

Functionalism: The Penumbra of Psychiatric Diagnoses

Walter Bromberg, MD

Functionalism, as generally understood, is not included in DSM-III-R. It differs from somatization and hysteria. Analysis of cases of functional overlay indicates the presence of a fixed attitude—depending on body-image distortion, feelings of injustice toward the existing medicolegal methodology, social and economic impairment, anger against legal delays, and a conviction of the futility of treatment or of attempts at rehabilitation. It should be included in DSM-IV as a subset under posttraumatic stress disorder.

The Problem

This discussion attempts to investigate, through clinical case experience, the roots of the term “functionalism.” It is generally understood intuitively although not defined precisely. Walton,¹ a British neurologist, has aptly stated: “Functionalism . . . is hallowed through common usage.” DSM-III-R² apparently allies functionalism with somatoform disorders, where “physical” symptoms are not explained by “specific patho-physiological processes . . . are not demonstrable or understandable by existing laboratory procedures and are conceptualized . . . by means of psychologic constructs.” These constructs are added to by attitudes, personality deviations, and sociocultural-economic pressures that eventuate in exaggeration and

overvaluation of pain and distress: They lie in diagnostic shadows, so to speak; hence the title of this article.

Functionalism occurs in many medical conditions but is more evident in posttraumatic stress reaction, where symptoms may be prolonged and intensified, defying successful treatment and altering prognoses. Some dismiss these exaggerations as “neurotic psycho-physiologic reactions . . . medicalization of the common aches and pains of mankind,” in the words of Weinberger,³ who added in his focus on traumatic fibromyositis, “[these complaints] are medical myths . . . in the folklore of trauma.”

More realistically, Beahrs,⁴ in a recent development of his Differential Therapeutic Index, remarks that such mental symptoms are “untestable intangibles” and hence beyond “scientific parameters.” Because traditionally a diagnosis for a patient rests on ruling out, or on ruling in, agreed-on medical and psychiatric disorders (after exhaustive history and examinations), from a vast array of

Dr. Bromberg is a diplomate of the American Board of Forensic Psychiatry and former President of the Board. He is a consultant for the Social Security Disability Evaluation Program and a forensic psychiatry consultant. Address reprint requests to Dr. Bromberg, 3353 Cottage Way #100, Sacramento, CA 95825.

physical and mental conditions, intangibles are neglected or discounted as meaningless.

In 1979, in attempting to analyze functionalism among posttraumatic cases,⁵ I described a gradient of nonverifiable symptoms: simulation, malingering, exaggeration, overvaluation, functional overlay, and conversion hysteria, in that order of severity. The first four were of conscious origin, the latter two on a partly unconscious basis. I agreed that "overlay" was an unacceptable diagnosis representing an "out-of-wedlock" term as far as DSM-III was concerned; a "bastard offspring of malingering and hysteria." My conclusion, at that time, was that functional overlay represented a shadowy reaction that prolonged and intensified traumatic stress symptoms not recognizable as accepted medical conditions.

On restudying the problem, with the experience of having evaluated more than 2000 cases over the past 40 years in courts trials, compensation hearings, settlement conferences, medicolegal conferences, etc., I now feel a broadened view is warranted.⁶ This view suggests evaluating those patients' symptoms that fall outside accepted medical diagnoses in terms of their own reality, i.e., their individual sociocultural realities. In so doing, the changing attitudes of patients and physicians who made diagnostic evaluations over the decades must be considered.

Social Influences

One of the social forces that tend to intensify posttraumatic symptoms, as

well as "nervous complaints" in medical patients, has been the medical-social heightening of interest on the part of the public during the past two or three decades. This interest has been occasioned by television educational and journalistic outpouring of "medical breakthroughs" and concentration on matters of health and disease that have heightened the public's sensitivity toward illness through increased self-perception of body changes. Heightened medical concerns have had conscious and unconscious influence on body-image perception on the entire populace, both healthy and ill. These influences have been described by Brodsky (see Ref. 27) as a "medical subculture."

From a medical viewpoint, social forces have also insensibly influenced physicians in their reactions to so-called nervous elements in victims of war and civilian injuries. As psychiatry and neurology developed in the latter part of the 19th century and early years of the 20th centuries, terms such as neurasthenia, traumatic neurosis, shell shock, combat fatigue, hysteria and, later, neurosis after trauma, compensation neurosis, the present-day posttraumatic stress disorder, and somatization were used to signify nervous and intangible elements in trauma patients.

Experiences with psychological casualties in World War I and II alerted physicians to these combined physiological and undefined psychological reactions. They were named⁷ effort syndrome (Lewis), defined as an "exaggerated physiological response to exercise," neurocircular asthenia, war neurosis,

Functionalism

combat fatigue, and, when extended to civilian injuries, traumatic neurosis, neurosis after trauma, compensation neurosis with secondary gain, and, finally, posttraumatic syndrome. It should be noted that the phrase malingerer was often used in connection with these difficult-to-diagnose conditions, disclosing an ever-present suspicion of deceit. For example, Foster Kennedy,⁸ an eminent New York neurologist, wrote in the 1940s:

Compensation neurosis [is] a state of mind borne out of fear, kept alive by avarice, stimulated by lawyers, and cured by a verdict.

And Walter Alvarez,⁹ widely respected physician and medical publicist, stated in 1951:

Traumatic neurosis cases develop from unwise suggestions by interns, doctors, nurses, physiotherapists . . . [in whom] . . . recovery usually occurs only after a remuneration. . . .

The problem became of practical importance when an injured patient was brought before a legal tribunal for judgment involving financial awards for "noneconomic" damages, i.e., pain, suffering, emotional discomfort, anxiety, etc., not truly the consequence of bodily impact.

The Legal View

This type of case arouses a wariness that fictitious claims may be fabricated, or frivolous claims made. The legal view can be summarized in a dissenting statement by Justice Douglas of the Supreme Court¹⁰ in a case involving "fear of mental shock" after an injury.

If defendant is turned over to the plaintiff's doctors . . . to discover the cause of the mishap,

the door will be opened for grave miscarriage of justice. . . . A doctor for a fee can easily discover something with any patient

More commonly the issue is a guarded attitude by the judiciary to allow financial awards for injured patients. A lawyer¹¹ writes: "The social implications of creating a pseudo-illness, i.e. traumatic neurosis, by awarding money for it is decried."

Medical writers have been no less adverse to awards for posttraumatic injuries in functional overlay patients. Robitscher¹² wrote in 1970:

The more money is available for attorneys' fees, the more psychiatric testimony can be marshalled, and the more ingenious the psychiatric view that will be presented in court.

The accent on deceit, apparently borrowed from the legal forum, has also been applied to psychiatric aid for money awards by meretricious posttraumatic patients. The clearest expression of this medical attitude is that of Weinberger,³ who, in discussing whiplash and back injuries, writes that *traumatic fibromyositis* is: The nidus around which a neurotic psychophysiological reaction develops when it is no more than a medicalization of the common aches and pains of mankind."

A more informed and reasoned picture of the money versus injury contest has been given by Modlin,¹³ an experienced psychiatrist, in these words: "Our sociolegal system long ago discarded the literal 'eye for an eye' philosophy and replaced it with money, the universal medium of exchange, as redress for tort grievances. Consequently, the possibility of monetary compensation has acquired

enormous symbolic significance . . . a potential source of security . . . legitimization of dependent needs.”

Modlin's perception that award money can symbolize psychological needs points to a broader interpretation of those symptoms not clearly secondary to pathology. Psychiatrists appreciate the complex relation of injury to its socioeconomic consequences, especially where injury calls forth trouble *not* present before the accident in question.

Before discussing the sociocultural-economic factors that impinge on post-traumatic cases categorized as presenting functional overlay, a brief review of recent psychiatric thinking in this area is of vital importance.

Recent Psychiatric Views

In 1963 Hirschfeld and Behan¹⁴ published their study of posttraumatic cases, concluding that the “accident process” develops *before* the accident occurs in cases of chronic disability. These authors claim that the “psychological process occurs where the injury is a solution to the patient's problem.” An editorial in the *Journal of the American Medical Association* (1963) concerning the above-cited article¹⁵ commented that the “accident process theory” is the “greatest obstacle to scientific accuracy because of the widespread public emotional involvement over medical insurance.” The recognition that the public is involved emotionally with insurance problems is significant in the analysis of functionalism.

As Florence and Miller,¹⁶ writing in 1985, point out: “Functional overlay is

virtually present in . . . many medical problems . . . [especially] in patients with chronic pain syndrome.”

Further, in a seminal paper on hypochondriasis, Bodily complaints and Somatic Styles, Barsky and Klerman¹⁷ point to the importance of considering the patient's “perception of and response to” demonstrable pathology, in contrast to his or her “disease,” among hypochondriacal individuals. They speak of the “style” of the patient, recommending “abandonment of the term *hypochondriasis* in favor of *amplifying somatic style*, emphasizing the “social, cultural and ethnic forces . . . [that] . . . modify the basic tendency to express psychological distress in somatic terms.” Amplifying somatic style is further defined as “one particular mode of perceiving, evaluating and expressing bodily sensations . . . [wherein] . . . personal and subjective factors, such as motivation and need, profoundly modify perception and thinking.”

Of historical interest is Schilder's¹⁸ description of tachistoscope experiments proving that “perception of body distortion was modified by personal attitudes and social expectations,” experiments in which I participated at the Bellevue Psychiatric Hospital in the late 1930s.¹⁹ Cantril²⁰ in 1957 repeated these experiments, concluding that all individuals establish perceptual “constancies” that become “solidifying social perceptions.”

In this connection it is noteworthy that sociologists have examined the “beliefs, values and roles of being sick” in persons hitherto able to function. Others remark in a slightly different context²¹

Functionalism

that “the connotation of weakness and moral culpability in a patient with mental disorder [such as depression is] still highly present, even among physicians.”

This connotation of weakness was pursued in a different vein when neuroses, or personality deviations, existing before an accident were examined. Thus Tuerk,²² in a standard psychiatric test (1975) wrote: “The patient’s disposition to disease and his reaction to injury . . . [are] . . . intangible factors [that] may be as important as the injury itself.”

In subsequent years (1980s), attention has focused on “illness behavior” to account for somatization reactions. Brodsky²³ approaches these conditions from this position: “Somatization is not a disease or an illness but . . . a broad term describing a person’s belief that a physical disease is present when . . . there is no medical evidence of disease.”

This approach stressed the belief aspect of the patient’s complaints. Ford²⁴ reaches an analogous position as he differentiates disease from illness: “Disease is an objectively measurable anatomic deformation and pathophysiological state while illness is a disvalued change in state of being and in social functions.” He describes social functions as including: “Patient’s family, employer, insurance company, lawyers . . . the entire socioenvironmental milieu in which patients live.”

The influence of environment in post-traumatic stress disorders became observably clear among Vietnam veterans so diagnosed, since 1980 when the Veterans Administration accepted this condition as compensable. Among others,

Atkinson *et al.*²⁵ found a disinclination among physicians to honor these veterans in like manner, inasmuch as it is recognized that exaggerated and false claims have been made by military personnel,²⁶ presented as *delayed* posttraumatic stress disorders. Criticism of the Vietnam War, and antipathy to the federal government’s actions, its inflexibility and bureaucracy, *did* add emotional elements to the original traumatic condition.

Environmental Influences

It is axiomatic that the dangers, frustrations, resentments, and anxieties in everyday life do affect all individuals and tend to prolong symptoms among neurotic and posttraumatic patients.

Brodsky²⁷ has discussed such environment-related stressors as fear of air pollution, concern about toxic admixtures in prepared food and some medications, worry about gases in the atmosphere, radioactive contamination from nuclear meltdowns, and anxiety about world destruction through nuclear warfare, all of which he placed under the heading of medical subculture. Brodsky further pointed to the influence of social support systems and Social Security programs, the atmosphere of “entitlements” to which disabled patients look for help, the expectation suggested by the statement, “Society owes me something,” and feedback from these government institutions that contributes to “illness and disability behavior.”

However, factual events that perpetuate posttraumatic symptoms in many cases have included extrusion from

the labor market, loss of self-esteem, concern about eventual reliance on welfare, fears of early forced retirement or of permanent physical disfigurement, anger at delays in the legal system and maneuvers by legal personnel and "company" doctors, and distrust of the judicial system. In the past these nondiagnosable factors have been considered matters of "secondary gain," or functionalism.

With the advent of a psychoanalytic attempt to understand the dynamics of the ego stress of wartime trauma, the notion of secondary gain²⁸ became an important factor to consider. Fenichel²⁹ defined it as a "demonstration of . . . helplessness in order to secure external help . . . as was available in childhood [e.g., love or sympathy]. . . ." beyond that of money. More recently (1985), in a similar direction, Mendelson³⁰ in Australia summarized the literature, both British and American, in respect to the validity of the "compensation neurosis" diagnosis. He concluded that the concept did not exist "as a clinical entity," although he agreed that these patients did present "hysterical conversion reactions." He also agreed that the older notion that "pecuniary gain . . . [is] . . . cured by the conclusion of litigation," is not supported by clinical evidence. Chiefly, Mendelson wished to do away with "vague terms such as functional overlay," although he did agree that "psychodynamic, interpersonal, intrafamilial and social" factors require detailed study.

This view of compensation neurosis has made perceptible gains in recent

years among workers in pain clinics. For example, Melzback *et al.*³¹ studied 81 patients with back and musculoskeletal pain, contrasting patients who received workers compensation with those who did not. They concluded that "compensation is not a *cause* of pain." Similarly, Dworkin and his group³² analyzed 454 chronic pain patients, finding that "patients who are receiving compensation . . . do not exhibit greater levels of psychological distress than patients who are not receiving compensation." Other research, chiefly from rehabilitation and pain control centers,³³ agrees that accident victims' symptoms include "complex psychophysiologic variables" that may be mistaken for compensation neurosis or malingering.

Thorne³⁴ in 1949 and Kamman³⁵ in 1951 introduced the term "attitudinal pathosis," a syndrome "occasionally found among compensation patients." Kamman emphasized the "primary-pathologic attitude [and] secondary personality and environment reactions" in this "global disorder." He pointed to the "nuclear attitude" of patients who interpreted reality according to this attitude which did not, in his opinion, constitute a specific neurosis. Branch and Cole,³⁶ in quoting Kamman and Thorne's attitudinal pathosis, described this attitude as a "type of character disorder."

Recently, Derebery *et al.*³⁷ and Gordon³⁸ have emphasized socioeconomic-cultural aspects in somatizing patients with low back pain. Their work confirms Schilder's^{39, 40, 41} and my researches into ego reactions to perception of distorted body images following in-

Functionalism

jury or disease. In this connection Steiner and Clark,⁴² in dealing with severely burned individuals, found a sense of "loss of body boundaries" among their patients. Such perceptions modify the resulting clinical picture.

Functional Overlay Concept

This concept rests upon a broadened view of the attitudes of injured persons with respect to their socioeconomic-cultural biases. For physicians, consideration based upon such a view will mean an objective stance toward posttraumatic patients that includes evaluation of their complaints in terms of patients' own senses of reality, i.e., their perceived physical (body image distortions) and psychological (economic, social, and cultural) realities.

The patient's reality may not correspond to the physician's concept of disease. The conflict then is between the patient's complaints and our diagnoses,⁴³ which "refer to actually existing entities versus the extent to which they are products of reigning medical fashions and social constructions of reality." (*cf.* DSM-II, DSM-III, DSM-III-R, and the projected DSM-IV).

Every illness, especially following impact of emotional trauma, is accompanied by a flash of resentment that constitutes an ego assault on the patient-victim, particularly if the injury is not anticipated. It is true that such reactions may develop out of neurotic soil or as a result of personality predilections, but nevertheless they are operative in the patient and can be easily observed.

The net effect of resentment after an

illness is the patient-victim's frustration in civilian or industrial trauma cases, in his or her incapacity to participate in and enjoy the advantages of our multifaceted economic and social national lifestyle with its aspirations to wealth, luxury, work success, health, travel and social position.

Case Material

Patient 1 A 38-year-old woman was injured in a rear-end collision in 1981. Thorough orthopedic, neurosurgical, neurological and medical examinations revealed slight to moderate radiculopathy of the level of C-7 and S-1. Consistent conservative treatment afforded no relief, nor did unorthodox orthomolecular and chiropractic treatment, including "garlic treatment," saliva analysis, and hair analysis. Her complaints were added to during the seven years after the injury: arthritis of the hip, "fracture of the cervical vertebrae" (absent on x-ray), colitis, "lines on the neck," tumor in the groin, etc.—all of which were imputed to the original injury.

Diagnoses of hypochondriasis, histrionic personality, and somatization were rejected by the patient, who considered them evidence of medical and legal "immoral and unjust negligence."

Because she was unable to secure legal representation for five years on the basis of these findings, her pain and disability were intensified. When she finally secured an attorney the full force of her accumulated anger exploded in invective and bitterness. According to the patient's statement:

I was left to suffer for the rest of my life . . . an innocent victim . . . [of] . . . the goal of the other side [third party] to fog the issues, to produce spite and rancor, to slander and defame my character through legal maneuvers. . . . I feel penalized for having seen a psychiatrist. . . .”

Patient 2 A 33-year-old man, a well-regarded worker, physically healthy and vigorous in January 1982, while at work, slipped on a wet floor while hauling 300 pounds of material on a pallet. His immediate symptoms were cervical and lumbar pain, restricted bodily movement, and numbness in the hands. Competent examiners reported, over a period of four and one-half years, diagnoses ranging from lumbosacral sprain to “no orthopedic pathology” and psychogenic pain disorder.

No improvement was observed following physical therapy except for some relief following carpal tunnel surgery. His compensation claim had not been settled for four years, during which time his standard of life had been severely reduced. One examiner’s report stated that his “symptoms were totally unrelated to this industrial accident,” a medical decision that particularly incensed the patient.

At home his wife reported his “seething anger” at lawyers, at their imputation of no permanent injury, at his company’s refusal to underwrite further treatment and their disinterest in his 15 years as a successful manager of a department, and at the hearing officer’s curt rejection of his disability.

One orthopedic consultant, who found no pathology, commented, “the

patient looks superficially relaxed . . . but is obviously very tense.”

Patient 3 A man, aged 42, was injured while working as a tree surgeon in 1982. He developed low back pain from hanging 30 feet above the ground on a limb, chainsaw in hand. Examination by competent orthopedic, neurological and neurosurgical consultants yielded a universal opinion of “back injury, etiology unknown.” Their reports included comments about an “inadequate personality”; a psychiatrist’s diagnosis was “passive-aggressive personality disorder.”

The history indicated numerous minor injuries, alcoholism, a prison sentence for involuntary manslaughter in youth, but a good industrial record; the patient had been regarded as a hard, trustworthy worker since his conviction.

When he was last seen by doctors in 1987, his lumbosacral and sciatic reference pain and disability were unchanged. His attitude was that of extreme frustration and resentment with outspoken demands for medical relief and demoralization at his forced inactivity.

Patient 4 An “angry young man” in his early 30s suffered from back and neck pain, tendonitis of elbows, and arthritis in both hands following a blow from the exhaust of a plane he was working on in the United States Air Force in 1970. Upon discharge he refused application for Veterans Administration disability benefits and has been complaining since then. In 1975 a laminectomy produced some relief of the neck pain but other complaints persisted. An ex-

Functionalism

amination in 1985 resulted in a diagnosis of "back pain and dysthymic disorder."

When seen in 1987, he produced a steady stream of invectives against "bureaucrats, the United States government, "the run-around," examinations, frustration at being "crippled," inability to engage in any physical activity, and anger at his ineffective life." He was particularly incensed at being denied Social Security disability benefits.

Patient 5 A 27-year-old woman, a refugee from Communist infiltration in the late 1960s complained of "all kinds of sickness" following divorce by the husband and removal of her two children. A tubal ligation had been performed after the birth of her second child in 1982, before the divorce.

She was given physical examinations for skin condition, abdominal pain, chronic back pain, urination difficulty, tingling in the hands and feet, hallucinatory experiences, and depression. The interpreter stated: "She lays around all day worrying about her divorce, loss of children, extrusion from her homeland."

Conclusion

The common factor associated with these, and many other, posttraumatic patients is the prolongation and intensification of symptoms and their imperiousness to treatment.

In sum, *Functional overlay*, unwieldily as the term is, can be defined as:

An unconsciously perceived distorted body-image, following an injury;

A conviction that the injury is beyond repair, is permanent in nature, affecting all life activities;

This conviction escalating into a firm belief that no treatment will remove the symptoms or disability, although treatment is avidly sought:

Increasing resentment toward "fate" that occasioned the injury, fixated by legal maneuvers, depositions, repeated examinations, delays in court or compensation forums, and antagonistic third parties;

Internalized anger, often mounting to rage, fused with a sense of injustice and outrage at presumed neglect, impervious to rational explanation;

Expansion of anger into a paranoid attitude toward lawyers, physicians and the entire legal system for its insensitivity;

Anger fired by the presumed unfeeling attitude of third parties that pain and disability can be reduced to bargaining over dollars; and finally,

The conviction that the presenting complaints were not present prior to the accident.

Experience with prolonged symptoms among patient-victims following impact or emotional trauma, lasting beyond medical prognostication, rests on emotional and attitudinal intangibles stretching beyond accepted psychiatric diagnoses. Therefore, it is incumbent upon forensic psychiatrists to recognize functional overlay as a describable condition involving socioeconomic and cultural elements that are as significant as medical, neurological, and psychological findings. It is hoped that the above definition of functional overlay will be included in future DSM revisions as part of posttraumatic stress reactions.

References

1. Walton JN: *Essentials of Neurology* (ed 2). Philadelphia, Lippincott, 1965, p 3
2. *Diagnostic and Statistical Manual of Mental Disorders* (ed 3 rev). Washington, D.C., American Psychiatric Press 1987, p 225, et seq.

3. Weinberger LM: Traumatic fibromyositis: a critical review of an enigmatic concept. *West J Med* 127:99, 1977
4. Beahrs JO: The differential therapeutic index. *Psychiatr Ann* 17:57-63, 1987
5. Bromberg W: Functional overlay: an illegitimate diagnosis? *West J Med* 130:561-5, 1979
6. Bromberg W: Psychiatric traumatology. *Psychiatr Ann* 14:500-5, 1984
7. Scrignar CB: Post traumatic stress disorder. *Psychiatr Times* 14:1-11, 1987
8. Kennedy F: The mind of the injured worker: its effects on disability periods. *Compensation Med* 1:19-24, 1946
9. Alvarez, WC: *The Neurosis*. Philadelphia, Saunders, 1951
10. *Schlagenhauf v. Holder*, 379 U.S. 104 Cir. Ct. for S.D. Ind.
11. Tanay E, quoted in *Psychic trauma and the law*. *Wayne Law Rev* 15:1033-59, 1969
12. Slovenko R, quoted in *Psychiatry and the Law* (ed 1). Boston, Little, Brown, 1973, p 300
13. Modlin H: Traumatic neurosis and other injuries. *Psychiatr Clin North Am* 6:661-82, 1983
14. Hirschfeld AH, Behan RC: The accident process. *JAMA* 186:193-9, 1963
15. Editorial. *JAMA* 186:174
16. Florence DW, Miller TC: Functional overlay in work-related injury. *Postgrad Med* 77:97-108, 1985
17. Barsky AJ, Klerman GL: Overview: hypochondriasis, bodily complaints and somatic styles. *Am J Psychiatry* 140:273-83, 1983
18. Schilder P: *The Image and appearance of the human body*. Madison CT, International University Press, 1950, pp 83-114
19. Bromberg W: *The Nature of Psychotherapy*. New York, Grune & Stratton, 1962, p 26
20. Cantril H: Perception and interpersonal relations. *Am J Psychiatry* 114:119, 1957
21. Katon W, Kleinman AL, Rosen G: Part II. Depression and somatization: a review. *Am J Med* 72:241-7
22. Tuerk K, et al: Head injury, in *American Handbook of Psychiatry* (ed 2). Edited by Arieta S. New York, Basic, 1975, pp 166-181
23. Brodsky C: Sociocultural and interactional influences on somatization. *Psychosomatics* 25:673-80, 1984
24. Ford CV: The somatizing disorder. *Psychosomatics* 27:327-37, 1986
25. Atkinson RM, Henderson RG, Sparr L, et al: Assessment to Vietnam Veterans for post-traumatic stress disorder in Veterans Administration disability claims. *Am J Psychiatry* 139:1118-21, 1982
26. Sparr L, Pankratz LD: Factitious post-traumatic stress disorder. *Am J Psychiatry* 140:919-1016, 1983
27. Brodsky C: 'Allergic to everything': a medical subculture. *Psychosomatics* 24:731-42, 1983
28. Miller H: Accident neurosis. *Br J Med* 1:919-25, 1961
29. Fenichel O: *The Psychoanalytic Theory of the Neurosis*. New York, Norton, 1945, p 126
30. Mendelson G: Compensation neurosis: an invalid diagnosis. *Med J Aust* 142:561-4, 1985
31. Melzback R, Katz J, Jeans ME: The role of compensation in chronic pain: analysis using a new method of scoring the McGill Pain Questionnaire. New York, Elsevier Press 23:101-12, 1985
32. Dworkin R, Handlin D, Richlin D, et al: Unraveling the effects of compensation, litigation and employment on treatment responses in chronic pain. New York, Elsevier Press 23:49-59, 1985
33. Trief P, Stein N: Pending litigation and rehabilitation outcome of chronic back pain. *Arch Phys Med Rehabil* 66, 1985
34. Thorne F: The attitudinal pathoses. *J Clin Psychol* 5:1, 1949
35. Kamman GR: Traumatic neurosis, compensation neurosis or attitudinal pathosis. *Arch Neurol Psychiatry* 65:593, 1951
36. Branch HCH, Cole NJ: Mental disease and injury, in *Disease and Injury*. Edited by L Brahdly. Philadelphia, Lippincott, 1961, p 45
37. Derebery V, Jane MD, Tullis: Low back pain exacerbated by psychosocial factors. *West J Med* 144: 574-9, 1986
38. Gordon, GH: Treating somatizing patients. *West J Med* 147:88-91, 1987
39. Schilder P: *The Image and Appearance of the Human Body*. New York, International Universities Press, 1950, p 104-18
40. Bromberg W, Schilder, P: On tactile imagination and tactile after-effects. *J Nerv Ment Dis* 76:1-24 and 133-155, 1932
41. Bromberg W: Tactual perception in alcoholism: a study of the influence of alcoholic and other psychotic states on tactual after-effects. *Arch Neurol Psychiatry* 28:37-51, 1932
42. Steiner H, Clark WR: Psychiatric complications of burned adults: a classification. *J Trauma* 17:134-43, 1977
43. Wallace ER: What is "Truth?" Some philosophical contributions to social issues. *Am J Psychiatry* 145:137-47, 1988