IS THE WORK-RELATED TEST DESIRABLE FOR ALL DISEASES THAT DISABLE WORKERS?

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I. INTRODUCTION

Every developed country has multiple programs providing cash benefits, medical care, and rehabilitation services to workers with disabilities. In most countries, one of the programs is workers' compensation, which limits benefits to workers who experience work-related injuries or diseases.

Workers' compensation programs share several basic characteristics.[1] First, workers are eligible for benefits without having to establish fault by their employers. Second, benefits primarily compensate for economic losses, principally loss of actual earnings or earning capacity and the cost of medical care. Third, benefits are prescribed by statute. Common but not universal features of workers' compensation are that the program is entirely financed by employers and that workers' compensation is the exclusive remedy of workers against their employers for work-related injuries.

Williams described several models of workers' compensation that provide variations on these features.[2] Germany enacted the first modern workers' compensation law in 1884. The German model relies on collective responsibility of Industrial Injuries Institutes (Berufsgenossenschaften), which are non-profit corporations, to administer the program subject to limited statutory requirements for coverage and benefits and to government supervision. The costs are shared among employers and employees. The United Kingdom's workers' compensation law of 1897 was similar to the

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1. ARTHUR C. WILLIAMS, JR., AN INTERNATIONAL COMPARISON OF WORKERS' COMPENSATION 1 (1991); John F. Burton, Jr., *Workers' Compensation*, *in* LABOR AND EMPLOYMENT LAW AND ECONOMICS 235, 235 (Kenneth G. Dau-Schmidt, Seth D. Harris & Orly Lobel eds, 2009). In addition to Williams, multi-country studies include the examination of occupational diseases by Peter S. Barth, *An International View of Workers' Compensation for Occupational Disease*, *in* INTERNATIONAL EXAMINATION OF MEDICAL-LEGAL ASPECTS OF WORK INJURIES 160 (Elizabeth H. Yates & John F. Burton, Jr. eds., 1998). Social security programs, including programs for work injuries, are briefly described for individual countries in Social Security Administration, *Social Security Programs Throughout the World* (2014–2015).

2. WILLIAMS, *supra* note 1.

German model in providing no-fault benefits, but differed by not providing for medical care or rehabilitation services, by assigning responsibility to individual employers rather than industrial associations, and by not requiring employers to insure their risks. The 1897 law also gave the employee the option to accept workers' compensation benefits or sue the employer for damages. The U.K. model was modified in 1948 to allow the injured worker to both receive workers' compensation benefits and sue the employer for damages, although any recovery in a tort suit reduces the workers' compensation benefits. The United Kingdom also now provides medical benefits to injured workers under the National Health Service.

An alternative model of programs for workers with disabilities is represented by New Zealand, the Netherlands, and Switzerland, although there are differences among these countries. The common feature is that no distinction is made between work-related and non-work-related injuries. The Netherlands adopted a set of programs in 1967 that provide the same medical, disability, and death benefits for all injuries and diseases whether work-related or not. In 1974, New Zealand replaced the common law system based on fault with a comprehensive disability program that provides benefits for all accidental injuries on a no-fault basis, but maintains the distinction between work-related and other diseases.

The differences between countries that have a separate disability program for work-related injuries and diseases and countries that include both work-related and non-work-related injuries and/or diseases in the same disability program provide the motivation for this chapter. I have advocated that the work-related test should be dropped for some diseases and a separate program established for these diseases, regardless of their origin. Stephen Adler has argued that the work-related test should be maintained for these diseases, which would be covered by workers' compensation.

The debate about whether the work-related test is desirable for all diseases proceeds in several steps. Section II provides an overview of the workers' compensation programs in Israel and the United States, corresponding to two countries Adler has intensively examined in his articles. Section III provides an introduction to the work-related tests used in the workers' compensation programs in these two countries and Section IV focuses on two "gray area" conditions that Adler has written about: heart attacks and psychiatric injuries. Section V attempts to distill the essential elements of Adler's approach, which argues that workable legal tests are feasible and desirable for these "gray area" conditions. Section VI reports on the approach used in the United States in recent decades to deal with conditions for which medical causation is problematic, namely to exclude them from workers' compensation without providing an alternative disability program to protect the disabled workers. Section VII develops my approach:

that at least some diseases should be moved from workers' compensation to a separate disability program that does not use the work-related test. Section VIII concludes with a review of the three approaches to dealing with diseases for which medical causation is feasible and assesses Adler's contribution to the debate over the desirability of the work-related test.

II. WORKERS' COMPENSATION IN THE UNITED STATES AND ISRAEL

This section compares certain aspects of the workers' compensation programs in Israel and the United States, based in large part on Adler.[3] Israel's program is a national program that began in the 1950s. In the United States, (except for a few workers covered by federal programs), workers' compensation programs were enacted by the states beginning in 1911.[4] There are no federal standards for the state programs and there are considerable differences among the states on matters such as benefit levels and coverage.

All employees and self-employed workers are covered by workers' compensation in Israel. In the United States, the coverage of workers varies from 79.6% of workers in Texas (the one state where coverage is elective for employers) to almost all workers in some states: nationally, 97.1% of employees were covered by workers' compensation programs in 2014.[5]

In Israel, workers' compensation is not the exclusive remedy for workplace injuries. Employers may also be sued under tort law, with the workers' compensation benefits subtracted from the award in the tort suit. In the United States, workers' compensation is the exclusive remedy for workplace injuries (with limited exceptions, such as when the employee is intentionally injured by the employer).

In Israel, benefits are insured by the National Insurance Institute (NII) and are financed by payments from the employer that do not vary among employers. In the United States (depending on the state), insurance is provided by private insurance carriers, and/or state insurance funds, and/or self-insuring employers and is paid for by employers. In the United States, premiums for workers' compensation insurance vary among occupations and industries based on previous benefit payments in the insurance classification,

3. Stephen Adler, *Should Work Injuries and Nonwork Injuries be Compensated Differently?*", *in* INTERNATIONAL EXAMINATION OF MEDICAL-LEGAL ASPECTS OF WORK INJURIES 1 (Elizabeth H. Yates & John F. Burton, Jr. eds., 1998); Stephen Adler, *Achieving Social Security Rights: A Comparative Study of Workers' Compensation in the United States, Germany and Israel*, *in* MEDIZINISCH-RECHTLICHE ASPEKTE VON ARBEITSUNFALLEN Band III 33 (1999).

4. Burton & Mitchell provide a history of employee benefits and social insurance in the United States; John F. Burton, Jr. & Daniel J.B. Mitchell, *Employee Benefits and Social Insurance: The Welfare Side of Employee Relations*, *in* INDUSTRIAL RELATIONS TO HUMAN RESOURCES AND BEYOND (Bruce E. Kaufman, Richard A. Beaumont & Roy B. Helfgott eds., 2003).

5. MARJORIE BALDWIN & CHRISTOPHER MCLAREN, WORKERS' COMPENSATION: BENEFITS, COVERAGE, AND COSTS, 2014, Table A (2016).

and also vary among larger firms based on each firm's own history of benefit payments.

In Israel, the National Insurance Institute (NII) administers the workers' compensation programs. In the United States, the programs are largely administered by private or public insurers, subject to appeals and oversight handled by state workers' compensation agencies.

Cash benefits for temporary and permanent disability and for death are provided by the Israel and U.S. workers' compensation programs. There are considerable variations among states in the levels of all types of benefits and in the operational approaches for permanent disability benefits.[6]

All Israeli residents have been entitled to medical care through a general health program since 1995. Medical care for work injuries is financed by the NII and includes care not provided by the general health program. Many U.S. citizens do not have health insurance and are not covered by public programs such as Medicaid. State workers' compensation programs require employers to provide necessary medical care, with variations among jurisdictions on matters such as whether the worker or the employer choses the treating physician and whether fee schedules are used to limit expenses.

In Israel, vocational rehabilitation benefits are generally provided for up to one year, although there is flexibility to extend the benefits for up to three years. In the United States, some states require employers to provide vocational rehabilitation benefits to injured workers and some insurance carriers provide such benefits even where they are not mandated by law.

III. INTRODUCTION TO THE WORK-RELATED TESTS IN ISRAEL AND THE UNITED STATES

The workers' compensation programs in Israel and the United States both limit benefits to those workers who can establish their injury or disease is work-related.

A. The United States

A four-step test found in most state workers' compensation laws is used to determine if an injury is work-related:[7] (1) there must be a *personal injury*, which in some jurisdictions is interpreted to exclude mental illness; (2) that results from an *accident*, which is interpreted in some states to exclude injuries that develop over a long period of time, as opposed to those injuries

6. John F. Burton, Jr., *Permanent Partial Disability Benefits*, *in* WORKPLACE INJURIES AND DISEASES: PREVENTION AND COMPENSATION 69 (Karen Roberts, John F. Burton, Jr. & Matthew M. Bodah eds., 2005).

7. STEVE L. WILLBORN ET AL., EMPLOYMENT LAW: CASES AND MATERIALS 925-58 (6th ed. 2017).

resulting from a traumatic incident; (3) that must *arise out of employment*, which means that the source of the injury must be related to the job; and (4) that must occur during the *course of employment*, which normally requires that the injury occur on the employer's premises and during working hours.

Determination of the compensability of diseases is a problem in U.S. workers' compensation programs. Many diseases could not meet the accident test because they develop over a prolonged period. In addition, statutes used to contain limited lists of diseases that were compensable. Fortunately, the restricted lists of diseases have been abandoned in all jurisdictions. Now, typically, there is a list of specified occupational diseases followed by a general category permitting the compensation of other occupational diseases. Nonetheless, restrictions in language pertaining to work-related diseases are still found in many laws, such as statutes of limitations that require the claim to be filed within a limited period after the last exposure to the substance causing the disease, even if the disease does not manifest itself for a prolonged period. Also, some state courts have interpreted the general category of occupational diseases as covering only those diseases that are peculiar to or characteristic of the occupation of the employee seeking coverage. Additional limitations on the compensability of diseases are discussed in Section VI.

B. Israel

The workers' compensation program in Israel also uses different legal tests for injuries and diseases in deciding whether a condition is work-related.[8] For an employee, the term *work accident* (employment injury) means an accident "which occurred in the course and as a consequence of the work and/or on behalf of the worker's employer."[9] For a self-employed person, the definition of a work accident is an accident that occurred "in the course and in consequence of the pursuit of his occupation."[10]

An *occupational disease* is defined as a disease "contracted as a consequence of work or while acting on behalf of the employer, or, in the case of a self-employed person, in consequence of the pursuit of his or her occupation."[11] A list of forty-nine types of work-related diseases establishes

8. Haim Chayon, *Employment Injuries Insurance and Compensation in Israel*, *in* ILO ENCYCLOPEDIA OF OCCUPATIONAL HEALTH AND SAFETY, PART III: MANAGEMENT AND POLICY ch. 26: "Topics in Workers' Compensation Systems" (Jeanne Mager-Stellman ed., 4th ed. 1998), *available at* http://www.ilo.org/iloenc/part-iii/topics-in-workers-compensation-systems/item/358-employment-injuries-insurance-and-compensation-in-israel.

9. *Id*. at 1.

10. *Id*. at 1.

11. *Id*. at 1.

a presumption of compensability "but other diseases of occupational origin can, subject to certain conditions, also be compensated."[12]

IV. COMPENSABILITY OF PROBLEMATIC CONDITIONS

A. "Gray Area" Conditions

Many arguably work-related injuries or diseases fall into "gray" areas, leading to litigation, delays, and confusion. They are in a gray area because often the injuries or diseases involve exposure at work over time, preexisting dispositions, overlap with conditions that occur outside work, or are difficult to measure and diagnose. Gradual onset health conditions, particularly those in which the condition is likely caused by both work and non-work factors, often meet with resistance when workers file for benefits. Because there is a lack of clarity about whether some of these health conditions are caused by injuries or by diseases, workers' compensation agencies struggle with how to manage them under the differing statutory provisions for injuries and diseases. Common conditions that often fall into this gray area include repetitive motion injuries, including carpal tunnel syndrome, other musculoskeletal injuries, hearing loss, lung diseases such as asthma or chronic obstructive pulmonary disease (COPD), stress disorders unrelated to physical harm, heart attacks, and back disorders.

In this section, we examine the treatment of two of these gray area conditions in Israel and in the United States—heart attacks and psychiatric injuries. Section VII examines the handling of back disorders in the United States.

B. Compensability of Heart Attacks in Israel

1. A Medical Primer on Heart Attacks

Gotsman and Adler[13] examined the compensability of heart attacks in Israel and the United States. They begin with a medical primer on myocardial diseases (coronary atherosclerosis) and heart attacks (infarcts) that provides a basis for the legal analysis.

> The heart requires oxygen to survive. The oxygen is supplied by arteries which surround the heart . . . If the blood flow to the heart is blocked or reduced drastically, the heart muscle cannot function and a heart attack occurs. Such changes in the blood flow due to abnormal coronary function

12. *Id.* at 1.

13. Mervyn Gotsman & Stephen Adler, *Under What Circumstances Can an Acute Myocardial Infarction be Regarded as a Work-Related Accident?* 1 INT. J. OF SOCIAL SECURITY AND WORKERS COMPENSATION 21 (2009).

> (pathophysiology) are determined by two factors: (1) Narrowing of the artery due to excessive fatty plaque (atheroma), plaque rupture and/or thrombus formation; (2) Dynamic variations in coronary vascular tone due to contraction or relaxation of its muscular arterial wall."[14]
>
> Coronary artery disease develops during most of our lives, caused by a number of factors, the most common being genes, smoking, stress (which can be work-related or non-work-related), high cholesterol, being overweight and improper diet . . . Most of these factors are unrelated to work. The main factor which can be related to work is stress, which is not an accident but a gradual process occurring over years, and which has many non-work-related factors.[15]
>
> [T]he development of coronary heart disease is a normal part of life and can develop to an extent that a heart attack will occur naturally, without outside stimulus. Pre-existing heart disease must be present to produce a heart attack. The heart functions despite the narrowing of the artery and dynamic variations in coronary tone, which are part of normal life. However, unusual narrowing or dynamic variations can be the immediate cause of a heart attack. These unusual narrowing or variations can be influenced by triggers—specific events in one's life . . . Triggers exist in a person's normal life, unrelated to work, such as unusual physical strains (sports, sex, lifting heavy objects), stress (personal crises, arguments, fear), circadian and weekly variations, extreme climate changes and stress-related or other outside dangers. However, there may also be triggers at work which precipitate heart attacks.[16]
>
> We suggest that the trigger event at work, which can be the immediate cause for a heart attack, is the basis for the legal principle determining when a heart attack will be recognized as a work accident.[17]

2. The Legal Principles Used in Israel.

"Occupational diseases are illnesses which medical research has proved to be caused entirely or mainly by a certain type of work. For example, asbestosis is generally recognized as an occupational disease for a worker in an asbestos factory."[18] "[C]oronary artery disease has many underlying causal factors and is, therefore not an occupational disease. Also, since the heart disease is not caused by an accident (one-time sudden event), it is not recognized as a work accident."[19]

While the heart disease is therefore not compensable by workers' compensation, the heart attack that results from the heart disease should be

14. *Id.* at 22–23.
15. *Id.* at 24.
16. *Id.*
17. *Id.* at 26.
18. *Id.* at n.3.
19. *Id.* at 26.

recognized as a work accident when the heart attack "is triggered by an unusual strain or stress at work."[20]

Gotsman and Adler argue that the legal rules in Israel are compatible with the medical knowledge about the causes of heart attacks.[21] The National Insurance Institute and the National Labour Court have adopted the rule "that if the heart attack occurs within hours or days of the unusual strain or stress at work, there is a causal relationship between them and, therefore, the infarct should be regarded as a work accident."[22]

C. Compensability of Heart Attacks in the United States

Gotsman and Adler briefly survey the legal rules used in the U.S. to decide the compensability of heart attacks.[23] They criticize Professor Arthur Larson's test, "which divided workers into two categories: those with pre-disposed risks and those without predisposed risks."[24] Gotsman & Adler indicate that the "Larson test was abandoned because of the difficulty to determine whether a worker had predisposed risks."[25] However, a more compelling reason to abandon the Larson test is that, according to modern medical knowledge, all workers who have heart attacks have pre-disposed risks.

A thorough examination of the legal rules used by the various U.S. jurisdictions to determine the compensability of heart attacks is beyond the scope of this study. However, Larson places states in four categories: [a] Jurisdictions Accepting the Usual-exertion Rule, which "hold that when usual exertion leads to something actually breaking, herniating, or letting go, with an obvious sudden mechanical or structural change in the body, the injury is accidental" and therefore is compensable;[26] [b] Jurisdictions Requiring Unusual Exertion, which require showing unusual exertion in order to relate a heart attack to the employment; and [c] Jurisdictions with Special Rules, such as New York; and [d] Jurisdictions not having the "By accident" requirement, which uniformly reject the unusual-exertion requirement but do require the worker to demonstrate a causal connection between the exertion and the injury.

Larson indicates that the preponderance of U.S. jurisdictions—three to one—belong to the first category and that a substantial minority—about a

20. *Id.* at 26
21. *Id.* at 30.
22. *Id.*
23. *Id.*
24. *Id.*
25. *Id.*
26. LEX K. LARSON, LARSON'S WORKERS' COMPENSATION, DESK EDITION. NEW PROVIDENCE §43.03[1] (2016).

third—are in the second category. Thus Israel, which requires unusual exertion in order for heart attacks to be compensable, is comparable to a minority of U.S. jurisdictions that impose a relatively stringent test to determine whether heart attacks are compensable.

D. Compensability of Psychiatric Injuries in Israel

Adler and Schochet begin their article with this statement of purpose:

> Psychiatric industrial injury lacks clear definition and objective causation standards in Workers' Compensation law. We propose to provide both: by requiring that psychiatric injury be defined by reference to medically recognized mental disorders and by means of a multifactor test for legal causation.[27]

Adler and Schochet cite Larson on the compensability rules for cases involving mental factors. Compensation is uniformly granted when a mental stimulus results in a physical injury (a "mental-physical" injury), as when fright results in paralysis. Compensation is also uniformly granted when a physical injury results in a mental injury (a "physical-mental" injury), as when loss of an eye was followed by traumatic neurosis. The difficult cases are those in which both the cause and the effect are mental (a "mental-mental" injury) and those in which there is no obvious cause and that do not fall into an established category of diagnosis.

Adler and Schochet offer an approach to industrial psychiatric injury that can be applied across all three paradigms: "physical-mental, mental-physical, and mental-mental."[28] In order to be compensable, the claim must demonstrate three elements "(a) a psychiatric injury, (b) which is work-related, and (c) precludes work."[29] Their article addresses the first two elements.

1. What is a Psychiatric Injury?

As defined by Adler and Schochet this element is "a personal injury or stressful life event that occurs in relation to the near future onset of a mental disorder."[30] The "personal injury" can be either physical or mental. What about preexisting conditions? Here the definition becomes a bit more challenging. "This definition of psychiatric injury precludes preexisting conditions, such as personality disorders, as a type of [compensable] injury

27. Stephen Adler & Rivka Schochet, *Workers' Compensation and Psychiatric Injury Definition*, 22 INT. J. OF LAW AND PSYCHIATRY 603, 603 (1999).

28. *Id.* at 604, n.3.

29. *Id.* at 604.

30. *Id.* at 605. I presume this means a personal injury or stressful life event that is soon followed by the onset of a mental disorder.

by the requirement that the occurrence be closely related in time to the onset of the disorder."[31] However, "Preexisting conditions, especially personality disorders, increase the vulnerability of the person to stressful life events. Preexisting psychiatric illness will not exclude a work-related mental disorder from a WC award if the elements of a claim are present."[32]

In order to be compensable, "the 'mental disorder' resulting from the psychiatric injury must be limited to recognized categories subject to medical consensus."[33] The authors indicate that the most definitive diagnostic tool available at the time was the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), published by the American Psychiatric Association. Compensability of a claim for WC benefits requires both a specific diagnosis using the DSM-IV and a fact pattern that conforms to the DSM-IV criteria for the diagnosed mental disorder. Adler and Schochet then provide a multi-page primer on the use of the DSM-IV in determining which mental disorders are compensable in workers' compensation.

2.What is a Work-Related Mental Condition?

Adler and Schochet delineate the second element required for compensability of a psychiatric industrial injury: there must be the required causation.[34] Their compensability test includes five factors:

> A psychiatric disorder shall not be deemed the result of a work-related injury, unless
>
> 1. the psychiatric disorder is recognized and diagnosed under DSM-IV; and
> 2. the claimant experienced an acute trauma or unusual stressor that arose from and occurred in the course of employment; and
> 3. the symptoms of the psychiatric disorder appeared within 6 months thereafter; and
> 4. the employment-related trauma or stressor was a positive factor in the development of the disorder or played an active role in the course of the disorder; and
> 5. notice of a claim for psychiatric injury (to the insurer of the employer) stating facts under paragraphs 1, 2, 3, and 4 above, is made no later than 6 months after the appearance of such symptoms.
>
> Each of the five factors must be present to support a legal finding of industrial causation.[35]

31. *Id.* at 605.
32. *Id.*
33. *Id.*
34. *Id.* at 609.
35. *Id.* at 611.

Their article includes extended discussions of each of these five factors. For Factor Two, Adler and Schochet indicate that "'Acute trauma' excludes chronic repetitive stresses and relate to the element of occurrence in time. It is close to the concept of a single accident. In contrast, an 'unusual stressor' is not so limited and could include any stressor that is not part of the normal work routine, whether or not it recurs in time."[36]

For Factor Four, Adler and Schochet state that "While the work-related trauma or stressor may not be the sole, or even primary cause of the disorder, it must be a contributing factor or trigger for the disorder, rather than a mere backdrop to the events. . . Nonindustrial and personal factors also should be considered, and a determination made whether the work-related triggers-stressors played a significant role in the onset of the disorder."[37] They clarify the causation standard when there are pre-existing conditions:

> While an employment-related trauma or stressor may not be the sole or primary factor precipitating a mental disorder, it may provide the trigger-stimulus to aggravate, accelerate, or combine with a preexisting condition or disposition to produce a mental injury, sufficient to satisfy the causation nexus.[38]

E. Compensability of Psychiatric Injuries in the United States

A thorough examination of the legal rules used in U.S. jurisdictions to determine which mental disorders satisfy the causation requirements for workers' compensation benefits is beyond the scope of this study. Willborn et al. provide a capsule description:

> [t]he injury test will be satisfied in almost all jurisdictions when the cause is physical and the result is both physical and mental: the "physical-mental" case. . . Most states hold the injury test when the mental cause leads to a physical consequence: the "mental-physical" case. . . The most problematical cases are those that involve both a mental cause and a mental consequence: the "mental-mental" case.
>
> Larson's treatise identifies four approaches that states use to analyze stress claims [generally referred to as "mental-mental" cases]. The eight states in Group One find mental injury produced by mental stimulus compensable even if the stress is gradual and not unusual by comparison with that of ordinary life or employment. There are about a dozen states in Group Two that hold "mental-mental" cases compensable even if the stimulus is gradual, but only if the stress is unusual. Over half a dozen states in Group Three find "mental-mental" cases compensable, but only if the stimulus is sudden. In Group Four there are over a dozen states that

36. *Id.* at 612.
37. *Id.* at 614.
38. *Id.* at 615.

> never compensate "mental-mental" cases; there must be some physical component in the injury.[39]

V. APPROACH ONE FOR WORKERS' COMPENSATION WHEN MEDICAL CAUSATION IS PROBLEMATIC: INVENT A WORKABLE LEGAL TEST

There appear to be three underlying principles to which Stephen Adler and his co-authors adhere in their analysis of heart attacks and psychiatric injuries.

A. Principle One: Develop Workable Legal Tests for Determining Compensability

For both heart attacks and psychiatric injuries, Adler and his co-authors prescribe legal tests that are designed to draw a "bright line" between diseases that are compensable in a workers' compensation program and diseases that are not compensable in a workers' compensation program.

I am not sure the proposed rules are as workable as Adler and his co-authors imply they are. Consider the rule for heart attacks endorsed by Gotsman and Adler "if the heart attack occurs within hours or days of the unusual strain or stress at work, there is a causal relationship between them and, therefore, the infarct should be regarded as a work accident."[40] Surely there will be disputes over this formulation: How many hours or days? What strains or stresses are unusual? And consider the rule for psychiatric injuries endorsed by Adler and Schochet.[41] The authors (1) provide a multi-page discussion of which mental conditions are potentially compensable based on the use of the DSM-IV and then (2) identify five factors to use to determine if the mental condition was caused by work.

B. Principle Two: The Workable Legal Tests for Compensbility Do Not Have to Correspond to Medical Knowledge about Causation

The issue of causation in WC claims is a legal issue distinct from questions of medical etiology. [42]

> "Cause" as an element of a WC claim should not be confused with absolute, actual, or medical cause. "Cause" as utilized in WC is a "policy choice" defined by statute, detailed in case law, and essentially rooted in the compromise nature of the workers' compensation system itself. By setting the parameters of causation required for a compensable injury, the law defines the parameters of the WC system itself. While expert medical

39. WILLBORN ET AL., *supra* note 7, at 958, 960-61.
40. Gotsman & Adler, *supra* note 13, at 30.
41. Adler & Schochet, *supra* note 27.
42. *Id.* at 609.

> diagnosis, together with other factual evidence, must form the determination of the existence of a work-related psychiatric injury, it is ultimately the evaluative judgment of the WC system's overinclusive or underinclusive definition of causation that will decide if purely psychiatric injuries are compensable.[43]

C. Principle Three: The Lack of Correspondence Between the Legal Tests for Compensability and the Medical Knowledge About Causation is Necessary and Even Desirable

In addition to the previous passage, Principle Three is illustrated in these excerpts:

> We suggest that any solution to the causality puzzle relating to mental illness shall not be exact. We do not pretend nor seek to find a method to identify actual medical causation, a far too complicated and complex inquiry for the intended efficiencies of any WC system. The law must work within the limits of medical science and legal assumptions and, therefore, the goal must be reasonable—not absolute—certainty[44]:
>
> Our foremost concern was to fashion a workable model to function well within the existing system. Much like the WC system overall, it is a rough system that should attain just results. Above all, we recommend it because it represents the same kind of compromise that lies at the foundation of the WC system itself.[45]

VI. APPROACH TWO FOR WORKERS' COMPENSATION WHEN MEDICAL CAUSATION IS PROBLEMATIC: DEVELOP LEGAL RULES TO EXCLUSE THE CONDITIONS

A. Workers' Compensation Developments in the United States

Workers' compensation developments since the mid-1980s help explain the importance of the causality issue in the United States.[46]

1. The Seeds for Neo-reform Are Sown: 1985–1991

Workers' compensation benefits increased rapidly during this period: from 1.17 percent of payroll in 1985 to 1.65% of payroll in 1991, with much of the increase due to high inflation in the rate for medical care. Largely as a result, the employers' costs of workers' compensation increased from 1.64%

43. *Id.* at 610–11.
44. *Id.* at 604.
45. *Id.* at 616.
46. John F. Burton, Jr., *Workers' Compensation: Developments Since 1960 and Prognostications for Benefits and Costs*, 1 WORKERS' COMPENSATION POL'Y REV. 3 (2001)

to 2.16% of payroll between 1985 and 1991.[47] Private insurance carriers were unable to increase premiums rapidly enough to pay for the higher benefits and so the workers' compensation insurance industry lost money every year during this period, even taking into consideration return on investments.[48] The major legacy of the period from 1985 to 1991 was the planting of the seeds for reform that blossomed in subsequent years. Employers were concerned about the increase in the costs of workers' compensation after 1984, while private carriers experienced serous financial developments and were unprofitable every year between 1984 and 1991.

2. The Neo-Reform Era: 1992–2014

Escalating costs from 1985 to 1991 galvanized political opposition by employers and insurers to workers' compensation programs that had been liberalized in the 1970's. Opposition to growth in workers' compensation costs led to significant changes in the programs in many states. Several significant developments related to these efforts were identified by Spieler and Burton,[49] including the reduction of the statutory levels of cash benefits in a number of jurisdictions, particularly with regard to benefits paid for permanent disabilities, and the narrowing of eligibility for workers' compensation benefits due to changes in compensability rules, a topic explored in greater detail below.

The effects of these developments on benefits and costs were significant. Benefits as a percent of payroll dropped from 1.65% in 1991 to 0.91% in 2014, while costs dropped from 2.16% to 1.35% of payroll between 1991 and 2014. The workers' compensation insurance industry was generally profitable between 1992 and 2014, with the operating ratio less than 100 in only four years (1992, 2001, 2002, and 2011).

B. Changes in Workers' Compensation Compensability Rules Since 1990

Starting in the 1990s, a number of states enacted legislative changes that were designed to specifically limit the availability of benefits for conditions

47. Benefits and costs as a percent of payroll are from BALDWIN & MCLAREN, *supra* note 5, at fig. 1.

48. Workers' compensation insurance underwriting experience from 1973 to 2013 is provided in John F. Burton, Jr., *Workers' Compensation Insurance Industry Underwriting Results Continue to Improve in 2013*, WORKERS' COMPENSATION RESOURCES RESEARCH REPORT Issue 8, Table 1 (Workers' Disability Income Systems, Inc. 2014).

49. Emily A. Spieler & John F. Burton, Jr., *Compensation for Disabled Workers: Workers' Compensation*, *in* NEW APPROACHES TO DISABILITY IN THE WORKPLACE 205 (Terry Thomason, John F. Burton, Jr. & Douglas Hyatt eds., 1998).

in the gray areas.[50] Since each state's program is an interdependent system with its own history of tradeoffs among key provisions, it is important to be careful in making generalizations in trends. Some of the more common types of changes in the availability of benefits are, however, apparent.

1. Changes in Compensability of Particular Conditions

One of the most obvious constraints on benefit availability involves statutory or regulatory changes that explicitly limit the compensability of claims involving particular medical diagnoses. For example, many states substantially restricted the right of workers to make claims for psychological injuries resulting from a mental stimulus in the absence of a physical injury (so-called "mental-mental" claims).

Injuries caused by repetitive trauma, such as carpal tunnel syndrome and noise-induced hearing loss present a similar picture. As the incidence of these claims sky-rocketed, state legislatures responded by tightening eligibility standards, using the same mechanisms used to limit compensability of stress claims.

2. Limitations on Coverage When the Injury Involves Aggravation of a Pre-Existing Condition

Other changes are subtler than explicit restrictions on the compensability of specific conditions. Traditionally, employers were said to ''take workers as they found them." This meant that workers with preexisting conditions were not barred from coverage for work injuries, even if the underlying condition contributed to the occurrence of the injury or to the extent of the resulting disability. Through a variety of legislative and judicial changes, rules governing compensation for preexisting conditions or aggravation have been tightened in many jurisdictions. Most significantly, several states now deny compensability when the current injury is not the sole or major cause of disability. These limitations come in a variety of forms: excluding injuries or resulting disabilities if they are the effects of "the natural aging process"; requiring that work be the "major" or "predominant" cause or "the major contributing factor" of any disability; and excluding injuries for which current work is merely the triggering factor. These changes are reinforced by heightened evidentiary standards for claimants, including requirements of "objective medical evidence" (discussed below), and by

50. Emily A. .Spieler & John F. Burton, Jr., *Compensation for Disabled Workers*, supra note 49; Emily A. Spieler & John F. Burton, Jr., *The Lack of Correspondence Between Work-Related Disability and Receipt of Workers' Compensation Benefits*, 55 AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 487 (2012).

stricter rules and shorter time limits for reopening prior claims when progression of a condition occurs.

4. Procedural and Evidentiary Changes in Claims Processing that Restrict Compensability

Finally, statutory and administrative changes in procedural rules and evidentiary standards have resulted in restrictions on the number of compensable claims in many programs. For example, statutory changes in a number of states now require a claimant to prove both that the injury was primarily work-related and that the resulting medical condition can be documented by "objective medical" evidence. The requirement for objective evidence excludes claims based upon subjective reports regarding patients which cannot be substantiated by objective evidence, including debilitating musculoskeletal injuries that involve soft tissue damage and reports of pain and psychological impairment.

In addition, claimants are sometimes asked to meet increasingly strict burdens of proof. In a landmark case under the federal black lung compensation law,[51] the U.S. Supreme Court ruled that, due to requirements in the Administrative Procedures Act, claimants must prove their cases by a "preponderance of the evidence." The result was a reduction in the number of approved claims. Amendments to some state statutes now require, either for all claims or for specifically delineated ones, that claimants meet this "preponderance" standard or, for some injuries or diseases, the even more difficult standard of "clear and convincing evidence." Because many workers' compensation programs gave claimants the benefit of the doubt in close cases in the past, these changes are significant.

5. Apportionment

The California workers' compensation statute was amended in 2004 to change the approach used to compensate a permanent disability that involves a current work-related injury (or disease) that overlaps a pre-existing work-related or non-work-related injury.[52] The basic issue is: should the rating for the permanent disability be apportioned among the multiple injuries? One type of case occurs when a worker has a pre-existing medical condition due to a congenital problem (such as a back disorder) that did not previously limit her actual earnings and the worker experiences a work-injury that (in combination with the congenital problem) reduces her earnings capacity by 50%. Assume the evidence indicates that if the worker did not have the pre-

51. Director, OWCP v. Greenwich Collieries, 512 U.S. 267 (1994).
52. WILLBORN ET AL., *supra* note 7, at 980.

existing medical condition, the work-related injury would have reduced her earning capacity by only 20%. The "traditional" workers' compensation legal principles hold the employer responsible for the entire amount of her 50% loss of earnings capacity. However, the *Brodie* case indicates that California changed this traditional answer and so the employer is only responsible for the 20% reduction in earning capacity.[53]

6. Effects of the Restricted Compensability Rules

On the national level, workers' compensation cash benefits per 100,000 workers (measured in constant dollars) declined by 41.6% between 1990 and 1999. Guo and Burton identified several factors that help explain the decline in cash benefits in many states during this period.[54] They constructed a measure for the benefit allowance stringency (the BAS variable), which looked at the proportion of injuries reported by employers to OSHA that resulted in workers' compensation claims, and found that the proportion declined between 1985 and 1999 as state workers' compensation programs became more stringent because of administrative practices, rules, or decisions by state agencies or courts. They also found that a portion of the decline in cash benefits was due to statutory changes that involved tightening of compensability rules. Together, changes in the BAS variable, in the compensability rules, and in the declining share of workers' compensation cases that resulted in permanent partial disability benefits explained more of the decline of cash benefits paid by workers' compensation programs during the 1990s than did the decline in the workplace injury rate.

VII. APPROACH THREE FOR WORKERS' COMPENSATION WHEN MEDICAL CAUSATION IS PROBLEMATIC: DEVELOP A NEW PROGRAM FOR THESE DISEASES

A. Back Disorders

1. The Medical Approach to Back Disorders

Claims involving back disorders are very common in workers' compensation systems, and certain types of medical conditions involving the back illustrate the problem of determining causation.[55] From a medical

53. Brodie v. Workers' Compensation Appeals Bd., 156 P3d 1100 (Cal. 2007).

54. Xuguang (Steve) Guo & John F. Burton, Jr., *Workers' Compensation: Recent Developments in Moral Hazard and Benefits Payments*, 63 IND. & LAB. REL. REV. 340 (2010).

55. John F. Burton, Jr., *Disability Benefits for Back Disorders in Workers' Compensation*, *in* ARTHRITIS AND SOCIETY: THE IMPACT OF MUSCULOSKELETAL DISEASES 89 (Nortin M. Hadler & Dennis B. Gillings eds., 1985).

standpoint, three types of back disorders can be identified: (1) fractures and dislocations, which are relatively uncommon, although often they are quite serious, especially if the spinal cord is involved; (2) sprains and strains, which are common, but in general have less serious consequences than fractures and dislocations; and (3) diseases of the back, in which damage results from a slowly developing condition rather than an acute traumatic event.

Diseases of the back include conditions specifically affecting the back and neck (such as a prolapsed intervertebral disc, also known as a herniated, ruptured, or slipped disc). Prolapsed discs are one of the most common sources of disability among the working age population. At one time, physical trauma was believed to be the only cause of prolapsed discs. However, the current medical view is that, although trauma is sometimes the precipitating event, many discs prolapse without any antecedent trauma and "trauma is seldom regarded as the underlying cause."[56] Thus any simple cause-and-effect model for herniated discs is inappropriate. A second disease affecting the back is degeneration of the discs. To a large extent, the degeneration is part of the normal ageing process. A complicating factor is that many people with radiographic evidence of disc degeneration have no symptoms.

In addition to diseases specifically affecting the back, others of a more general nature can also affect the back, including arthritic disorders, such as osteoarthrosis, which is the most frequently occurring joint disease and seems to be an almost inevitable consequence of aging. One confounding aspect is that many people with radiographic evidence of osteoarthrosis have no symptoms,

Several generalizations about the medical knowledge of back disorders appear to be warranted.[57] First, "in a large proportion of cases of flow back and neck pain, no definite diagnosis can be made."[58] This is partly so because the symptoms are often not uniquely associated with a particular disease; partly because radiographic evidence of a disorder is often not associated with any symptom, and partly because a particular patient may have two or more disorders.

The previous paragraph was written in 1985. Has the ability to diagnose low back pain improved in the last thirty years? Hadler is a skeptic.

> Health agencies in eleven countries have published evidence-based guidelines for the management of such patients: all agree that radiographs are not useful. Almost everything one can see on an X-ray is likely to be present in many people the same age who are not hurting, is likely to be

56. JENNIFER L. KELSEY, EPIDEMIOLOGY OF MUSCULOSKELETAL DISORDERS 153 (1982).
57. Burton, Jr., *supra* note 55, at 96–97.
58. KELSEY, *supra* note 56, at 45.

> have present before the current episode of backache, and is likely to persist after the episode.[59]

But surely we must have made great progress because of the introduction of CT and MRI scans in recent decades. Again, Hadler is the doubter.

> MRI scans are brilliant at defining the details of the soft tissues and CT scans of the bony anatomy. Imaging has a high false-positive rate, with the result that billions of dollars are spent annually in this pointless exercise. Furthermore, magnetic resonance imaging cannot be used to predict back pain. Magnetic resonance imaging is not even sensitive to anatomical changes that might correlate with new symptoms.[60]

A second generalization about back disorders is that the contribution of work to the disorders is difficult to ascertain. For example, there is no simple relationship between physical stress or particular types of work activity and back disorders. Hadler has opined on the ability to determine the cause or consequences of back pain. "Furthermore, there is no way to objectively quantify the pain and no pathoanatomical change that can be reliably ascribed to exposure at work or be considered the specific cause of the pain."[61]

A final generalization is that the medical view of trauma as a cause depends on the type of back disorder. Fractures and dislocations are usually caused by a readily identifiable traumatic event, while strains and sprains tend to have a less significant and therefore less identifiable trauma as the likely cause. Trauma is no longer considered the basic cause of prolapsed intervertebral discs. Trauma may also be a precipitant in several other diseases affecting the back, including disc degeneration. The true culprit often is age, although factors such as hereditary disposition may also be involved.

2. The Legal Approach to Back Aisorders

Burton examined the legal tests used to determine the compensability of back disorders and found a disconnect between the legal and medical view of causation.[62] The legal approach distinguishes between back disorders involving a slipped disc, which are considered to have a definite result, from those with generalized results, which includes all back conditions without a slipped disc. For slipped discs, most jurisdictions provide compensation without requiring proof of unusual exertion or a mishap as a cause. For generalized conditions, essentially all states provide compensation if there is

59. NORTIN M. HADLER, STABBED IN THE BACK: CONFRONTING BACK PAIN IN AN OVERTREATED SOCIETY 41 (2009).

60. *Id.* at 44.

61. I*d*. at 118.

62. Burton, *supra* note 55, at 97–101.

evidence of unusual exertion. When the indefinite result is coupled with usual exertion, a majority of states will also consider the back condition compensable, but a substantial minority will not.

There appears to be little problem with reconciling the medical knowledge concerning fractures and dislocations with the legal approach to these back disorders. There is normally an external traumatic event that causes the back problem and the application of the four legal tests used to decide if a claim is compensable is no more difficult than in most workers' compensation cases.

However, the distinction between herniated discs and other back disorders is not medically warranted. It represents an outmoded view of causation in which external trauma is assumed to be the cause of discal herniation. This distinction also reflects an inaccurate view that the consequences of discal herniation can be distinguished from the consequences of other back disorders because there is breakage rather than generalized conditions. Probably the most serious problem, however, with the legal approach is the implicit assumption that herniated discs can be differentiated from other sources of back disorders. The current legal approach of distinguishing between usual and unusual exertion as a precipitant of a back disorder is also inappropriate in light of current medical knowledge.

Based on an extended comparison of the medical and legal approaches to back disorders summarized in preceding paragraphs, Burton stated:

> The conclusions from this review of the legal issues involved in determining eligibility for compensation cannot be too comforting for those who support workers' compensation. The current legal tests to distinguish specific and generalized results, and the roles assigned to discrete precipitants and evidence of diseases, seem to have little scientific basis.[63]

B. A Modest Proposal for Reform

What should be done to deal with the wide gap between the medical and legal views of causation? Fortuitously, Burton received "guidance" from *The Report of the National Commission on Workers' Disease Protection Acts*, which had recently submitted a unanimous report.[64] The Commission

63. *Id.* at 100–01.

64. I "invented" *The Report of the National Commission on Workers' Disease Protection A*cts, as revealed in an explanation as to why the report was unanimous: "The absence of dissent is understandable, given the size and composition of the commission (Modesty prevents me from revealing his or her name)"; John F. Burton, Jr., *Compensation for Back Disorders*, *in* WORKERS' COMPENSATION DESK BOOK I-123, I-126 (John F. Burton, Jr. & Timothy P. Schmidle eds., 1992).

identified eleven fundamental precepts for such acts, of which two are relevant for this chapter:

> 1. Workers' Disease Protection Acts apply to diseases only, with injuries left to the exclusive domain of workers' compensation. It may be desirable to confine the coverage of the acts to selected diseases, such as cancer, back cases, or heart attacks. These are the types of diseases where multiple causes are likely and the ability to sort out the contribution of workplace factors from other causative factors is particularly difficult.
>
> 2. There is no work-related test for diseases encompassed by the Workers' Disease Protection Acts. The claimant is required to establish that he or she was or is an employee and that he or she has a disease that has caused an impairment that in turn caused actual loss of earnings.

The phantasmic *Report of the National Commission on Workers' Compensation Disease Protection Acts* was first published in Burton,[65] but had been included in an unpublished 1981 speech. Larry Joseph, who heard the speech, argued that the approach used in the Workers' Disease Protection Acts was appropriate for mental disorders[66] and for cardiovascular diseases.[67]

Adler initially appeared to be sympathetic to the proposal to remove diseases with multiple causes from workers' compensation programs, or to at least remove back disorders:

> The causality problem. . . arises out of the difficulty to determine the connection between the injury (disability) and the work. This problem is acute with diseases, such as back problems, heart attacks, stress-related diseases, and hearing decline which. . . are caused by both work and nonwork related factors and develop gradually, while the person is at work and not at work. . .
>
> The second causality problem is the imprecision of legal tests for determining the work connection of such diseases. . .
>
> The causality issue, however, must be seen in perspective. In Israel in 1993, 94.1 percent of work accidents were caused by an external factor, 5 percent resulted from back disease, and the remaining .90 percent of work accidents were from heart attacks, occupational injuries, hearing decline, poisoning, etc. . . The problems involving this small percentage of cases does not justify eliminating the entire worker's compensation system. We should, however, seek solutions that will reduce the causality problems. . .
>
> One possible solution to the causality problem is to eliminate back disease, heart attacks, stress-related diseases, and hearing decline as work accidents. . .
>
> Elimination of such diseases as back disease, heart attacks, and hearing reduction would reduce greatly the instances of imprecise and arbitrary

65. *Id.*

66. Lawrence Joseph, *The Causation Issue in Workers' Compensation Mental Disability Cases: An Analysis, Solutions, and a Perspective*, 36 VAND. L. REV. 263 (1983).

67. Lawrence Joseph, *Can Workers' Compensation Deal with Cardiovascular Claims? in* WORKERS' COMPENSATION: THE CHANGING CHARACTER OF STATE SYSTEMS (Peter S. Barth ed., 1987).

> tests and cases, which discredit the workers' compensation system. This would increase the "fairness' of the system and reduce the chances that the parliament will eliminate the entire workers' compensation insurance system. . .
>
> There is, however, one serious drawback to the abolition of all these diseases as work accidents. The public is used to these diseases being recognized as work injuries and their elimination may be regarded as unfair by the public, especially when the disease appears at the workplace (such as a heart attack that occurs at work or a backache that begins at work).
>
> Therefore, it might be prudent to eliminate only back disease, which is the only disease involving a significant number of claims.[68]

However, Adler's support for any proposal to remove one or more diseases from workers' compensation appears to have been short-lived. Although the specific condition discussed was mental disability, the logic appears to apply to all diseases in Adler and Schochet:

> Lawrence Joseph, in his comprehensive 1983 article . . . argues that the complexities of mental disability claims preclude a fair and just determination of causation. Joseph concludes that compensation for industrial psychiatric injury should be included in Professor John F. Burton Jr.'s recommendation for a statutory solution for compensation of disabling diseases of unknown causes. Professor Burton has proposed a "Workers' Disease Compensation Act" as a systemic solution for disability claims of unknown or multiple cause which would not require a work-related nexus for compensation.
>
> Lasky disagrees. Like Lasky, we too believe that "substantially effective solutions are possible." It is not required to find the medical cause of a purely psychiatric claim in order to find that a psychiatric injury (assuming disability) is compensable. It is only necessary to determine that the injury was work-related; that is, that it arose out of and occurred in the course of employment as defined within the WC system.[69]

VIII. CONCLUSIONS

The chapter has examined three possible approaches for workers' compensation programs to deal with diseases when medical causation is problematic. What are the advantages and disadvantages of each approach?

A. Develop Legal Rules to Exclude Diseaseswiht Problematic Causation

This approach has been dominant in the United States since the early 1990s. One advantage to employers is that the tightening of compensability

68. Adler, *Should Work Injuries and Nonwork Injuries be Compensated Differently?*", *supra* note 3, at 12–15.

69. Adler & Schochet, *supra* note 27, at 610.

rules has been a major factor in reducing the costs of workers' compensation as a percent of payroll in recent decades. Another advantage is some of the most problematic cases have been eliminated from workers' compensation programs, thereby lowering litigation costs for private parties and state agencies.

There are, however, disadvantages. The lower costs to employers have largely been achieved by reducing or eliminating workers' compensation benefits for injuries and disease that previously would have been compensable. Unlike Israel, which guarantees comprehensive assistance to those whose disabilities are not work-related through a general disability program and a guaranteed income program,[70] in the United States there are no comprehensive programs that provide cash benefits to workers who do not qualify for workers' compensation benefits. Guo and Burton provide evidence that as workers' compensation compensability rules were tightened in the 1990s, applications for Social Security Disability Insurance (SSDI) increased modestly.[71] However, SSDI is only available for workers who are permanently and totally disabled, while typically more than 60% of workers' compensation cases involve temporary total disability benefits and more than 60% of workers' compensation paid benefits are for permanent partial disability.[72] In addition, a significant portion of U.S. workers are not covered by health insurance for non-work-related medical conditions, although that percentage has increased as a result of the enactment of the Affordable Care Act (a.k.a. Obamacare). As a result of the gaps in the U.S. safety net, many of the disabled workers who previously received workers' benefits will no longer receive adequate cash benefits or medical care. I am discouraged by the U.S. experience in recent decades because compensability rules for workers' compensation benefits have been tightened not on the basis of scientific evidence but instead on the basis of cost-minimization.

B. Develop a New Program for Diseases with Problematic Causation

I have advocated a new program for diseases with problematic conditions—at least on a trial basis in some states. One advantage is that the proposed Workers' Disease Protection Acts would eliminate the work-related legal tests that flaunt the medical knowledge of causation for conditions such as back disorders and mental disorders. The arbitrary results

70. Adler, *Should Work Injuries and Nonwork Injuries be Compensated Differently?*", *supra* note 3, at 4–5.

71. Xuguang (Steve) Guo & John F. Burton, Jr., *The Growth in Applications for Social Security Disability Insurance: A Spillover Effect from Workers' Compensation*, 72 SOC. SEC. BULL. No. 3, 1 (2012).

72. BALDWIN & MCLAREN, *supra* note 5, figs. 4a, 4b.

of the application of the legal rules would be eliminated. A related advantage is that a major source of litigation would be eliminated.

There are, however, limitations to this approach. One such limitation is that dropping the work-related test does not eliminate other contentious issues in the current workers' compensation: it still must be determined whether the worker has a disease (which, for example, is a non-trivial issue in many cases involving mental disorders) and the extent of the worker's disability still must be determined (which is often a contentious issue in cases involving permanent partial disability benefits). So the omission of the work-related test in Workers' Disease Protection Acts will not produce a frictionless delivery system. Another limitation is that—other than endorsement by a few scholars—the notion of eliminating the work-related tests for certain diseases has not been a run-away best seller in the market place for ideas. And finally, one motivation for the proposed Acts was to enhance the consistency between the legal tests for compensability and the medical knowledge of causation. But is consistency truly a virtue? I am admonished by the words of Ralph Waldo Emerson:

> A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines. With consistency a great soul has simply nothing to do.[73]

C. Develop Workable Legal Rules to Include Diseases with Problematic Causation

The development of workable legal rules that may not incorporate the medical understanding of causation has been advocated by Adler and his co-authors. One advantage is that legal rules for causation can avoid the complexity of scientific knowledge of causation of diseases and also may avoid the necessity to adjust the legal rules every time a new theory of medical causation prevails. Another major advantage is that the legal rules of compensability can reflect compromises that make the workers' compensation program viable.

One disadvantage of the Adler approach is that if legal rules lag too far behind advances in medical knowledge of causation, the rules and in turn workers' compensation programs lose credibility. Another disadvantage is that once the link between scientific knowledge of causation and legal rules for compensability is viewed as dispensable, policymakers have greater freedom to determine the scope of the workers' compensation program. In some instances, such as the traditional approach to back disorders in the United States, the legal rules allow some conditions into the program even

73. RALPH W. EMERSON, ESSAYS: FIRST SERIES (SELF-RELIANCE) (1841).

though medical causation is lacking. In other instances, such as the recent trend in the United States, legal rules are written to preclude compensation for conditions that medical evidence has shown to be caused by work.

Coda

Stephen Adler is to be commended for his multiple contributions to the debate about which diseases should be included in workers' compensation programs. He has been a persuasive advocate of the position that congruence between legal rules and medical knowledge is a foolish consistency. Or, to restate even more positively his contribution,

Shall we say prudent?

Adler's work-cause pronouncements

Nay, let's say profound!