

Valuing Earning Capacity: The Pennsylvania Case Law Perspective and with
Consideration of Part-Time Work

James D. Rodgers
Professor Emeritus
Penn State University
237 Timberton Circle
Bellefonte, PA 16823-9070
Phone: 814-355-4944
Cell: 814-571-4425
Fax: 877-420-7617
Email: jdr@psu.edu

December 12, 2014, 10:25 a.m.

Prepared for presentation at a session of the National Association of Forensic
Economics (NAFE), Allied Social Science Associations, Boston Marriott Copley Place,
January 3-5, 2015, Boston, MA.

Draft: Please do not quote without permission.

Valuing Earning Capacity: The Pennsylvania Case Law Perspective and with Consideration of Part-Time Work

James D. Rodgers¹

The purpose of this paper is to offer some comments and reflections about the paper by Stephen Horner and Frank Slesnick, “Latent Capacity: When Earning Capacity is Not Expected Earnings,” draft, 2014 (H-S 2014). I will first re-state the definitions of actual earnings, earning capacity, expected earnings and latent capacity. I will then discuss a recent exchange about the earning capacity appearing on one of the list services for forensic economists. Next I will present an example of the computation of latent capacity in a hypothetical case using Pennsylvania damage rules. Finally, I will pose a question about the use of male earnings data as a possible method of allowing for inclusion of latent capacity in the computation of the loss of earning capacity of an injured female child.

1. Definitions from Horner-Slesnick

Using the words of the 1999 Horner/Slesnick paper (H-S 1999), “Actual earnings are what a person actually earns, expected earnings are what the person is *expected* to earn, while earning capacity is what the person is *able* to earn.” (p. 13, italics in original) In other words, expected earnings are what the person *would most likely* have earned and earning capacity is what the person *could* have earned. The context for each of these three earnings concepts is not a single year but an entire working life. These definitions were elaborated upon as follows:

¹ Rodgers is Professor Emeritus of Economics, Penn State University

Actual earnings "...is a series of outcomes of a complex stochastic process involving the interaction of a person's abilities and preferences and the needs of employers." (p. 14). This makes actual earnings a random variable. Only past actual earnings can be observed; future actual earnings, as the outcome of a single trial of a random process dependent on chance and choice, as well as the person's ability and skill, cannot be observed or predicted with certainty.

Expected earnings "...is the series of earnings figures which are the expected values of the actual earnings in the corresponding time periods." (p. 14) The expected values of the process producing the actual earnings are not directly observable, even in the past. And since the probability distributions giving rise to actual earnings are not known, expected earnings cannot be computed as could be done for the expected value of a simple random process (e.g., flip of a coin, toss of dice). Economic experts often treat an average of past earnings, expressed perhaps in constant dollar terms, as an estimate of expected earnings. For such an average to estimate expected earnings, a requirement is that the stochastic process producing the distribution of outcomes must be stationary, and that requires the factors governing the distribution—the person's abilities, opportunities to exercise these abilities, and preference ordering over the various opportunities--to be stable. Lack of stability in any of these factors would cause the distribution to be non-stationary. For example, a divorce or disability of her spouse can shift the preference ordering of a full-time homemaker over these opportunities to make employment in the paid labor force much more attractive. Predicting such changes in preferences makes projecting expected earnings more difficult than

projecting earning capacity, which in the definition put forward by Horner and Slesnick is not dependent on a person's preferences.

“Earning capacity is the expected earnings of a worker who chooses to maximize the expected present value of long-term expected earnings.” (H-S 2014, p. 1) Earning capacity is like expected earnings in that both depend on the probability of various earnings outcomes, but earning capacity is “...not usually affected by voluntary, non-binding choices made by the worker.” (H-S 1999, p. 15). The difference between expected earnings and earning capacity can be illustrated by the example of the homemaker. An estimate of her expected earnings would have to take into account the probability of her returning to the labor force. If earning capacity is the standard of loss, rather than expected earnings, then the computation of her loss would not depend on the probability of her returning to the labor force, whereas these probabilities would need to be estimated if the standard of loss was expected earnings. In an interesting footnote, the use of earning capacity as a standard of loss is also described as a way of preventing inequitable results. Suppose, for example, that damages are awarded to an injured full-time homemaker based on an expected earnings standard. If subsequently she becomes divorced or her husband becomes disabled, the preferences of the woman would have shifted toward wanting to re-enter the labor force, with a corresponding increase in her expected earnings. But after the trial, the case cannot be reopened. An earning capacity standard would have resulted in a larger award to be to better insure against this type of eventuality.

The courts require that earning capacity estimates be based on reliable evidence—a prominent component of which is the person’s earnings history. However, the earnings history is also a prominent component of the evidence that is used to estimate expected earnings. According to H-S, this leads to the misconception that expected earnings is the court’s true standard of loss, even though “earning capacity language” is used in court decisions.

“**Latent capacity** is defined...as the difference between earning capacity and expected earnings, and can only exist when a person is expected to earn less than his or her earning capacity...latent capacity only exists when a decision has been made to accept reduced earnings less than the person is able to earn at the time.” (H-S 2014, p. 1). Perhaps the most pervasive examples of latent capacity are provided by persons who, because of family considerations, decide to give up careers to be homemakers, or who choose to take less-demanding jobs with lower pay so that there is more time-flexibility to deal with family matters, or who choose to work part-time for family reasons (e.g., being home when the kids arrive home from school in the afternoon).

2. Recent List Service Discussion Regarding Earning Capacity

During December 2014, a discussion occurred about the meaning of statements about earning capacity in a Louisiana Court of Appeals (First Circuit) decision. In Graham v. Offshore Specialty Fabricators, Inc. and Cashman Equipment Corporation (37 So. 3d 1002 (2010)), the court states (p. 1016) as follows:

“An award of loss of future income is not based on the difference between a plaintiff’s earnings before and after a disabling injury. Rather, the award is predicated on the difference between a plaintiff’s earning capacity before and after a disabling injury. Damages may be assessed for the deprivation of what the injured plaintiff could have earned, despite the fact that he may never have seen fit to take advantage of that capacity. The theory is that the injury done him has deprived him of a capacity he would have been entitled to enjoy even though he never profited from it monetarily.”

A debate ensued on one of the list services regarding the way the last two sentences of the court’s statement should be interpreted. In his initial posting Jim Rodgers argued that the sentences meant that the jury was being instructed to assess what the plaintiff could have earned and award that number, ignoring any adjustment for a less-than-one probability—or even zero probability---that it would have actually been earned.

Gary Skoog offered the alternative interpretation that the statement gives the jury permission to consider what might be termed the option value of working, which might not have been exercised in the past and may or may not be exercised in the future. Using this interpretation, economists should not assume with certainty that the present value of lost wages will occur. If the stream is computed, the economist should say that this lost wage figure should be multiplied by the probability the option would have been exercised and that the probability is: 1) what the economist says it is, if such probability can be defended, or 2) what the jury deems the probability to be. This situation is similar to the lost value of life or general damages in that the element is compensable but the economist may not be able to value it validly and reliably. In regard to the Rodgers interpretation of the statement’s meaning, Skoog indicated that because the word “damages” appears instead of “the present value of an income stream assuming the

worker would have started working on the accident date,” the interpretation that he offers is also viable and much more likely to put the plaintiff in the economic state he/she would have enjoyed but for the accident.

David Tucek indicated that the most straightforward interpretation of the quoted opinion is only that a loss of earning capacity has occurred, but with no guidance whatsoever on how that loss should be measured. Hence, it is incorrect to interpret the opinion as saying that the probability of the loss should not be considered, or, alternatively, that it should be considered. Tucek goes on to suggest that a valid measurement methodology should put the plaintiff in the position he would have been in otherwise, to the extent possible, with no *ex ante* expectation of under- or overcompensation. He agrees therefore with Skoog’s suggestion for how the loss should be measured, even though that suggestion does not flow from the opinion.

Rodgers responded to Tucek’s post by indicating basic agreement with the standard he proposed, but noting that it could be difficult to calculate the dollar amount needed to compensate for the loss of an option to enter the labor force. Rodgers contrasted the situation where a person had an accident only days before a job was to begin with a situation where the injured person had no plans to enter the labor force at the time of the injury and had recently received a large inheritance. Tucek responded that situations where there is extreme difficulty in estimating the relevant likelihoods should be handled by presenting two alternative estimates, in effect (I am paraphrasing now) one with latent capacity included and another with latent capacity excluded, letting

the jury sort what to award based on the two damage scenarios and other evidence.

Doing this would fulfill our duty to inform the jury as best we can.

Damage analysis and computation based on case and statute law is full of ambiguities because the guidance provided is often vague and capable of alternative interpretations. Without clearer guidance about what the various courts mean, there will be disagreements among forensic economists. The definitions offered by H-S imply that latent capacity should be included in economic damages, whereas the standard offered in the foregoing exchange by Skoog and Tucek would exclude latent capacity by setting earning capacity equal to expected earnings. The argument by Skoog and Tucek that an earning capacity standard carries with it an *ex ante* expectation of over-compensation deserves further examination. One consideration is attorney fees, which reduce the plaintiff's compensation by a third or more in virtually every case. Juries may use awards for pain and suffering or other noneconomic damages to offset attorney fees but the prevalence and certainty of such offsets is unknown. Another consideration is the comfort and confidence the forensic economist has in his or her own estimates. This confidence comes from doing good work that is balanced and objective and from knowing that the damage rules in the relevant jurisdiction are being followed. Where a clear-cut set of rules exist, the expert can be confident in his or her estimates that follow these rules even if the rules embody bad economics (e.g., the Pennsylvania rule that allows a productivity factor to be added while requiring the assumption that the discount rate and the inflation rate are equal). The degree of comfort and confidence the forensic economist has in his or her damage estimates may vary inversely with the size of the

latent capacity contained in those estimates. However, in such cases, the Tucek approach of presenting two alternatives, one with latent capacity included and one without it, can restore that comfort and confidence.

3. Computing Latent Capacity in a Sample Case with Pennsylvania Damage Rules

The article by Robert Thornton (2014) in this session finds the earning capacity language in Pennsylvania court decisions to be ambiguous, sometimes mentioning earning capacity as what the plaintiff **could** have earned, but more often as what the plaintiff **would** have earned, and sometimes using both of these words in close proximity. There is no need to repeat Bob's excellent review here. My goal in this section will be to compute latent capacity in a hypothetical situation.

Suppose a married woman named Mary Smith graduates from college with a bachelor's degree at age 23 in 2009. Assume that she works for two years after receiving her degree and earns the median earnings of females of all races in her education-age cohort working a full-time, year-round (FTYR) job. She then gives birth to a child, Beth, at age 25. As a consequence, she decides to withdraw from the labor force until Beth enters the first grade at age 6. A period of three years elapses, after which Mrs. Smith (at age 28) is involved in a 2014 traffic accident and suffers a brain injury that renders her permanently and totally disabled.

What is Mary Smith's latent earning capacity? For concreteness, I will assume that pre-accident, she had annual money earning capacity equal to that of females of all races aged 25-29 with a bachelor's degree working FTYR. For simplicity, this assumption gives her credit for the two years of work experience she gained before she became a mother, rather than having her start over with zero years of work experience. Based on the latest edition (2013) of *Full-time Earnings in the United States*, p. 20, median annual earnings are \$42,185. During the three years between the date of the accident and when Beth reaches age 6, Mrs. Smith would have had zero expected (and actual) earnings but annual earning capacity of \$42,185, so her latent capacity for the three-year period would be computed as $3 \text{ years} \times \$42,185 = \$126,555$. (The computation ignores any increase in earnings between the earnings in 2013 and 2014 and applies Pennsylvania damage rules, such that future earnings increases arising from inflation are ignored and the discount rate is assumed to offset the inflation rate; furthermore, age-earnings increases are also ignored during this interval). At the end of three years it is assumed that, but for the brain injuries in the accident, Mrs. Smith would have resumed working, as planned, when her daughter started school. After her return to work, it is assumed that annual expected earnings = annual earning capacity, with zero additional latent capacity loss; hence, the total latent capacity loss is \$126,555.

4. Do Differences in Earnings Data for Men and Woman Reveal Anything About Latent Capacity?

I will conclude with an idea that I would like to develop more fully at a later time. If a female child is injured severely and suffers a loss of earning capacity, the computation of the lifetime loss of earning capacity must necessarily be based on earnings statistics. In a paper by Corcione and Thornton, work life expectancies for women were criticized for being biased downward because the data on which such tables are based include a greater prevalence (compared to men) of voluntary choices² to withdraw from participation in the labor force (or limit such participation) to attend to family responsibilities. One possible solution suggested in the article was to use **male** work life expectancies in place of female expectancies, based on the notion that men (more nearly than women) have a single goal (maximizing expected earnings), whereas women endeavor to balance career and family responsibilities and in so doing make choices that give rise to reduced work life expectancies.

The same voluntary choices leading to a downward bias in female work life expectancy statistics also may lead to a downward bias in the level of annual female FTYR earnings and the proportion of women in the labor force who work full-time, as compared to those working part-time and/or part-year. Thus, using an earning capacity standard in estimating the losses to an injured female child may require using **male** earnings data to compensate for the voluntary choices females make that result in earnings below those that maximize the expected present value of long-term expected earnings. If an earnings capacity standard is required by the courts, the merit of the use of male earnings data for projecting female earning capacity deserves further study and consideration.

²As noted in H-S 1999, voluntary choice in the context of social and family pressures may not be really "voluntary." However, that is a topic for another time.

References

Corcione, Frank and Robert Thornton, "Female Work Experience: Voluntary Versus Involuntary Labor Force Activity, *Journal of Forensic Economics*, 2 (4), 1991, pp. 163-74.

Expectancy Data, *Full-time Earnings in the United States: 2013 Edition*. Shawnee Mission, Kansas, 2014.

Horner, Stephen and Frank Slesnick, "The Valuation of Earning Capacity - Definition, Measurement and Evidence," *Journal of Forensic Economics*, 12 (1), 1999, pp. 13-32.

_____, "Latent Capacity: When Earning Capacity is Not Expected Earnings," paper presented at the NAFE Sessions at the ASSA Meetings, Boston, MA, January 3, 2015.

Thornton, Robert, "Demystifying Earning Capacity and Expected Earnings: A Pennsylvania Perspective," paper presented at the NAFE Sessions at the ASSA Meetings, Boston, MA, January 3, 2015.

Graham v. Offshore Specialty Fabricators, 37 So 3d 1002 (Court of Appeal of Louisiana, First Circuit, 2010).