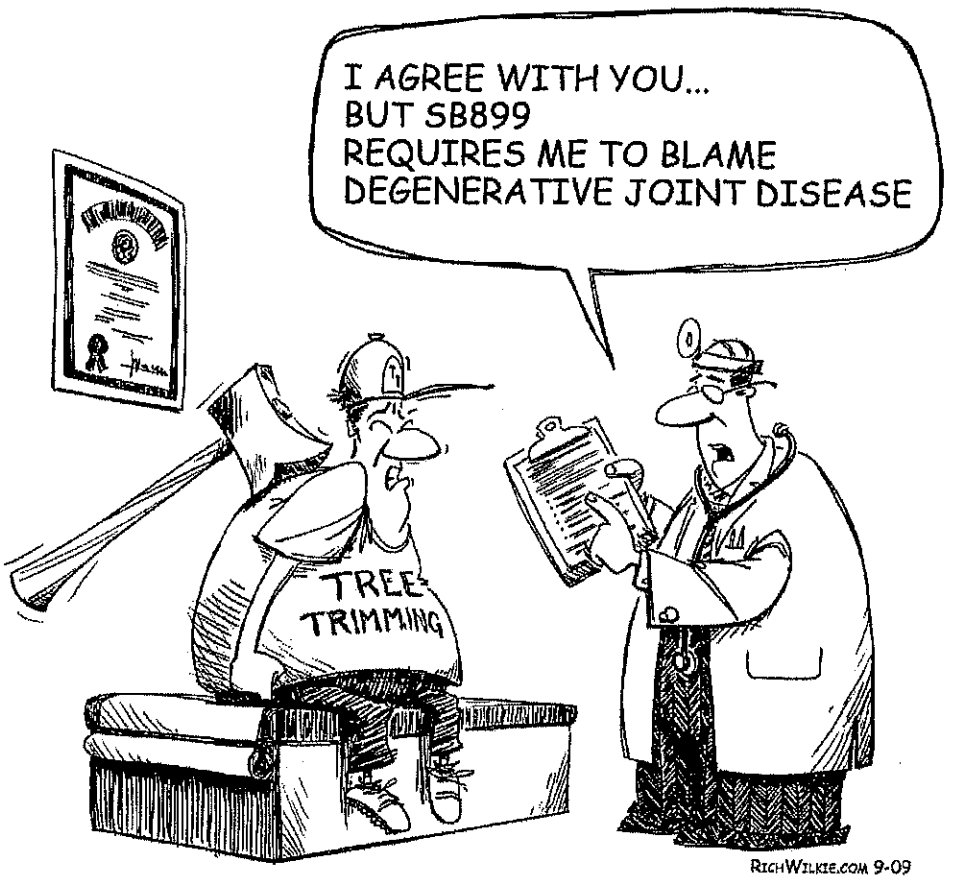
Challenging illegal apportionment –

5 approaches



It is common for physicians to offer an opinion regarding apportionment, but what is the basis for the opinion? Are they apportioning to a medical condition? Are they apportioning impairment? Are they apportioning disability? Are they even qualified to assess all the dimensions of disability?

There are many reported cases on apportionment, but the outcomes are very different despite an apparently "similar" record. Without knowing the actual facts of each reported case, and the degree to which the physician adhered to acceptable medical and legal analysis, it is impossible to identify common themes and issues.

This outline offers five approaches to consider pursuing when faced with conclusionary "apportionment" opinions, and some sample deposition questions to get you started.

APPROACH #1 – CHALLENGE THE ANALYTICAL PROCESS

In order to meet the substantial evidence requirements of the law, a physician must not use illegal theories in his or her attempt to apportion. (Escobedo v Marshalls 70 CCC 604, Granado v WCAB 33 CCC 647, v WCAB 33 CCC 358, People v Bassett 69 Cal2d 122). As stated in Yeager Construction v WCAB (Gatten) 71 CCC 1687:

> "To constitute substantial evidence regarding apportionment, a medical opinion should disclose the physician's **familiarity with the concepts of apportionment, describe in detail** the nature of the apportionable disability, and **set forth the basis** for the physician's opinion so that the Board can determine whether he or she is properly apportioning under the **correct legal principles**." (Emphasis added.)

Even when a physician is familiar with apportionment concepts, the physician must still provide a detailed explanation of "how and why apportionment is justified.

First, apportionment is unjustified when the physician fails to explain "how and why" the preexisting factor caused the current disability. (See Kinley v Orange County Dept. of Ed. 72 CCC xv (Noteworthy Panel Decision), San Mateo County Transit District v WCAB (Reddy) 73 CCC 438, Coca Cola Bottling v WCAB (Saucedo) 71 CCC 279, Grossmont Hospital v WCAB (Powell) 71 CCC 85, Sierra Bible Church v WCAB (Clink) 72 CCC 21, Fry's Electronics v WCAB (Moghadam) 72 CCC 13, Gibson v Mendocino Solid Waste Management Authority 72 CCC xiii (Noteworthy Panel Decision), Yellowhair v Hair Masters 73 CCC xiii (Noteworthy Panel Decision), Vaira v WCAB 72 CCC 1586 – unpublished.)

Second, many physicians feel they "must" apportion because the "law requires them to" – even in the absence of a record to support it. However, a physician cannot assign an arbitrary apportionment percentage simply out of "fairness". (*Zemke v. Workmen's Comp. Appeals Bd., supra,* 68

Cal.2d at pp. 798, 800; *Berry v. Workmen's Comp. Appeals Bd.,* 68 Cal.2d at pp. 790-791; *Callahan v. Workers' Comp. Appeals Bd.,* 85 Cal.App.3d at p. 630.)

Finally, LC §3202.5 mandates that defendant prove apportionment by a **preponderance of the evidence.** Remember, although physicians are permitted to "approximate" the percentage of disability, that is not an excuse for the approximation to be based on surmise, speculation or guess. (Hegglin v WCAB 36 CCC93; Place v WCAB 35 CCC 525; Zemke v WCAB, supra, 33 CCC 358; Granado v WCAB 33 CCC 647.)

Sample deposition/advocacy letter questions:

- *What is your understanding of how LC §4663 applies in this case?*
- *Can you explain how you analyzed the facts in this case to arrive at your apportionment percentages?*
- *With regard to the prior factor, what facts did you rely on in this case to conclude it is more likely than not that the prior factor is causing work restrictions/functional loss/impact to ADL?*
- *What information in your chart/report reveals the process by which you analyzed apportionment in this case?*
- *What process are you using now?*
- *Why wasn't the prior factor causing work restrictions/functional loss/ADL impacts before the industrial injury? What changed?*
- *Is the absence of prior limitations significant? Why?*
- *If the industrial injury never occurred, what was the likelihood, in terms of a percentage, that the prior factor would have caused work restrictions/functional loss/impact to ADL? Do you have any studies to back that up? Are you familiar with studies that state otherwise?*

APPROACH #2 – UTILIZE AMA *GUIDES* PRINCIPLES

The Board recognizes that the *Guides* play a central role in analyzing impairment, and the effect of an industrial injury on ADL's and function. Chapters 1 and 2 of the AMA *Guides* must be considered when analyzing impairment. (Almaraz/Guzman II, page 25 -"Chapter 1 discusses the philosophy, purpose and appropriate use of the Guides"; See also Footnote 31.) Remember, physicians are experts in analyzing impairment and limitations. (LC §4061(i), 2005 PDRS, pgs 1-2.)

Likewise, in the context of analyzing what factors caused impairment versus which did not, the AMA *Guides* Section 1.6b outlines a very specific approach (bolded text and "Notes" are added):

> "1.6b **Apportionment analysis**
> **Apportionment** analysis in workers' compensation represents a distribution or allocation of causation among multiple factors that **caused or significantly contributed** to the injury or disease and resulting impairment. The factor could be preexisting injury, illness, or impairment. In some instances, the physician may be asked to apportion or distribute a permanent impairment rating between the impact of the current injury and the prior impairment rating. Before determining apportionment, the physician needs to verify that **all** of the following information is true for an individual: **(Note: One is not enough!)**
>
> "1. There is **documentation** of a prior factor. " **(Note: Defendant must meet the substantial evidence requirement.)**
>
> "2. The current permanent impairment is greater as a result of the prior factor (i.e., prior impairment, prior injury, or illness). **(Note: Is the prior factor playing any role? What evidence of prior impairment is there? What studies support opinion?)**
>
> "3. There is evidence indicating the prior factor caused or contributed to the impairment, **based on a reasonable probability** (> 50% likelihood)." **(Note: LC §3202.5.)**

The AMA Treatise "Guides to the Evaluation of Disease and Injury Causation" states:

> "It is often difficult to quantify preexisting impairment. In many cases, symptoms and limitations were not adequately documented, required measurements not made, and sufficiently specific diagnosis or procedures were not listed"..... "**apportionment is not warranted when only one probable cause exists, even if there are other possible causes.** If there is **no evidence of**

preexisting evaluation or treatment for or disability or impairment due to the condition in question, apportionment is probably not indicated." (pg. 70 – emphasis added.)

Sample deposition/advocacy letter questions:

- *Do you believe DJD was a prior factor? Do you have any documentation of it? How does it affect your analysis when DJD was not producing any known limitations?*
- *With no previous documentation that the prior factor produced any limitations itself, do you agree it is only a possible cause, rather than the probable cause, of the current work restrictions/functional losses/ADL impacts?*
- *Do you agree that you are only qualified to assess impairment and not all the components of disability? (i.e., FEC, occupation, age, diminished future earnings capacity, etc.?)*

APPROACH #3 – DISTINGUISH CAUSE OF INJURY AND CAUSE OF DISABILITY

The law recognizes that there is a vast difference between the existence of a previous injury/condition, and whether it caused disability. Too often, the assumption is that, if a pre-existing condition existed, it "must" have caused "disability". You should challenge a physician's apportionment "analysis" based on such speculation, because it violates assessment principles in the AMA *Guides* (discussed above) and California law.

The *en banc* decision in *Escobedo, 70 CCC 604* established that the analysis of what produced the injury is different than what produced the disability, stating:

> **"The issue of the causation of permanent disability, for purposes of apportionment, is distinct from the issue of the causation of an injury.** (See *Reyes v. Hart Plastering* (2005) 70 Cal.Comp.Cases 223 (Significant Panel

Decision).) Thus, the percentage to which an applicant's *injury* is causally related to his or her employment is not necessarily the same as the percentage to which an applicant's *permanent disability* is causally related to his or her injury. **The analyses of these issues are different and the medical evidence for any percentage conclusions might be different.**" (Emphasis added.)

For example, the Board rejected a physician's attempt at apportionment based on "risk factors," stating:

> "As noted in Escobedo, 'the percentage to which the applicant's injury is causally related to his or her employment is not necessarily the same percentage to which an applicant's permanent disability is causally related to his or her injury. **Dr. Anderson is apportioning to a risk factor for injury as the cause of the applicant's injury and not to his disability.**'" (United Airlines v WCAB (Milivojevich) 72 CCC 1415 – Emphasis added.)

The linkage between the existence of an *abnormality* (due to DJD, prior injury, etc) in a joint, and that pre-existing abnormality actually producing functional losses is not nearly as clear as some believe.

In fact, there are many scientific studies on numerous body parts that have concluded that there is very little if any relationship between degenerative joint disease and symptoms. Here are just a few studies that relate to the spine and knee joints.

In the January/February, 2008 issue of "The Spine Journal", a brief overview of evidence-informed management of chronic low back pain with surgery was provided by Angus S. Don, FRACS and Eugene Carragee, MD which stated:

> "However, such findings are also common in cross-sectional studies of asymptomatic populations [22, 23]. **It is therefore impossible to draw conclusions between findings of common degenerative changes on imaging and patient complaints of CLBP.** Imaging findings are also not able to identify those at risk of developing CLPB **because DDD on MRI in asymptomatic subjects is not predictive of experiencing LBP** and previous MRI scans are unlikely to detect changes in disc protrusion, annular fissures, high-intensity zones, or end plate signal changes with repeated MRI [25]." (Emphasis added.)

In the January/February 1996 issue of The Journal of Computer Assisted Tomography, an article called "Cervical and Lumbar MRI Asymptomatic Older Male Life-long Athletes Frequency of Degenerative Findings", the author's concluded: **"The incidence of lumbar degenerative changes in our study of population of older male athletes was similar to those seen in other populations."** (Emphasis added.)

In a seven-year follow-up study entitled "The Value of Magnetic Resonance Imaging of the Lumbar Spine to Predict Low Back Pain in Asymptomatic Subjects", researchers at the Emery Spine Center of Georgia concluded the following: **"The findings on magnetic resonance scans were not predictive of the development or duration of low back pain, individuals with the longest duration of low back pain did not have the greatest degree of anatomical abnormality in their original 1989 scans.** Clinic correlation is essential to determine the importance of abnormalities on magnetic resonance imaging." (Emphasis added.)

In the March 15, 2003 issue of Spine, an article entitled "Associations between back pain history and lumbar MRI findings" was published. The authors concluded:

> "Those findings raise new questions about the underlying mechanism of low back pain. The sensitivities of the only significant MRI parameters, disc height narrowing and annular tears are poor, and these findings alone are of limited clinical importance."

In the November 2008 Spine Journal (Spine, 2008: 33(23):2560-2565), the conclusion was **that no association between facet osteoarthritis and low back pain was seen in this study of 3529 participants.**

Similarly, studies of the knee joint yield similar findings.

In the June 2000 Journal of Rheumatology, (JRheumatology, 2000 Jun, 27(6): 1513-7, in a study entitled "Analysis of the discordance between radiographic changes and knee pain in osteoarthritis of the knee," it was determined:

"CONCLUSION: **Substantial discordance exists in this population based study between radiographic OA of the knee versus knee pain, versus a diagnosis of arthritis by a physician.** These phenomena may be important in the design of clinical research studies, as well as in criteria for OA." (Emphasis added)

In a study entitled "MR imaging findings in the follow-up of patients with different stages of knee osteoarthritis and the correlation with clinic symptoms," EU Radiol (2006) 16:608-618 concludes:

"It should be noted, however, that OA-related changes visualized with MRI **are not strongly associated** with clinical findings as assessed by WOMAC scores, but provide a useful therapeutic hallmark." (Emphasis added.)

Sample deposition/advocacy letter questions:

- What is the difference between injury/condition and disability?
- Do you agree that the DJD can be a normal, age related process?
- Have you personally been part of any scientific studies that examine whether the existence of DJD affects function/ADL 's?
- Are you familiar with studies that have determined that there is little, of any, correlation between DJD and function/ADL's?
- You have identified DJD in this case – is that one of the conditions present at the time of this injury? Did it pre-date the applicants' employment? To what degree did it exist? Was it producing work restrictions/functional losses/ADL impacts by itself?
- Would you agree that it is speculative to state when DJD could cause functional/ADL impacts, if ever?
- Would you agree that before this industrial injury (specific/CT) it would have been impossible to predict the degree in which my client would have DJD at this time?

- In light of your opinion, would you agree the DJD is not producing any work restrictions/functional losses/ADL impacts **in and of itself** today?

- Is it possible now to determine to what degree the industrial injury affected the DJD? Would you agree that is would be speculative for you to separate the degree in which the two are interacting? Would you agree that the industrial injury (specific/CT) is the event that is producing all or all/most of the current work restrictions/functional losses/ADL impacts?

- Let's look at the actual record in this case. You took a history that my client was a warehouse worker, lifting furniture each day before the injury. He also played baseball on once a week. Would you agree that it is likely (greater that 50%) that the industrial injury is the reason he now has work restrictions/functional losses/ADL impacts?

- Hypothetically, if you had an opportunity to examine this patient before the industrial injury, and were given the history of the physical abilities they were able to do without limitation, would you agree that you would not have given them a work restriction/impairment rating?

- Given the fact that the DJD was causing no known previous work restrictions/functional losses/ADL impacts, would you agree that the industrial injury is likely the primary cause of the current limitations?

- By what factual process did you assign percentages of apportionment? What facts did you consider?

- Do you feel that you HAVE to apportion some of the impairment/disability in this case? Why?

APPROACH #4 – ESTABLISH INEQUALITY

Even when a physician attempts to apportion permanent disability, the WCAB is precluded from deducting the apportionment from the applicant's permanent disability award under certain circumstances.

For example, apportionment based solely or exclusively on race, age, gender may constitute a form of discrimination prohibited by Government Code §11135(a). (Asher v Pactiv Corp. 73 CCC xxiv (Significant Panel Decision); see also Seabright Insur. Co. v WCAB (Fitzpatrick) 36 CWCR 32 –unpublished, Vaira v WCAB 72 CCC 1586 – unpublished.)

Government Code §11135(a) states:

> **(a)** "No person in the State of California shall, on the basis of **race**, national origin, ethnic group identification, religion, **age, sex**, sexual orientation, **color,** or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state." (Emphasis added.)

Bias by the examiner can have a significant impact on the medical reporting in your case. For example, in a review of the AMA *Guides* 3rd Edition, a Harvard Law Review article (103 Harv. L. Rev. 964):

> "The Guides is partly responsible for this potential for biased application of the impairment guidelines. First, the book's vagueness about its underlying criteria permits an individual practitioner's own perspective to frame the inquiry about relevant life activities. **Second, the book's examples give at least implicit and possibly direct encouragement to evaluating women and men according to stereotypical assumptions.**" (Emphasis in the original.)

Certainly, in the context of the apportionment analysis offered by a physician, one should be vigilant to what degree bias may be playing a role in the formulation of opinions on apportionment.

Sample deposition/advocacy letter questions:

- Would you agree that it is speculative to state that age alone produced the limitations in this case?

- Do you believe that every 50 year old deserves apportionment regardless of the facts of the case?
- Do you believe that everyone with osteoporosis deserves apportionment?
- Do you believe that every (insert race here) deserves apportionment?
- Would you agree that it is impossible to separate the osteoporosis/age related changes in this case from the limitations caused by the industrial injury?
- Would you agree the osteoporosis/age represents a risk factor in this case? In other words, the osteoporosis/age made the applicant more susceptible to injury, correct?
- Is osteoporosis more common in women than men?
- What limitations are directly caused by osteoporosis/age? What facts/literature do you rely on?
- How did you separate the effects of age/osteoporosis from the industrial factors? Are there any studies that support your method of separation? Wouldn't you agree it is not possible to separate the factors without speculating?
- With regard to my client's pre-injury activities, what assumptions did you make about what she was capable of physically doing? Were you aware that she competed competitively as a bowler before the industrial injury? Why didn't you ask?
- Did you weight the risk factors in this case differently because of my client's race? How?

APPROACH #5 – ESTABLISH THE LIMITS OF THE PHYSICIAN'S EXPERTISE

LC §4663 requires apportionment of *disability*, not impairment. As discussed above, just because a physician determines that both industrial and non-industrial factors produced the ***impairment*** does not necessarily establish a basis for apportionment of ***disability***.

As stated in Almaraz/Guzman II and Ogilvie II, the calculation of *disability* is determined based upon multiple elements (Almaraz/Guzman II *en banc* pgs.19, 26 and 27, Ogilvie II *en banc* pgs. 7 and 8). However, most physicians will readily admit that they have no expertise in evaluating the non-WPI components of the elements of disability, yet will attempt to "carry through" the *impairment* analysis in the *disability* analysis, ignoring the major difference between the two concepts.

For example, in County of Los Angeles v WCAB (LeCornu), *medical* apportionment was **not** carried through to the final disability rating:

> "In reaching the 96% permanent disability rating, **the disability evaluation specialist followed the requirements of Labor Code section 4663 and apportioned to applicant's non-industrial disabilities, as outlined by the AMEs. However, he did not also factor in the applicant's "diminished ability to compete in an open labor market.**" This diminished ability constitutes an additional factor which was directly caused by applicant's industrial injury. It falls within the WCJ's discretion to consider this factor in determining the final permanent disability rating." (Emphasis added.)

Since the new LC §4660 requires that an "employee's diminished future earnings capacity" is to be considered in determining *disability,* the record should be made clear that the physician is not qualified to address this consideration, and an issue arises any time a physician attempts to ignore the critical distinction between impairment and disability.

Sample deposition/advocacy letter questions:

- *Do you know the elements of disability? What are they?*
- *Do you claim any expertise in how future earnings capacity, occupational and age considerations relate to the disability analysis?*

- *Are you are familiar with Section 1.2 of the Guides that discusses the difference between the two concepts?*
- *You did an impairment evaluation in this case, not a disability evaluation, correct?*
- *You do not have any expertise in evaluating how the industrial injury affected my client's earnings capacity, correct?*
- *While you have determined that there is medical apportionment in this case, you agree that you do not have the expertise to determine how your apportionment findings should affect the final disability rating, correct?*
- *Your opinions regarding apportionment only relate to WPI, correct?*

Medical Resources for Use in Addressing Apportionment Issues

(These articles and resources were accumulated from a variety of sources and are by no means exhaustive of this complicated issue. They can be used as a guide for additional research depending on the facts of your case.)

1. FLAWED PROMISES: A CRITICAL EVALUATION OF THE AMERICAN MEDICAL ASSOCIATION'S GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT, Harvard Law Review, February 1990 Book Review, Ellen Smith Pryor. (attached)

2. THE TWIN SPINE STUDY: CONTRIBUTIONS TO A CHANGING VIEW OF DISC DEGENERATION, The Spine Journal 9 (2009) 47-59, Battie, Videman, et. al. (attached)

3. A BRIEF OVERVIEW OF EVIDENCE-INFORMED MANAGEMENT OF CHRONIC LOW BACK PAIN WITH SURGERY, The Spine Journal 8 (2008) 258-265, Don, Carragee. (attached)

4. FACET JOINT OSTEOARTHRITIS AND LOW BACK PAIN IN THE COMMUNITY BASED POPULATION, Spine, Volume 33, number 23, pp 2560-2565, Kalichman, et. Al. (attached)

5. LUMBAR DEGENERATIVE DISK DISEASE, Radiology, Volume 245, Number 1 (October 2007), Modic, Ross. (attached)

6. Reference Manual on Scientific Evidence: http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/$file/sciman00.pdf

7. There are numerous scientific studies on numerous body parts that have concluded that there is very little if any relationship between degenerative joint disease and symptoms. Below are some examples:

a. January/February, 1996, CERVICAL AND LUMBAR MRI ASYMPTOMATIC OLDER MALE LIFE-LONG ATHLETES: FREQUENCY OF DEGENERATIVE FINDINGS, The Journal of Computer Assisted Tomography. The author's conclusions were as follows: "The incidence of lumbar degenerative changes in our study of population of older male athletes was similar to those seen in other populations.

b. In a seven-year follow-up study entitled "THE VALUE OF MAGNETIC RESONANCE IMAGING OF THE LUMBAR SPINE TO PREDICT LOW BACK PAIN IN ASYMPTOMATIC SUBJECTS", researchers at the Emery Spine Center in Georgia concluded the following: "The findings on magnetic resonance scans were not predictive of the development of duration of low back pain. Individuals with the longest duration of low back pain did not have the greatest degree of anatomical abnormality in their original 1989 scans. Clinic correlation is essential to determine the importance of abnormalities on magnetic resonance imaging."

c. In the March 15, 2003 issue of Spine, an article entitled "ASSOCIATIONS BETWEEN BACK PAIN HISTORY AND LUMBAR MRI FINDINGS" was published. The authors' conclusions were as follows: "These findings raise new questions about the underlying mechanisms of low back pain. The

sensitivities of the only significant MRI parameters, disc height narrowing and annular tears are poor, and these findings alone are of limited clinical importance."

d. In the November, 2008 Spine Journal (Spine, 2008:33(23):2560-2565), the authors concluded that there was no association between facet osteoarthritis and low back pain seen in this study of 3529 participants. Conclusion: There is a high prevalence of Facet Joint OA in the community. Prevalence of FJ OA increases with age with the highest prevalence at the L4-5 spinal level. At low spinal levels women have a higher prevalence of lumbar FJ OA than men. In the present study, we failed to find an association between FJ OA, identified by multi-detector CT, at any spinal level and LBP in a community-based study population.

8. PubMed Search Materials (attached)

a. MAGNETIC RESONANCE IMAGING OF THE LUMBAR SPINE IN PEOPLE WITHOUT BACK PAIN, New England Journal of Medicine, 1994 Jul 14:331(2)69-73, Jensen, et. al.

b. MAGNETIC RESONANCE IMAGING OF THE THORACIC SPINE. EVALUATION OF ASYMPTOMATIC INDIVIDUALS, J Bone Joint Surg Am 1995 Nov; 77(11); 1631-8, Wood, et. al.

c. THE RELATIONSHIP BETWEEN THE MAGNETIC RESONANCE IMAGING APPEARANCE OF THE LUMBAR SPINE AND LOW BACK PAIN, AGE AND OCCUPATION IN MALES. Eur Spine J. 1997; 6(2);106-14, Savage, et. al.

d. THE VALUE OF MAGNETIC RESONANCE IMAGING OF THE LUMBAR SPINE TO PREDICT LOW BACK PAIN IN ASYMPTOMATIC SUBJECTS: A SEVEN YEAR FOLLOW-UP STUDY, J Bone Joint Surg Am 2001 Sep; 83-A(9); 1306-11. Borenstein, et. al.

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Book Review

*964 FLAWED PROMISES: A CRITICAL EVALUATION OF THE AMERICAN MEDICAL ASSOCIATION'S GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT

Guides to the Evaluation of Permanent Impairment. Edited by A. Engelberg [FN1]. Chicago: American Medical Association. 1988. 3rd ed. Pp. xii, 254. $45.00.

Ellen Smith Pryor[FN2]

Despite its medical authorship and seemingly technical subject, the American Medical Association's *Guides to the Evaluation of Permanent Impairment* deserves the careful attention of the legal community. Quietly but surely, this publication has come to play a dominant role in numerous compensation programs. For example, in recent years state after state has adopted the *Guides* as a standard for determining entitlement to workers' compensation benefits. [FN3] Perhaps more importantly,***965** efforts to rate or schedule the effects of injury or disease will grow increasingly significant as the compensation debate continues to look favorably on replacing or drastically modifying the tort system. [FN4] As the dominant existing version of such a rating system, the *Guides* assumes an importance beyond its current use. The recent publication of an expanded and revised third edition [FN5] offers an opportunity to give this book the inspection it deserves and has not yet received.

I argue that the *Guides* is not the objective, medical evaluative system that it purports to be and that has been so appealing to legislators and other decisionmakers. Instead, like any impairment rating scheme, it rests in large part on important and difficult normative judgments. Yet the *Guides* obscures this from the reader; ***it is laden with hidden or poorly explained value judgments that frequently are gender-biased.*** The *Guides'* flawed promises of objectivity are especially troubling because they appeal to the craving of legislators and other decisionmakers for certainty and clarity in the difficult arena of impairment and disability assessment. [FN6] By uncritically embracing***966** the *Guides,* these decisionmakers delegate significant normative decisions to the book's medical authors.

This Review consists of three Parts: in Part I, I briefly describe the *Guides'* system. In Part II, I criticize several of its authors' key claims: that the book's system is objective and purely medical, and that evaluations made according to the *Guides* are accurate and reproducible. In addition, I explain that the book poorly identifies its underlying criteria. Finally, in Part III, I discuss those aspects of the book that are useful and defensible.

I do not contend that the effort to produce impairment ratings systems is implausible or useless. Indeed, in many contexts, such systems are justifiable. [FN7] In addition, not all the problems associated with use of the *Guides* stem from the book's own failings. The legal community frequently has misapplied the *Guides*; lawyers and judges often have misunderstood the consequences that may flow from injury or disease and the available methods of measuring those consequences. [FN8] But the *Guides'* own flawed promises, which help motivate and shape the legal community's adoption and use of the book, also deserve serious examination.

I.

At its outset, the book defines impairment as an "alteration of an individual's health status that is *assessed by medical means,*" (p. 2, emphasis in original) in contrast to disability, which is an alteration in one's capacity to meet personal, social, occupational, or legal demands, and "which is *assessed by nonmedical means*" (p. 2, emphasis in original). [FN9] The book does not purport to evaluate disability; instead, it sets out

"rules" (p. 1) for measuring impairments resulting from injury or disease to virtually all bodily systems. [FN10] Each chapter from Three to Thirteen relates to a different bodily system. For example, a knee injury falls under the coverage of Chapter Three ("The Extremities, Spine, and Pelvis"). The chapter explains how to ***967** measure the knee impairment (evaluate flexion and extension with a goniometer) (p. 59); includes a chart that translates this data into "% Impairment of [the] Lower Extremity" (p. 61); and in turn translates this lower extremity impairment into "Impairment of [the] Whole Person" (p. 65). The rules in Chapter Six ("The Cardiovascular System") apply to a person with heart disease. A 15-25% whole-person impairment rating results if an individual has a history of myocardial infarction; has no symptoms while performing ordinary daily activities; may require medication or moderate dietary adjustment; and is able to perform an exercise test with certain findings (pp. 126-27).

These examples illustrate several points about the *Guides'* system. First, some but not all of the system-specific chapters include rules that can generate what I will term "organ-level" impairment ratings, such as the degree of impairment to the knee. Second, all of these chapters set out rules for arriving at a whole-person impairment rating. Third, some of the chapters, such as the cardiovascular system chapter, base the final whole-person rating on findings by the practitioner that include an assessment of how the patient performs daily living activities. By contrast, other chapters, such as the chapter that covers knee injuries, require findings (such as range of motion) that do not include ability to carry on daily activities. The *Guides* suggests that the whole-person rating is the most meaningful one: it "espouse[s] the philosophy that ... all impairment ratings should be combined to be expressed as impairment of the whole person" (p. xviii). Hence, the book's primary rating objective is to generate a whole-person impairment percentage that represents the impairment consequence of injury or disease to virtually any bodily system. [FN11]

II.

A. Objectivity and the Medical Nature of Impairment

Chapter One ("Concepts of Impairment Evaluation") presents the

principles and definitions that are central to the *Guides.* The chapter states that the user "must understand the concepts under which the 'rules' have been developed and the intended approach for using them to achieve objective, accurate, fair, and reproducible evaluations of individuals with medical impairments" (p. 1). Impairment, the chapter emphasizes, is a "medical matter" (p. 2), a "medical condition" (p. 6), a "medical fact" (p. 4), and is "*assessed by medical means* " (p. 2, emphasis in original). The book continues to stress the importance of ***968** Chapter One's concepts - virtually all the system-specific chapters begin by admonishing the reader to review those concepts.

The claims of objectivity and of the ratings' purely medical nature are deeply flawed. To understand why, one must explore the nature of impairment in more detail than the *Guides* provides. As the medical and rehabilitative literature makes clear, impairment is a meaningful concept at both the organ or system level and at the whole-person level. [FN12] For example, a knee injury may reduce the knee's functioning or scar its appearance, and also may reduce the person's ability to carry out integrated, whole-person-level activities, such as walking, bending, or dressing. The medical and rehabilitative literature, particularly that of recent years, provides many methods of measuring or classifying impairment at both the organ and whole-person levels. [FN13]. Measures of organ-level impairment are based on comparisons between healthy and non-healthy appearance and function. As to whole-person impairment, most measurement methods take the form of "activities of daily living" (ADL) scales. [FN14] These scales evaluate a person's ability to carry out activities that are deemed relevant to the measurement.

This vast literature on measurement, at least implicitly, makes a critical point: it is impossible to define and measure impairment (both organ and whole-person level) except in relation to some norm. [FN15] Hence, any organ-level impairment evaluation requires (1) a decision about what organ-level qualities (*e.g.,* range of motion) are relevant to the measurement, and (2) a decision about what degree of that ***969** quality will serve as the norm. Similarly, a whole-person impairment evaluation requires (1) a decision about what activities or qualities are relevant to the measurement, and (2) a decision about what levels of ability will serve as

the norm.

The need for these decisions dooms the *Guides'* claims that its impairment evaluation scheme is objective and purely medical. These claims seem most appealing with respect to some organ-level impairments, such as those to the orthopedic extremities, where one might argue that a basic consensus exists on the qualities that should serve as the norm (such as range of motion). But even this argument does not justify the *Guides'* claims of objectivity and of its medical nature. Disagreement over the relevant norms is possible even for organ-level impairments. For example, the *Guides* usually does not consider chronic pain for purposes of an impairment arising from injury or disease to the extremities (pp. 37, 244). This may be a defensible choice, but it is neither a consensus view nor a purely medical decision. [FN16] In addition, the chief aim of the *Guides* is to generate whole-person ratings; even if consensus on organ-level ratings did exist, its value to the scheme would be limited. [FN17]

As to the whole-person ratings, both judgments necessary to the measurement - the relevant activities and the ability norm - are normative. Deciding which activities to count requires a value judgment about which activities are important or necessary to the person, or which activities are significant enough to warrant inclusion for compensation purposes. Hence, unsurprisingly, surveys of various ADL scales have found that only a few activities are common to all. [FN18] Measuring one's ability to perform a selected activity also requires a normative judgment: what level of ability to feed or clothe oneself, to walk, to play sports, or to have sex reflects the appropriate measurement norm?

Many of the book's examples and guidelines confirm that the ratings have a normative foundation: a strain of gender bias is frequently*970 evident. For example, in the reproductive system chapter, an impairment of the penis results in 5-10% whole-person impairment when "sexual function is possible, but there are varying degrees of difficulty of erection, ejaculation, and/or sensation" (p. 196). By contrast, the criteria for evaluating impairment of the vulva-vagina make it clear that a 0% whole-person impairment rating can result if "symptoms ... do not require continuous treatment," "the

vagina is adequate for childbirth" during premenopausal years, and "sexual intercourse *is possible*" (p. 199, emphasis added). [FN19]

Examples in other chapters include a woman who "led a normal life caring for three children and her home" (p. 137); a woman who remained "able to do kitchen work, go shopping, and drive an automobile" (p. 139); a woman who remained "able to care for her house" (p. 128); a woman who was "able to do light housework" but did not wish to return to "her work as a seamstress" (p. 124); a woman who experienced increased "breathlessness during daily activities such as climbing stairs, mopping, or cleaning" (p. 132); and a woman who was "able to perform household duties" (p. 193). By contrast, examples of impairments of men include a man who "was an active participant in sports" (p. 138); a man who was "unable to participate in activities such as tennis and hiking" (p. 132); and a man who was able to play "18 holes of golf regularly" (p. 123). [FN20]

These passages have several implications. At a minimum, they establish that any whole-person measurement requires normative and not uncontroversial judgments about the activities or abilities that should matter for purposes of the measurement. They also illustrate that gender bias affects the *Guides'* system at two levels. The first is in the system's selection of the activities or abilities that count for purposes of arriving at the whole-person impairment ratings. Because, as I explain below, [FN21] the book does not adequately enunciate these underlying criteria, it is difficult to document gender bias at this level. **But the reproductive system guideline that omits consideration *971 of a woman's sexual sensation is simply the most obvious example of how differing world perspectives may lead to different choices of relevant abilities or activities.**

Gender bias also influences the *Guides* at another level: the stereotyped activity examples reveal the ratings rules' susceptibility to biased application. To realize why, one must understand the roles that ADL measurements play in the *Guides*. The examples related earlier - the knee injury and heart disease - can illustrate the two different ways that ADL measurement is used. As to the knee injury, the *Guides* provides initial measurement guidelines that do not require the practitioner herself to make

an ADL assessment. Instead, the measurements that must be obtained relate to organ-level qualities such as range of motion. The book then provides tables that translate the organ-level data into the whole-person impairment rating. Although the book does not so state, these ratings must rest on the *authors'* assessment of how the measured losses (*e.g.*, range of motion loss) affect the person's ability to carry on activities of daily living.

By contrast, the chapter on the cardiovascular system shows that bias is also possible when the *physician* must make an ADL assessment. As to injuries covered by this chapter, the practitioner's initial evaluation of the patient - before arriving at the *Guides'* whole-person rating - requires, among other measures, at least a rough assessment of the individual's ability to perform daily living activities. To determine the whole-person impairment of a person with a history of myocardial infarction, the practitioner must assess whether the patient has symptoms while performing ordinary daily activities as well as make various physical findings. The *Guides* then translates this evaluation into a whole-person impairment rating between 15% and 25%. Hence, in some but not all chapters the practitioner's initial data-gathering calls for some form of ADL assessment.

The stereotyped activity examples show that gender bias can play a role whenever the practitioner must make some sort of ADL assessment. Suppose, for example, that a practitioner performs an impairment evaluation on a female patient with heart disease who was previously active in athletics. If the physician's image of a woman's typical daily activities corresponds to or is actually informed by those in the book - cleaning, mopping, taking care of her house, sex without sensation - she might not inquire about and evaluate the condition's effect on athletic activities. The patient thus will receive an impairment rating that does not take account of this functional loss. By contrast, when evaluating a male patient the practitioner might well include reduced athletic capacity.

The *Guides* is partly responsible for this potential for biased application of the impairment guidelines. First, the book's vagueness about its underlying criteria permits an individual practitioner's own perspective to frame the inquiry about relevant life activities. **Second, *972 the book's**

examples give at least implicit and possibly direct encouragement to evaluating women and men according to stereotypical assumptions.

Given the normative nature of the judgments on which a ratings scheme depends, a book such as the *Guides* should clearly identify its underlying choices and criteria. But the book does not do so. Chapter One never plainly states that the book's whole-person ratings essentially reflect ADL measures; instead, the chapter's definition of impairment omits any reference to activities of daily living. [FN22] The glossary contains a definition of activities of daily living (p. 235), [FN23] but it leaves far too many questions unanswered. First, the specification of certain activities does not make clear what the activities include. For example, the glossary lists sexual function as an activity of daily living, but defines it as having "normal sexual function and participating in usual sexual activity," without further specifying what constitutes "normal" or "usual" sexual activity (p. 235). Second, it seems doubtful that the ratings system is solely governed by the glossary's list of activities. For example, some chapters refer to activities that do not appear on the list, such as occupational tasks (p. 170), housework (p. 128), and shopping (p. 139). In addition, some chapters refer to the individual patient's usual daily activities, in contrast to a uniform scale. [FN24] Third, the glossary gives no sense of the relevant scales of performance ability, and no explanation as to the relative weights of different activities in the overall whole-person rating. The reader does not know, for example, whether the *Guides'* final ratings give equal weight to self-care, transportation, and sexual function, or whether these activities receive different weights, and, if so, what those weights are. Finally, the *Guides* gives little or no explanation of how it "combines" two or more whole-person ratings to arrive at a single rating for a person suffering from multiple impairments. [FN25]

In sum, the *Guides* first obscures the reliance of whole-person ratings on ADL measurements, and then gives only a vague explication of its underlying criteria. What could justify this approach? The ***973** AMA cannot argue that its whole-person ratings do not rely on some assessment of ADL impact; evidence of such reliance appears throughout the book. [FN26] The AMA cannot claim that consensus on the appropriate ADL criteria renders precise identification of those criteria unnecessary: dozens of ADL scales

are currently in use, and there is an active debate about their relative validity, reliability, and usefulness. [FN27] Finally, the AMA cannot argue that the book's partial aim to provide information to a nonmedical audience justifies a less detailed enunciation of its criteria. In fact, the book's use by the legal community makes careful identification of the normative foundation of the ratings scheme even more important.

B. Accuracy and Reproducibility

The *Guides* suggests that use of its rules can achieve "accurate, fair, and reproducible" evaluations: "the user ... must understand the concepts under which the 'rules' have been developed and the intended approach for using them to achieve objective, accurate, fair, and reproducible evaluations of individuals with medical impairment" (p. 1). It seems plausible to interpret the "accurate, fair, and reproducible" assertion to mean that with proper use the *Guides*' system will be valid and reliable. Validity essentially means that an evaluative instrument measures what it aims to measure to some acceptable degree, or, more precisely, that inferring certain conclusions from the results of the instrument is appropriate. [FN28] Reliability refers to the quality of reproducibility. [FN29]

Because an instrument may be valid for one purpose and not for another, [FN30] the validity of the *Guides* depends in part on its use. Let us suppose, then, that the *Guides* is used only for the purpose that the book itself suggests - to measure a purely "medical" condition. But the book's validity for this purpose is difficult to defend once one ***974** acknowledges that impairment is not solely a medical condition. [FN31] Problems remain even if one understands the *Guides* to make the more modest claim that its rules are accurate and fair as a measure of person-level abilities. The book's failure to explain its underlying criteria makes it difficult to ascertain its validity even for this more limited purpose. **[FN32] In testing the validity of the *Guides* as a measure of the abilities that do or should matter to people, one should recall the reproductive system guideline and the stereotyped-activity examples. These passages, and the likelihood of gender bias that they imply, show that ratings performed in accordance with the book's guidelines will not always rest on a representative and fair sample of the activities or abilities that do or**

should matter to people. [FN33] Thus, one cannot defend the *Guides'* validity even under the more modest premise about its proper use.

The validity claim seems more defensible with respect to some of the organ-level evaluative rules. At least some data support the validity of certain organ-level evaluations, and the *Guides* defines fairly clearly the criteria underlying those evaluations. But many of the chapters do not contain organ-level ratings, and the book's primary rating objective is to express impairment at the whole-person level. [FN34]

The merits of the reproducibility claim differ among the various chapters. At least with respect to certain chapters - such as the extremities, spine, pelvis, and respiratory system - the claim of reproducibility seems plausible because the necessary evaluations require the use of tools (goniometer, inclinometer) in fairly precise and reproducible ways. Some of the chapters on other systems, however, require input that seems quite likely to vary from one evaluator to the other. For example, the cardiovascular system chapter requires an assessment of the patient's ability to perform "ordinary daily activities" (p. 121); the section on speech requires an assessment about the individual's "efficiency in using speech to make himself or herself understood in daily living" (p. 173); and the chapter on the reproductive system requires evaluation of sexual dysfunction (pp. 196-200). That the evaluation of some systems requires a less reproducible ***975** measurement process is neither surprising nor avoidable, but it does make troubling Chapter One's undifferentiated claim of reproducibility.

Fortunately, at times the individual chapters acknowledge some of the limitations of their evaluative rules. The cardiovascular system chapter, for example, notes that information about daily living activities "is subjective, and it is open to interpretation on the part of both patient and examiner" (p. 119).

III.

Despite these serious flaws, the book has some useful features. As explained above, it provides numerous guidelines for measuring various organ or system-level qualities. [FN35] Although the book's translations of

this sort of data into impairment ratings pose the many problems discussed above, its elucidation of various evaluative techniques could be helpful in a number of contexts. For instance, in devising a loss assessment schedule, a compensation program could use these guidelines to evaluate the losses that the program deems relevant for compensation purposes. Or a system that compensates for lost wage-earning capacity in an unscheduled fashion could establish evidentiary guidelines that require, in addition to other items of evidence, the results of evaluations performed in accordance with certain of the book's guidelines.

Another useful feature of the book is its emphasis on the need to improve the report writing process. The book stresses the importance of providing a complete report of the clinical findings, and it suggests that physicians examining clinical reports specify the basis of a finding of "disability" or "impairment" (p. 7). These are useful admonitions in an area so fraught with disparate assessment definitions and techniques. But one must remember that the choice of evaluative norms is not a "medical" matter, and that many sets of relevant norms are possible in different social and legal settings. Hence, the goal of standardizing the evaluative process to the extent possible, though sensible and important, cannot displace the need to make difficult social policy judgments; at best, some standardization of evaluation and reporting is possible once those judgments have been made.

In sum, a close look at the *Guides* reveals lessons both about its use and more generally about other ratings schemes. Because the *Guides* so poorly sets out its underlying criteria, and because so many of its judgments are suspect on their surface, legal systems should ***976** make use of the *Guides* only in the specific and defensible ways described in this Review. On a broader level, this Review of the *Guides* shows that any effort to create a compensation schedule will involve important normative judgments about the types of functions or qualities that matter in evaluating impairments, and the significance of the loss of these functions. Medically or scientifically authored ratings schemes can offer useful insights into the nature and measurement of various sorts of losses. Hence, when developing loss assessment systems, legislatures and administrative bodies can and should learn much from consultation with the medical

community. **But policymakers should appreciate that the search for an "objective," "accurate," or purely "medical" system is and always will be fruitless. [FN36] And they must resist the seductive but false hope that use of a scientifically or medically authored ratings system can bypass the need to make the hard choices necessary for any loss assessment system.**

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[FN2] Assistant Professor of Law, Southern Methodist University. I would like to thank Alan R. Bromberg, Richard J. Pierce, Jr., and Deborah A. Stone for their valuable comments. I also am grateful to C. Edwin Baker for encouraging the line of thought that led to this Review, and to Will Pryor for his indispensable help.

[FN3] In about a dozen states, the directive to use the *Guides* is statutory. *See, e.g.,*ALASKA STAT. § 23.30.190 (Supp. 1989); GA. CODE ANN. § 114-101(5) (Supp. 1988); LA. REV. STAT. ANN. § 23:1221(4)(q) (West Supp. 1989). In many other states, administrative directives, rulings, or regulations specify use of the *Guides. See, e.g.,* Gomez v. Industrial Comm'n, 148 Ariz. 565, 568, 716 P.2d 22, 25 (1986) (en banc) (discussing a rule adopted by the Arizona Industrial Commission calling for rating according to the *Guides*); Kroeplin v. North Dakota Workmen's Compensation Bureau, 415 N.W.2d 807, 808 (N.D. 1987) (discussing an administrative directive adopting the *Guides*). The states differ on whether use of the *Guides* is always, sometimes, or never mandatory. *Compare*MD. ANN. CODE art. 101, § 36C (Supp. 1989) (providing that until the Governor's Commission adopts impairment evaluation guidelines, physicians shall use the *Guides* "to measure all medical evaluations of permanent impairment") *with*N.M. STAT. ANN. § 52-2-3 (1987) (defining a "permanent physical impairment" as a condition that is "capable of being expressed in percentage terms as determined by medically or scientifically demonstrable findings" such as those presented in the *Guides* or comparable publications).

In addition, the use to which the *Guides* is put (for example, to rate whole-person impairment as opposed to organ-level impairment) varies

among states. *Compare*ALASKA STAT. § 23.30.190 (Supp. 1989) (making the *Guides'* "whole-person" impairment ratings determinative of benefit amounts for partial disabilities) *with*LA. REV. STAT. ANN. § 23:1221(4)(q) (West Supp. 1989) (restricting awards of permanent partial disability to claimants whose loss of use or function is greater than 25% as evaluated in accordance with the *Guides*).

Although the *Guides* has been most heavily used by workers' compensation programs, its evaluative methods are neither specific to nor confined to workers' compensation. Instead, the *Guides'* rules can be used to calculate impairment for a variety of compensable losses. For an example of the *Guides'* use outside the workers' compensation context, see OKLA. STAT. ANN. tit. 11, §§ 50-101(11), 50-115 (West Supp. 1989), which uses the *Guides* to calculate disability retirement for certain state and municipal workers.

[FN4] Alternatives or modifications to the tort system need not include a scheduled approach to compensable losses, but many critiques look in this direction. *See* G. CALABRESI, THE COSTS OF ACCIDENTS 209-12 (1970) (discussing the possible use of schedules to establish the costs of various injuries); J. STAPLETON, DISEASE AND THE COMPENSATION DEBATE 163-67 (1986) (discussing options to base compensation in whole or in part on percentages of disablement); Sugarman, *Doing Away with Tort Law*, 73 CALIF. L. REV. 555, 646-47 (1985) (suggesting that future programs could follow the approach of workers' compensation by compensating partial disabilities). The appeal of scheduled approaches stems from factors such as reduced administrative costs and increased predictability of compensation, which enhance a system's ability to serve an insurance function. *See* AMERICAN LAW INST., COMPENSATION AND LIABILITY FOR PRODUCT AND PROCESS INJURIES 23 (1987) (discussing the potential advantages of following the workers' compensation approach for products or malpractice injuries).

[FN5] The *Guides* had its origin in 1956, when the AMA's Board of Trustees created an ad hoc committee to prepare "a series of practical guides for the rating of physical impairment of the various organ systems." AMERICAN MED. ASS'N, GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT (2d ed. 1984) [hereinafter GUIDES II]. From 1958 to 1970,

the committee published thirteen separate guides in the *Journal of the American Medical Association. See id.* at iii. In 1971 the AMA published the *Guides* as a single volume. *See* AMERICAN MED. ASS'N, GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT (1971) [hereinafter GUIDES I]. The second edition, published in 1984, reflected the work of twelve expert panels that updated the clinical information supporting the ratings. *See* GUIDES II, *supra,* at iii. The third edition, published in 1988, is "substantially revised" (p. xvii). Reasons for the rapid revision include the growing literature on impairment, increased interest in impairment rating, and expanded use of the *Guides* (p. xvii).

The legal literature has virtually ignored the *Guides.* One thoughtful discussion of the *Guides,* however, appears in D. STONE, THE DISABLED STATE 108-17 (1984), in which Professor Stone notes that the *Guides* rests on "a pervading faith that a phenomenon of functional impairment, totally independent of context, can be precisely measured." *Id.* at 113.

[FN6]*See*FLA. STAT. ANN. § 440.15(3)(a)(3) (West Supp. 1989) (using such a schedule will "establish more certainty and uniformity in the rating of permanent impairment"); TENN. CODE ANN. § 50-6-204(d)(3) (Supp. 1988) (stating that physicians shall use the *Guides* "[t]o provide uniformity and fairness for all parties"); *see also* Kroeplin v. North Dakota Workmen's Compensation Bureau, 415 N.W.2d 807, 808 (N.D. 1987) (noting that the compensation bureau adopted the *Guides* "in order to establish more certainty and uniformity in the award of permanent impairment benefits"); Corcoran v. Foster Auto GMC, Inc., 746 S.W.2d 452, 457 (Tenn. 1988) (observing that in adopting the *Guides,* the legislature intended to standardize impairment rating, minimize arbitrariness, and encourage predictability).

[FN7] For a more detailed discussion of the merits of schedules in various contexts, see Pryor, *Compensation and a Consequential Model of Loss,* 64 TUL. L. REV.. (forthcoming 1990).

[FN8]*See id.*

[FN9] The *Guides'* glossary defines impairment somewhat differently: "the loss of, loss of use of, or derangement of any body part, system, or

function" (p. 236).

[FN10] The *Guides* properly insists that it does not evaluate disability, and that disability is not a medical evaluation (p. 2). This Review argues that, contrary to the *Guides'* assertions, impairment is not a purely medical matter either. *See infra* pp. 968-70.

[FN11] Another key objective, discussed in Part III below, is to standardize the evaluation and reporting process.

[FN12]*See, e.g.,* WORLD HEALTH ORG., INTERNATIONAL CLASSIFICATION OF IMPAIRMENTS, DISABILITIES, AND HANDICAPS 27 (1980); Crewe, *Assessment of Physical Functioning,* in HANDBOOK OF MEASUREMENT AND EVALUATION IN REHABILITATION 235, 236-37 (B. Bolton 2d ed. 1987). The literature does not always use the same terminology, however. For example, under the World Health Organization's classification scheme, "impairment" refers to organ or system-level loss, *see* WORLD HEALTH ORG., *supra,* at 27; "disability" refers to person-level loss, *see id.* at 28; and "handicap" refers to individualized person-level losses, *see id.* at 29.

[FN13]*See* Frey, *Functional Assessment in the '80s,* in FUNCTIONAL ASSESSMENT IN REHABILITATION 11, 27-33 (A. Halpern & M. Fuhrer eds. 1984) (discussing the recent proliferation of functional assessment devices). The publication by the World Health Organization in 1980 of a classification scheme for the consequences of injury or disease was in part the result of greater focus by the medical community on chronic disease and injury. *See* WORLD HEALTH ORG., *supra* note 12, at 25.

[FN14]*See, e.g.,* M. MINOR & S. MINOR, PATIENT EVALUATION METHODS FOR THE HEALTH PROFESSIONAL 107-15 (1985); Alexander & Fuhrer, *Functional Assessment of Individuals with Physical Impairments,* in FUNCTIONAL ASSESSMENT IN REHABILITATION, *supra* note 13, at 51-52; Keith, *Functional Assessment Measures in Medical Rehabilitation: Current Status,* 65 ARCHIVES PHYSICAL MED. REHABILITATION 74, 74-77 (1984).

[FN15]*See* Keith, *supra* note 14, at 74 (asserting that functional measurement requires agreement on what is being measured, or "the domains of measurement"); *cf.* WORLD HEALTH ORG., *supra* note 12, at 27 (noting that impairment is "deviation from some norm in the individual's biomedical status"); *id.* at 28 (stating that disability [*i.e.,* the *Guides'* person-level impairment] represents "a departure from the norm in terms of performance of the individual").

[FN16] The *Guides'* appendix B, which addresses the topic of pain and impairment, notes that "[t]here has been little consensus and much confusion about the extent and nature of impairment that results solely from chronic pain and the chronic pain syndrome" (p. 243). One reflection of this lack of consensus is the report of the twenty-member Commission on the Evaluation of Pain, which was formed in response to the Social Security Disability Benefits Reform Act of 1984, 42 U.S.C. § 423(f)-(g) (1982 & Supp. 1989). The Commission's final report split on the issue of how disability caused by chronic pain should count for purposes of social security disability benefits. *See* COMM'N ON THE EVALUATION OF PAIN, REPORT OF THE COMMISSION ON THE EVALUATION OF PAIN 121-24 (1986).

[FN17] For many systems, the *Guides* gives only a whole-person impairment rating. *See supra* p. 967.

[FN18]*See* Frey, *supra* note 13, at 20-21 (concluding that few activities are common to all ADL scales); Keith, *supra* note 14, at 75 (explaining that although much literature agrees on the importance of measuring self-care and mobility, there is little agreement on what other elements should be measured).

[FN19] The *Guides* gives an example of an "obese 38-year-old married woman" who has recurrent chronic dermatitis of the genitocrural area: "There is a remission of symptoms when her weight is controlled, when she avoids tight clothing, and when she observes careful hygienic measures. Sexual intercourse is possible if precautions are observed to avoid excessive vulvar irritation." She has a 0% impairment of the whole person (p. 199). Later examples that give rise to impairments do mention a

woman's sexual sensation (p. 199).

[FN20] These examples appear in chapters, such as that on the cardiovascular system, that require the practitioner's initial evaluation of the patient to include some form of ADL assessment. Many of the book's ADL examples are not as detailed as those cited in the text; instead, they simply refer to the patient's ability to perform usual or normal daily activities without specifying what those activities include (pp. 178-79, 181). When the book does include examples of ADL assessments, and when those examples specify some of the measured daily activities, stereotyped images appear quite frequently.

[FN21]*See infra* p. 972.

[FN22] Interestingly, earlier editions of the *Guides* stated at the outset that impairment evaluation requires an ADL assessment. *See* GUIDES I, *supra* note 5, at iii; GUIDES II, *supra* note 5, at vii.

[FN23] The glossary lists the following: self-care and personal hygiene, communication, normal living postures, ambulation, travel, nonspecialized hand activities, sexual function, sleep, and social and recreational activities. The glossary also gives examples of these activities.

[FN24] For example, the *Guides* refers to "his or her usual activities" (p. 126) and "the patient's daily living activities" (p. 145).

[FN25] The book contains a "combined values" chart, which generates a single whole-person impairment rating when two or more impairments affect the person (pp. 246-48). The foreword refers to this as the "familiar 'Combined Values Chart,'" (p. xviii), but gives little explanation of what premises and criteria underlie the chart. For a criticism of the combined values chart in earlier editions, see D. STONE, cited above in note 5, at 115-16.

[FN26] The digestive system chapter notes that its criteria evaluate impairment "according to a person's ability to perform activities of daily living" (p. 177). The chapters on the cardiovascular (p. 119) and urinary (p.

189) systems make a similar point.

[FN27]*See* Frey, *supra* note13, at 21 (discussing studies of numerous ADL scales developed over the years); Kaufert, *Functional Ability Indices: Measurement Problems in Assessing Their Validity,* 64 ARCHIVES PHYSICAL MED. REHABILITATION 260, 260 (1983) (discussing the inadequacy of validity data in the area of disability assessment); Keith, *supra* note 14, at 74-77 (discussing the need to improve the validity and reliability of functional assessment measures).

[FN28]*See* Rothstein, *Measurement and Clinical Practice: Theory and Application,* in MEASUREMENT IN PHYSICAL THERAPY 1, 15-16 (J. Rothstein ed. 1985). *See generally* AMERICAN EDUC. RESEARCH ASS'N, AM. PSYCHOLOGICAL ASS'N & NAT'L COUNCIL ON MEASUREMENT EDUC., STANDARDS FOR EDUCATIONAL AND PSYCHOLOGICAL TESTING 9-18 (1985) (discussing various means of accumulating evidence to measure the validity of a test for its intended purpose).

[FN29]*See* Rothstein, *supra* note 28, at 5.

[FN30]*See id.* at 16.

[FN31]*See supra* p. 969.

[FN32] One article concluded that the *Guides* (its second edition) is acceptably valid and reliable as to measurement of hand impairment. *See* Gloss & Wardle, *Reliability and Validity of the American Medical Association's Guides to Ratings of Permanent Impairment,* 248 J. A.M.A. 2292 (1982). Although the article gives a persuasive analysis, using a form of criterion validation on the *Guides,* it evaluates only the hand section of the *Guides.*

[FN33] This type of validity inquiry, known as content validation, examines the measurement tool and asks whether it seems fairly to represent the content of the domain that it allegedly measures. *See* Rothstein, *supra* note 28, at 19-20.

[FN34] I am not suggesting that the book should provide more organ-level rules, or that organ-level impairment ratings are preferable. The question of which levels and types of impairment a ratings system should aim to measure cannot be fully addressed here.

[FN35] For example, the book explains how to measure and record loss of motion in various orthopedic extremities with a goniometer (pp. 14, 17); how to measure spinal range of motion with an inclinometer (pp. 71-74); and how to measure loss of vision by means of particular charts and equipment (pp. 153-64).

[FN36] Unfortunately, as Professor Stone notes, "the quest for an objective method of medical evaluation of disability has a long history and continues into the present." D. STONE, *supra* note 5, at 116. She argues that, instead of attempting to find objective criteria, "one can try to examine how particular constructs and measures *systematically* exclude certain understandings and include others, how they serve the political interests of some groups at the expense of others, and how they work to produce particular types of policy results." *Id.* at 117 (emphasis in original).

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