Military medical systems do not exist in isolation. The thinking that dominated approaches to treating stress-related illnesses of World War I and World War II arose from concepts that developed in the late 19th and early 20th centuries. These concepts became part of the physician’s expectational set as well as of the soldiers' illness presentational set, thereby defining many of the symptoms and responses of the psychological casualty.

**HYSTERIA AND HYPOCHONDRIA**

In the 19th and early 20th centuries, hysteria was believed to stem from a disorder of the uterus, which was presumably responsible for a protean range of symptoms and ailments. Since the source was a part of the female reproductive system, “hysteria” was considered gender-specific, although the range of possible symptoms involved was vast. Male analogs of this disease were traditionally viewed as rising from the spleen, and its expression was most often categorized as hypochondria (literally, of the abdomen). In 1822, Falret broke with the past tradition of defining hypochondria as a “moral” failing and redefined it as a mental disorder, i.e., a psychological ailment. (See Baur, 1988.) In 1831, the British physician James Johnson grouped together hysteria and hypochondria as “wear and tear syndrome,” resulting from “physical and mental overexertion and the stress attendant on life in a new industrialized society” (Webster, 1995). In 1851, Benjamin Brodie diagnosed and classified “hysterical joint disease” (or neuralgia of the joints), with its symptoms mimicking arthritis but without the accompanying diagnostic signs.

In the period following the Civil War, new categories of diagnostic thought about the concept of hysteria, “life-events” trauma, and the effects of life patterns on the development of psychological and physical symptoms had emerged. They helped to define the approaches and analytic tools applied to combat-related illnesses in World War I, World War II, and beyond. Actual
knowledge of factors, dynamics, and underlying processes changed dramatically, but the meta-categories—the overall associational structures derived from observation—have remained comparatively stable.

**NEURASTHENIA (NEUROCIRCULATORY ASTHENIA)**

In 1869, George A. Beard, an American neurologist, developed the diagnostic category of neurasthenia (literally, nerve weakness). Neurasthenia’s symptoms included “loss of appetite, weakness of the back and spine, sleeplessness, sick headaches, fugitive neuralgic pains,” which were added to over time to include such symptoms as

noises in the ear, atonic voice, deficient mental control, bad dreams, nervous dyspepsia, heaviness of the loin and limb, flushing and fidgetiness, palpitations, spinal irritation, uterine irritability, impotence, hopelessness and fears such as claustrophobia, agoraphobia and fear of contamination (Webster, 1995, p. 186).

It is clear that neurasthenia is a syndrome that has many of the same characteristics that are today associated with chronic fatigue syndrome and multiple chemical sensitivity. Neurasthenia’s symptoms also include many of those presented by some veterans suffering from Gulf War illnesses.

Beard defined the causative agents of neurasthenia as the pace and strains of American life. He saw it affecting males more than females and interestingly defined it as essentially class and culture bound. It is described as afflicting primarily the affluent because it represented the response of more finely grained and organized nervous systems to the pressures and strains of life. Ultimately Beard decided that these problems of the very sensitive and well-bred required “electrical” treatment, the panacea of the day, and he treated neurasthenia with electric belts and similar instruments. This was in keeping with a medical belief of the time that electricity was vital to the body’s well-being and the proper functioning of the nervous system, and therefore applications of electricity would correct errors and faults in body functions.

**CHANGES IN THE CONCEPT OF HYSTERIA AND TRAUMATIC NEUROSIS**

The concept of hysteria was transformed into traumatic neurosis, making it gender neutral and leading to the present construct that we call posttraumatic stress disorder or posttraumatic stress syndrome. Much of the critical thinking and work regarding hysteria was performed by Briquet at the Hospital de la Charite in Paris, who published his findings in *Traite de l’Hysterie* (1859). As Ellenberger (1970, p. 142) points out:
He defines hysteria as “a neurosis of the brain, the manifestations of it consisting chiefly in a perturbation of those vital acts which are concerned with the expression of emotions and passions.” He found one male hysteric for every twenty females and believed that hereditary predisposition played a vital role in its development.

The transformation of the concept of hysteria began during the later part of the 19th century when there were persistent and continuous railway accidents. Individuals who were involved in such accidents suffered a wide array of symptoms, often after a significant time delay. In many cases such symptoms were seen in patients who had no detectable injury or neurological damage. Others experienced symptoms well beyond those expected from the modest injuries sustained. Initially termed “railway spine,” these injuries were later renamed traumatic neurosis (after the older definition of neurosis, a disorder of the nerves brought about by exposure to trauma). Traumatic neurosis was a complex and thorny diagnosis, however, because the prolonged aftereffects of railway accidents were often the basis of litigation for compensation from railway companies.

In 1883, Herbert Page, an English physician asserted that the sequelae to “railway spine” were not based upon physical insult but a result of “nervous shock” and therefore were a form of hysteria. He asserted that the paralyses and loss of sensation (considered a diacritical of hysteria) in these patients were not organic. Again, the symptoms often appeared well after the railway accident. They were like those we see today in posttraumatic stress disorder as well as those of neurasthenia or other similar fatigue syndromes with an emphasis on physical symptoms.

While Page’s view was rejected by the Austrians and Germans, it received its most important endorsement from Charcot who utilized the extended construct of the functional, posttraumatic disorder to broaden and redefine notions of hysteria, particularly male hysteria. Thus Charcot defined two kinds of male hysteria, the classical one (grande hysterie) and the posttraumatic form (petite hysterie). Charcot’s ideas tied the concepts of hysteria to hypnotism as

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1In cases of traumatic neurosis, malingering was often broached, but over time more and more investigators came to reject the hypothesis that malingering was the primary basis for symptom presentation. Despite this, the term “compensation neurosis” came to be attached by many to persistent psychological and physical symptoms following an accident. It is still a category used for symptoms that persist during the course of litigation, even though the symptoms seldom disappear following payment of compensation.

2This position was widely accepted in Anglo-American and French medicine but rejected by a number of German physicians who maintained that these sequelae were different in severity and intensity from “hysteria” and should be classified as “traumatic neuroses.”

3These notions were to have significant influence on Sigmund Freud, who spent some four months working with Charcot at the Salpetriere in the winter of 1885–1886.
its treatment mechanism. From 1890 on, Charcot’s influence waned in the face of two rising modes of approaching the problem of hysteria and its symptoms.

The first was psychotherapy, ultimately to be personified by Freud, which defined the sources of the problem not in heredity or in the existential traumas of the present, but in the early developmental history of the individual. The second approach was that developed by Charcot’s successor at the Salpetriere, Joseph Babinski. Babinski proposed “a purely pragmatic definition of hysteria. Hysteria . . . is the sum total of the symptoms that can be called forth by suggestion and dispelled by counter suggestion” (Ellenberger, 1970). While he felt that there were individuals predisposed to high suggestibility, he focused on the collusive nature of symptom elicitation: the patient producing what the physician, and by implication the medical system and medical culture, “expected” him to produce. As a result of Babinski’s reformulation, the number of diagnosed cases of hysteria in Europe declined in the first decade of the 20th century.

In sum, Babinski’s formulation of suggestibility, Beard’s concept of neurasthenia, and the rapidly developing schools of psychotherapeutic thought informed the paradigms for diagnosis and explication of combat-related stress responses in this century. These paradigms crystallized during World War I into modes of allocating causality for the psychological consequences of combat and combat deployments that remain part of the more complex models in use today.

**THE MAJOR MEDICAL TEXT: OSLER’S DEFINITIONS**

To understand clearly the structures that underlay the conceptualization and diagnosis of psychological and psychophysiological symptoms during World War I, it is reasonable to review the conceptual apparatus of the educated physician through the text that was the medical standard for decades: *The Principles and Practice of Medicine*, first published in 1892 by Sir William Osler, the first Chief of Medicine at Johns Hopkins University. It is my belief that the following symptom sets, which were defined by Osler for each of the diagnostic categories (traumatic neuroses, hysteria, and neurasthenia), became the cognitive undergirding of military psychiatry in World War I.

**Traumatic Neuroses**

Osler defines traumatic neuroses (also know as railway brain, railway spine, and traumatic hysteria) as, “a morbid condition following shock which presents the symptoms of neurasthenia or hysteria or both.” The condition often followed an accident but may follow “a profound mental impression.” “Severe mental
strain combined with bodily exposure may cause it,” as might “a slight blow, a fall from a carriage or on stairs.”

Osler divides the symptoms of cases of traumatic neuroses into three groups:

- **Simple traumatic neurasthenia.** This symptom set includes headache; tiredness; sleeplessness; inability to concentrate; nervous irritability and changes in mental attitude; despondency; and in extreme cases, depression, numbness and tingling in the extremities, back pain, disturbed digestion, and weight loss as well as the cardiovascular changes described for neurasthenia. The physical examination will often be unremarkable.

- **Cases with marked hysterical features**—in addition to the symptoms of neurasthenia, symptoms characteristic of hysteria may also develop. The patients have headache, backache, vertigo, limitation of the field of vision, hemianesthesia, and marked tremor.

- **Cases indicating or simulating organic disease.** These cases demonstrate marked sensory and motor changes, including anesthesia, paralysis, and contracture. Osler notes the paucity of such cases that have gone on to demonstrate organic disease, stating that,

  So far as I know no case with autopsy has been reported in this country, nor have I seen an instance in which the clinical features pointed to an organic disease which had followed upon a traumatic neurosis (Osler, 1892, p. 984).

**Hysteria**

Osler defines hysteria as “a state in which ideas control the body and produce morbid changes in its functions.” He sees two predisposing causes: heredity (providing an “abnormally sensitive” nervous system) and education (in our terms, psychological history). He contends that it is more common in some ethnic groups. What Osler terms the nonconvulsive forms of hysteria are of concern to us here and are explained below:

- **The disorders of motion:** paralyses, contractures, tremors and spasms, which may persist for months or years.

- **The disorders of sensation:** these include anesthesia and hyperaesthesia, (i.e., increased sensitivity and pains in various parts of the body, particularly the back and abdomen). There are also disorders of the senses (i.e., disturbances of smell, taste, vision, and hearing).

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4“There is no form of organic paralysis which may not be simulated in hysteria” (Osler, 1892, p. 969).
• Visceral manifestations: These symptoms include disturbances in respiratory rhythm (i.e., aphony, hiccup, cough), the digestive system (i.e., disturbed appetite, dyspepsia, gastric pain, gagging, vomiting, flatulence, diarrhea, and constipation), the cardiovascular system (i.e., tachycardia, chest pain, flushes in various parts of the body, and sweating), and the musculoskeletal system (i.e., joint affections involve sensitivity, pain, and swelling). Osler also maintains that he saw a number of cases of hysterical fever. These physical symptoms can be accompanied by a wide array of mental symptoms.

Neurasthenia

Osler defines neurasthenia as “the expression of a morbid, unhealthy reaction to stimuli acting on the nervous centers which preside over the functions of organic life.” He felt it was caused by both heredity and strain, particularly those “cares and anxieties” of living that lead to distress and “worry.” The symptoms of neurasthenia are wide-ranging and varied. The mental symptoms may include inability to focus upon a task, headache, irritability, depression, and disturbance of vision. The patient may complain of “weariness upon the least exertion, of weakness, pain in the back and of aching pain in the legs.” There may be local areas of tenderness, and disturbances of sensation, such as numbness and tingling. Other symptoms may include cardiovascular symptoms, including palpitations, cardiac irregularities, tachycardia; vasomotor symptoms, such as flushes and hyperemia of the skin; gastrointestinal symptoms; and sexual difficulties.5

Beyond Osler’s Definitions

At this time, the leading figures in psychiatry espoused Osler’s idea that a combination of hereditary and situational factors caused the above conditions. William Alanson White (1916) described all “mental disease” as

being the necessary outgrowth of his [the patient’s] particular and peculiar personality, not only so far as it had been acquired during his growth and development but also as far as it had been grounded in the hereditary elements with which he started.

5Quotations are drawn from Osler, 1892, pp. 967–984. The materials remain essentially the same in the 1910 edition.
ANCILLARY DEVELOPMENTS IN MILITARY MEDICINE

Within military medical thinking of the early 1900s, observations were made with respect to unit cohesion and esprit de corps in relation to illness that ultimately became part of our contemporary paradigm, although they played only a minor role in medical thought during World War I.

The relationship between cohesion or "primary group bonding" in respect to performance and sustainability on the battlefield had been noted since the time of Sun-tzu and the Western classical era. The recognition of the connection between cohesion and unit climate and illness was a result of the application of epidemiological observation of morbidity in military organizations. The almost universally high morbidity and mortality rates, particularly in overseas venues, had probably served to mask the possible contributions of psychosocial variables to illness rates. Therefore, this observation was more easily made following the introduction of competent methods of field sanitation and preventive medicine. The 19th century French Encyclopedia of Medicine observes that illness and psychological problems seem to be highest in units characterized by "poor" leadership and low cohesiveness. Soldiers in such units tended to have far more medical problems and issues than did those in their otherwise similar sister organizations.

There is little of substance to be learned from the American military experience throughout the late 19th and early 20th centuries. A small professional force was engaged in the occasional short and sharp battles of the Indian wars. Its losses to desertion and disease were chronically high. The only major conflict of the period, the 1898 Spanish-American War, relied heavily upon volunteers who were drawn widely from the population, and the war was short and triumphant. The overwhelming bulk of casualties came from diseases that were or had been endemic in the United States itself. While its medical leaders were responsible for many major developments in American civil medicine, the force’s medical problems were of little interest to society at large, still steeped in the American “antimilitaristic” tradition (see, for example, Marshall, 1972).

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6 This is particularly true of the numerous colonial deployments of the French Army of the period.
7 The force seldom if ever numbered more than 40,000, minuscule by European standards.