partial disability cases. Loss is restored to the pre-existing family, all of whom consume.

The collateral source rule precludes deductions from loss estimates for payments from third parties not connected with the death or injury. It should simply be noted that instances do exist where injured parties receive disability or other payments which reduce economic loss, perhaps substantially, as the difference between income received absent injury and income received given the injury. Relaxations of the collateral source rule, or more jurisdictions rejecting this rule, can only reduce economic loss estimates and awards (see Chapter 11).

## **8.6 Testimony**

### *A. Plaintiff's Side*

The plaintiff's economist should carefully review the second section of this chapter. While use of the first two approaches or of only one type of expert to establish partial disability damages may save him time and money, he is very vulnerable to straightforward attacks on the credibility of the loss estimate.

Given this, the testimony of the vocational expert must *clearly* provide the base data which is later used by the economist—post-injury annual earnings and PE probabilities for example. Moreover, the vocational report should not contain generalities with which neither the plaintiff's attorney nor the economist can deal.

Vocational/rehabilitation experts concentrate upon the rehabilitation of handicapped persons. Economists need the probabilities of overcoming any work disabilities—but they need hard, precise judgments. We have seen vocational experts who will testify that the plaintiff has certain reduced wage and employability



characteristics, but then add their “hope” of recovery. The vocational expert must deal with facts and probabilities in testimony.

The economist early in testimony makes clear what data he has taken from the vocational expert and how it has been used in deriving his numbers. As previously stated, the vocational expert and economist may ultimately collaborate on five or more factors in earning capacity that an injury has affected. Because a chain of numbers from multiple experts is involved, it may be even more important to use blow-up charts as demonstrative evidence.

Finally, the plaintiff’s attorney may emphasize conservative assumptions if they exist. For example, did the economist keep post-injury fringes just as high as pre-injury, and did he ignore lowered household service hours or wage growth rates? Did he only consider the single factor of lower wage earnings when working?

#### B. *Defense Side*

The second section of this chapter gives ample directions for attacking any partial disability estimate based upon the first two approaches or when one expert is stretching to cover two separate areas of expertise. If these approaches are attempted, experienced economists can provide excellent questions for cross examination. Clearly, no one has provided a sound foundation for net economic losses, and perhaps post-injury earning capacity is no less than pre-injury. This can and does happen, by the way, when the person has the skills to retrain and produce an equal or better earnings stream than existed before the injury.

In fact, a vocational expert for the defense may be willing to testify to post-injury earnings levels and PE probabilities not much less than, equal to, or even greater than pre-injury. Since the publication of the two-factor technique in 1987,<sup>5</sup> we have sensed that some vocational experts automatically assign the disabled plaintiff to the low PE probabilities of average disabled persons. The two-factor technique allows the vocational expert to direct the economist toward *any* reduction in PE probabilities below those of average persons. A defense vocational expert may justify a small reduction in PE probabilities, and this will lead to a much lower estimate of net economic loss than an unjustified use of probabilities for average disabled persons.

Defense vocational and economic experts may also point to problems with self-definitions of disability. They may discuss recovery rates from specific injuries and the possibilities that retraining may eliminate or reduce economic losses after a reasonable retraining period. It may be shown that the individual’s LPE probabilities were below average even before the disability. Similarly, a normal PE pattern by the plaintiff after the injury contradicts any assumptions about a diminished work-life expectancy.

A fundamental attack can focus on the string of plaintiff witnesses—medical doctor-vocational expert-economist. They all build upon each other. The defense may, on the one hand, make the endless stream of connecting data seem hopelessly confusing. It may also point out that each expert depends upon the correctness of the estimate of the previous expert. If one mistake, or weak link, in the “chain” appears in testimony, the defense attorney will attempt to make the jury believe

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<sup>5</sup> Brookshire, *op. cit.*

that none of the testimony on damages is credible.<sup>6</sup>

### **8.7 Conclusion**

Partial disability estimates of economic loss are based on the same economic fundamentals discussed before. Yet, traditional estimates of loss have not adequately captured the true economic loss in many of these cases. The proper treatment of post-injury work-life expectancy, fringe benefits, and other variables should remedy these difficulties.

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<sup>6</sup> Note that experts, in situations where alternative foundations of their testimony seem probable, will be ready with alternative estimates.

**APPENDIX 1****SAMPLE VOCATIONAL REPORT IN PARTIAL DISABILITY CASE**

February 16, 1990

Mr. Michael R. Smith  
Attorney at Law

Re: Mr. Jack Doe

Dear Mr. Smith:

On February 15, 1990, I had the opportunity to meet with Jack Doe. Mr. Doe is a slightly overweight white male who presented himself for evaluation to determine his residual functional capacities to sustain himself in work activity, and secondarily, to assess any occupational or financial losses the patient may have sustained due to injuries that he suffered on February 14, 1989. Mr. Doe presented himself as a cooperative individual who was noted to be ambulating with a stiff gait, and wearing a back brace at the time of interview. He sat very erect, occasionally arising and walking in order to alleviate pain.

Mr. Doe is a 35-year-old male who was born on September 11, 1953 in Kenton County, Kentucky. He has an eighth grade education. He has no vocational training, nor military experience. The client indicates he is married and has two children, ages fourteen and twelve.

He relates a good childhood, indicating he got along well with his brothers and sisters. They had a close family, his father was employed as a construction worker, his mother a housewife. Neither parent is alive. At the present time, he resides with his two children and wife in a single family home.

**Employment History**

Vocationally, the client indicates he has worked for the past 15 years as a carpenter, both rough and finished, and most recently was performing the work of a journeyman carpenter for the Messer Construction Corporation. At the time of injury on February 14, 1989, Mr. Doe was engaged in volunteer work for a local hospital. While carrying a sheet of plywood, Mr. Doe fell several feet. He was treated at the University Hospital and has had 3 major surgical procedures. One was a fusion of the spine with the placement of Harrington Rods in his back resulting in a second hospitalization in July of 1989, with discharge on August 2, 1989, and a third hospitalization approximately four months later with a fusion for the removal of the rods on November 22, 1989. The patient was initially treated by Dr. Bridwell and presently receives medical treatment from Dr. Hopson.

The client's vocational history implies that he performed heavy work of a skilled nature requiring an occupationally significant combination of the following: Ability to learn and apply craft techniques, processes, and principles; ability to use independent judgment in planning sequence of operations and in selection of proper tools and materials; ability to assume responsibility for attainment of prescribed qualitative standards; ability to apply shop mathematics to practical problems, such as computing dimensions and locating reference points from specifications data.

when laying out work; spatial perception to visualize arrangement and relationships of static or moving parts and assemblies represented in blueprints and diagrams; form perception as required in such activities as inspecting finished work to verify acceptability of surface finish; and some combination of finger and manual dexterity and eye-hand coordination to use hand tools and manually controlled power tools when executing work to close tolerances.

### **Medical History**

The medical records indicate the patient has sustained a rather significant injury to his lower back resulting in no motion in the lumbar spine. In addition, he has constant pain which occurs in both the right and left legs. It is generally the opinion of the medical community, including his treating physicians Dr. Bridwell and Dr. Hopson, that the client would be unable to return to his past relevant work as a carpenter or to any other kind of strenuous work. More directly, it is assumed the client is restricted from any type of activity requiring bending or twisting at the waist and would be unable to lift or carry over 10 lbs., with no repetitive lifting or climbing up and down stairs or ladders.

He continues to receive medical treatment from the University Hospital through Dr. Hopson, who, on last examination, found the patient to have reached his maximum level of recovery, indicating he felt the client sustained serious injury and would be unable to engage in any activity above a sedentary level.

### **Psychological Assessment**

On examination, the patient appears as a 6'2" individual weighing 220 lbs., wearing glasses. He could follow both written and oral communication. He indicated he dropped out of school early in his life in order to get a job to help the family. He has not returned to school, but indicates a desire to finish a G.E.D., or to enter into some type of technical program. His outside activities include, basically, working around the yard and fishing, which have been greatly restricted due to his physical losses.

From an intellectual standpoint, the client was able to tell me the current President of the United States, as well as the last 3 in order. He had no problem doing a serial 3 or 7 subtraction from 100. He could name three states that border the State of Kentucky. He knew the direction from Los Angeles to New York but had trouble knowing the direction of Brazil to Chicago. He could not estimate the population of the United States. His judgment was intact, he had no problem in responding to common proverbs and his overall intellectual content appeared to be that of a person in the dull normal to average range.

In order to determine his residual functional capacity to sustain himself in work activity he was tested using the General Aptitude Text Battery (GATB), as well as the Self Directed Search (SDS).

The General Aptitude Text Battery (GATB) is an aptitude test consisting of twelve subtests yielding nine aptitude scores believed necessary to perform work. Scores are reported in stanines ranging from one, lowest, to nine, highest. Scores of one, two, and three are considered below average; four, five, and six are average; and seven, eight, and nine are above average. The client's scores are as follows:

<u>APTITUDE</u>	<u>STANINE</u>
General Learning	6
Verbal	4
Numerical	5
Spatial	6
Perceptual	6
Clerical	3
Motor Coordination	3
Finger Dexterity	1
Manual Dexterity	1

The results of the GATB indicate there has been a reduction in the overall coordination and dexterity areas, which would be anticipated of an individual having sustained the types of injuries that Mr. Doe has sustained. In addition, it indicates that he has a high degree of spatial and perceptual ability, as well as general learning ability to qualify him for work, both in the semiskilled and, to a certain extent, skilled area, or a technical area.

The Self Directed Search (SDS) is a vocational interest test which measures a person's occupational interest by use of a personality profile. Theoretically, an ideal occupational match would be one where an individual's personality and the job profile personality are the same. There are six such personality types: Realistic, Investigative, Artistic, Social, Enterprising and Conventional. Scores are given in groups of three so that possible blends of various occupational types may be considered. The client achieved a letter code of RSC.

Individuals with the same or similar letter code as Mr. Doe perform in the following jobs: Chair Upholsterer, Conductor, Excavator, Mail Handler, Press Operator, and Rigger.

It is important to note that the previous work experience of Mr. Doe was in the Realistic area and he continues to express the same or similar interests at his current level, although he is greatly restricted by his physical impairment. Realistic occupations generally require a good deal of physical activity to perform and, therefore, Mr. Doe will have increasing difficulty being able to make the transfer from his past work as a carpenter to future occupational choices.

Mr. Doe's "pre-injury" earning capacity is best represented by his own history of wage and fringe benefit earning capacity. Because of his injuries, he is reduced by physical capacity and by past testing to semiskilled and, to some extent, skilled work, of a technical, sedentary nature based upon information provided by his doctors and by the testing that took place during the course of my interview. At this time, Mr. Doe has sustained an eighty-three percent (83%) occupational loss in comparison to his pre-injury functional abilities. More directly, individuals in the Metropolitan area performing the same or similar work to that for which Mr. Doe presently qualifies are making a weekly salary rate of \$400.00 based upon 1985 dollars.

The power to earn money is a reflection of a person's ability to not only perform work, but also to participate in the labor force. These characteristics are often expressed by the employability of an individual and in his participation rate. In the Cincinnati Standard Metropolitan Area, there are 64,521 individuals who are self-reported as being disabled. Of that number, 24,529 are presently in the labor

force; 6,236 are currently seeking employment and are presently unemployed, and an additional 33,763 find themselves no longer in the labor force. Some 6,000 individuals are in the labor force but not prevented from working. This has resulted in an employment rate for disabled individuals in the Standard Metropolitan Area of Cincinnati of .75, a participation rate of .38, and a combined or joint probability of employment and participation of .28.

Further examination of the data presented by Mr. Doe, and based upon the testing, examination, and medical restrictions provided, it is my professional opinion that Mr. Doe is now halfway between the participation/employment probabilities of disabled persons and those probabilities for "average" white males at his future ages.

Finally, Mr. Doe's rate of annual earnings growth is likely to be lower in "post-injury" jobs that would have occurred in the absence of injury. Employer contributions to his fringe benefits may be less in the post-injury range of jobs. Mr. Doe's weekly hours of household services for his family have also been affected, and reduced, as a result of his injuries.

Sincerely,

Vocational Expert, Ph.D.

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SOURCE: Adapted from vocational report of Dr. George Parsons, Associates for Psychological Resources, Cincinnati, Ohio.

**APPENDIX 2****SUMMARY OF THE PRESENT VALUE OF ECONOMIC LOSS  
IN THE PARTIAL DISABILITY CASE OF JACK DOE****With One-Factor Analysis of Wage Differences Through an End of Working Life**

	Pre-injury Earning Capacity	\$739,067
<b>Less</b>	Post-injury Earning Capacity	<u>589,431</u>
	Net Economic Loss	\$149,636

**With Two-Factor Analysis Including Worklife Expectancy Differences Under  
LPE Approach**

	Pre-injury Earning Capacity	\$739,067
<b>Less</b>	Post-injury Earning Capacity	<u>405,397</u>
	Net Economic Loss	\$333,670

