Chapter 2

TRADITIONAL WARFARE COMBAT STRESS CASUALTIES

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Tom Lea *Going In, Peleliu* 1944

Tom Lea was an artist correspondent for Life Magazine during World War II. He participated in the landing of U.S. Marine forces at Peleliu, hitting the beach 15 minutes after the troops. This painting was done from memory as he spent the first 36 hours after landing just trying to stay alive. The painting powerfully depicts the psychological mindset of a veteran going into combat yet again. The set of the jaw and the look of determination, against the background of ongoing death and destruction, was familiar to combat artists during World War II as they accompanied the fighting troops into "traditional warfare."

Art: Courtesy of US Center of Military History, Washington, DC.

INTRODUCTION

The diagnosis and treatment of combat stress casualties range from the easily accomplished to the highly difficult. Diagnosis may be apparent when a fatigued, anxious, otherwise intact soldier says, "Doc, I can't take it anymore." Diagnosis may be more difficult when the casualty is mute and unresponsive, or aggressive. Making the diagnosis is complicated not only by the heterogeneity of symptoms in the unwounded but also by potential wounding agents that can present with or mimic psychiatric symptoms. In addition to bullets, fragments, and burns, such wounding agents include biological and chemical agents, and radiation, both nuclear and microwave.

Treatment involving rest, nutrition, and expectancy, while generally easy in concept, may be difficult in application. During World War II, it was not unusual for sheer numbers of surgical casualties to overwhelm the forward treatment capabilities and result in evacuation rearward of stress casualties. High-intensity warfare, in addition to making forward treatment difficult because of the absence of a safe treatment area, will likely overwhelm the forward treatment facility with very large numbers of surgical and psychiatric casualties.[1] Low-intensity warfare can also produce psychiatric casualties and misconduct stress casualties (drug abuse, disciplinary infractions, venereal diseases) that may be difficult to treat—as was seen in Vietnam.

The types of casualties and their treatment depend on the type of war. It is, therefore, appropriate to discuss them in this context after first defining stress and psychiatric casualties.

DEFINITION AND MANIFESTATIONS

Historically, since late World War I, a combat psychiatric casualty has been defined as any militarily ineffective soldier (or organization) in whom the predominant factors producing ineffectiveness were of psychological (as opposed to physical) or neuropsychiatric origin. Although partly fulfilling this definition, disorders involving structural damage or major physiological disturbances of brain tissue were normally excluded from this category. Nonconflicted malingering was also excluded.

Current U.S. Army doctrine[2] distinguishes psychiatric from stress casualties. Psychiatric casualties are those with standard Diagnostic and Statistical Manual (DSM-IV)[3] diagnoses which are not simply the temporary consequence of the intense psychological and/or physiological stress of combat or other highly stressful missions. These latter are labeled "stress casualties," "battle fatigue," or "contingency fatigue." The U.S. Army classification also defines the "misconduct stress behaviors" as violations of regulation or law which require disciplinary action even though they are largely attributable to stressful conditions. It is recognized that psychiatric disorders, battle fatigue, and misconduct stress behaviors can coexist in the same soldier, with some grey areas where any of these labels can be used, based on the command's judgment of which will be best for the mission, the unit, and the individual soldier. This textbook will distinguish the psychiatric, stress, and misconduct categories except when making historical references and citations where "psychiatric" is historically accurate.

Manifestations of combat stress overlap at both ends of the psychobiological spectrum, and one role of the psychiatrist is to separate out particularly the neurological cases that require a different, sometimes surgical form of treatment. Sometimes it is important also to separate out the conscious malingerers, but this is not always the case because the treatment involving rest, expectancy, and strengthening the desire, however attenuated, of the soldier to return to his unit is generally the same in cases of combat fatigue and malingering. In the latter instance, however, a more coercive stance (threat of court-martial) may be required if early rest, expectation of recovery, and talking therapy do not produce willingness (however reluctant) to return to duty.

It is important to remember that most psychiatric casualties are soldiers who, because of the influence of negative psychological, social, and physiological factors, unconsciously seek a medical exit from combat. Most cases, therefore, will mimic features of other medical disorders that would be "legitimate" forms of escape from combat, thus

becoming "evacuation syndromes."[4] Improperly treated through evacuation, the symptoms may persist or worsen, developing characteristics of traumatic neurosis (chronic post-traumatic stress disorder).

The symptoms displayed are those considered more acceptable by fellow soldiers, commanders, and medical personnel. The symptoms often have a neurological or psychophysiological flavor, which in the past led to their classification as neuroses (anxiety and somatoform disorders). The absence of "neurotic" personality patterns and the transience of the syndrome when properly treated indicate a more appropriate categorization as a transient or situational stress or adjustment disorder.

Based on World War II experience, Weinstein and Drayer[5] distinguished the anxiety states of combat from those of civilian life by the following characteristics of combat anxiety: (*a*) the extraordinary precipitating factors in the perils and hardships of the combat environment, (*b*) symptom plasticity, (*c*) the importance of hostility and guilt, which is more immediately apparent than in most neuroses in civilians, and (*d*) the fact that they are in large part group phenomena. The soldier is a member of a closely knit, interdependent group, and group effectiveness and attitudes as well as ability to identify with the group modify significantly the soldier's capacity to withstand the traumas to which he is subjected. Failure in group membership may result in symptom formation.

From this discussion it is obvious that the symptom complex may be quite heterogeneous and fluid. During the early years of World War I, when it was believed that many soldiers were suffering from concussion caused by exploding shells or bombs, a diagnosis of "shell shock" was given and the symptoms mimicked those of persons who had suffered from a blow to the central nervous system. In the words of Bailey, Williams, and Komora: "There were descriptions of cases with staring eyes, violent tremors, a look of terror, and blue, cold extremities. Some were deaf and some were dumb; others were blind or paralyzed."[6(p2)]

Later, after the use of poison gas had become widespread, many soldiers presented with respiratory symptoms, particularly "choking" and hyperventilation, and they were often labeled "gas hysteria." As the psychological nature of the syndromes became known and the term "war neurosis" came into vogue, soldiers would present themselves as suffering from neurosis and latch onto this label as a legitimate escape from combat, leading to a policy by medical personnel of using a cryptic label, "N.Y.D. (nervous)" which stood for "not yet diagnosed (nervous)," as described in Chapter 1, Psychiatric Lessons of War.

Similarly, in the early phases of U.S. involvement in World War II, medical personnel used the term "psychoneurosis." Soldiers abbreviated this unfamiliar term to "psycho," and the casualties frequently displayed bizarre and regressive symptoms similar to those often seen in psychotic patients.[7] With the rediscovery of the principles of treatment by Hanson in North Africa,[8] and the use of the term "exhaustion," the bizarre symptoms receded to be replaced by symptoms of fatigue.

Glass[7] explained the efficacy of the term "exhaustion" compared with the diagnosis of psychoneurosis. Psychoneurosis implied unresolved intrapsychic conflict with unconsciously derived symptoms. The linkage between the symptoms and the conditions of combat was lost, and such casualties would not be accepted by the soldier's combat reference group as a normal result of battle. Instead, such soldiers were considered weaker, predisposed persons who had not been properly screened out at induction. Exhaustion was selected because it best described the appearance of most psychiatric casualties and of most combat participants of the time. Exhaustion was readily accepted by the casualty and his combat reference group. They could appreciate that anyone could become exhausted by the stress and strain of continual combat. The psychiatric casualty became a rational consequence of battle conditions. The new terminology communicated that the casualty was afflicted with a temporary, situationally-induced disorder that only required rest for restoration of function.

Despite the variability of symptoms in combat breakdown, some groups of symptoms have predominated in various wars. Bar-On and colleagues, as cited in Belenky,[9] have reviewed the predominant symptoms described in U.S. and Israeli casualties in World War I, World War II, Vietnam, and the Arab-Israeli wars of 1973 and 1982. These symptoms were grouped by Jones[10] in Table 2-1. These listings are not actuarial and should be viewed as showing tendencies only. When the anxiety and fear categories are collapsed, these symptoms are found to predominate in all U.S. wars except the Vietnam conflict. Even in the Vietnam conflict, an examination of psychiatric syndromes among sol-

TABLE 2-1

SYMPTOM CLUSTERS IN VARIOUS WARS

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Adapted with permission from Jones FD. Psychiatric lessons of low-intensity wars. *Ann Med Milit Fenn* [Finland]. 1985;60:129.

diers seen at a rear-echelon care facility staffed by a mobile psychiatric detachment (KO Team) early in the war before drug abuse and disillusion became widespread reveals a large number of anxiety-type symptoms. This is evident in Exhibit 2-1. In nonwounded soldiers, Bowman[11] found a predominance of dissociative, anxiety, and conversion symptoms, and in wounded soldiers anxiety dreams and neurological symptoms.

Similarly, Jones[12] found that anxiety and fear symptoms predominated in combat soldiers in Vietnam. In contrast, combat-support soldiers were more likely to present with what Jones referred to as "disorders of loneliness," which may be the modern analog of the "nostalgia" of previous centuries. Copen described the psychiatric stresses of military advisory soldiers in Vietnam in 1962 before large-scale U.S. involvement:

> Support troops, although exposed to little physical danger or hardship, nevertheless were stressed by separation from family, boredom, and job frustration. These men were frequently seen because of excessive drinking, psychosomatic complaints, and behavioral problems. Such individuals from support units were contrasted with advisors to combat units in which there was constant physical danger and far less comfortable environmental surroundings. These stresses resulted in casualties referred to as combat fatigue, although this entity tended frequently to be disguised in the form of antisocial behavior or vague physical symptoms.[4(p50)]

Thus, it appears that some manifestations of psychiatric difficulty are related to frequency and intensity of exposure to combat. The relationship of breakdown and its psychiatric manifestations to combat conditions will now be examined.

EXHIBIT 2-1

STRESS SYMPTOMS IN WOUNDED AND NONWOUNDED SOLDIERS AT THE 93RD EVACUATION HOSPITAL, VIETNAM, JANUARY–JUNE 1966 (Not listed in order of prevalence)

A. Stress Symptoms Seen in Wounded Soldiers

The disabling symptoms of wounded soldiers usually developed after hospitalization, or if present when hospitalized, the symptoms persisted or became more severe, requiring neuropsychiatric consultation.

1. Persistent anxiety dreams.
2. Pain in wounded extremity following complete healing.
3. Sensory defects in which the patient claimed hypesthesia and weakness of an extremity but the neurological examination was negative.

B. Stress Symptoms Seen in Nonwounded Soldiers

1. Somnambulism.
2. Anxiety dreams with talking or shouting.
3. Syncope and vertigo.
4. Narcolepsy-like complaints.
5. Seizures—not proved to be grand mal or petit mal.
6. Musculoskeletal-type complaints, such as low back pain, where the orthopedic examination is negative.
7. Amnesia, especially following exposure to explosions (mortar, artillery, or mines) but having no concussion.
8. Blurred vision—when the ophthalmologist can find no visual defects.
9. Stuttering, expecially following exposure to loud noises or automatic weapons fire.
10. Aphonias or other speech disturbances, such as whispering.
11. Persistent nausea or abdominal pain in which no gastrointestinal disease could be demonstrated by the internal medicine service.
12. Headaches, atypical but severe, persistent, and disabling, most often diagnosed as "tension headache."
13. Loss of hearing—in which ear, nose, and throat examination could find no hearing loss.

Adapted with permission from Bowman J. Recent experiences in combat psychiatry in Vietnam. Presented at the Social and Preventive Psychiatry Conference. 1967; Walter Reed Army Medical Center. Washington, DC.

ETIOPATHOGENESIS

The etiopathogenesis (origin and process of disability) of the stress casualties of mid- to high-intensity combat was well known by the French and British during World War I and became the basis for Salmon's "forward treatment." Strecker describes Salmon's etiological concept as follows:

> His visualization of the concept of the emotional conflict underlying war conversion hysteria (the moving demands of the instinct of self-preservation stirring deep and strong affective currents vs. the conscious expectations, desires, and requirements of "soldierly-ideals" imbedded in an emotional matrix of discipline, patriotism, and the like) was so dynamic and stimulating that it served as a beacon light to every psychiatrist in France, no matter how dark the outlook.[13(p386)]

Appel and Beebe put it more starkly in describing psychiatric casualties of World War II:

> [T]he danger of being killed or maimed imposes a strain so great that it causes men to break down … Each man (up there) knew that at any moment he may be killed, a fact kept constantly before his mind by the sight of dead and mutilated buddies around him. Each moment of combat imposes a strain so great that men will break down in direct relation to the intensity and duration of their exposure. Thus psychiatric casualties are as inevitable as gunshot and shrapnel wounds in warfare.[14(p185)]

Psychiatric Casualties and Combat Intensity

Glass has described the relationship of intensity and breakdown as following a bell-shaped or Gaussian curve:

> Very obviously, if you raise the destructive power of the weapon so that the individual cannot cope with it, then non-effectiveness is enhanced. If you have a weapon that is of minor destructive power such as bows and arrows, or rifles, more people can cope with it. This is why men tell you in combat they don't mind small arms fire; what they detest is artillery fire or mortar or other high explosives. So if you diminish the destructiveness, your curve looks different; if you raise it, then you have more non-effective people.[15(p4)]

Marlowe[16] has discussed the concept that combat stress casualties occur as a function of various "battle ecologies" in which the most important variable is the lethality of the environment. The stress casualties more directly related to combat have been shown in numerous studies to occur in a direct ratio to combat intensity as measured by killed-in-action (KIA) or wounded-in-action (WIA) casualties.[17] This ratio usually is about one stress casualty per three or four WIA casualties; however, other factors related to morale, training, physical fatigue, prior exposure, and combat success can markedly change this ratio. It, therefore, becomes appropriate to group stress casualties according to combat intensity. Combat intensity has generally been measured by numbers of WIA and KIA per combat day (any day in which one or more soldiers per company was killed or wounded). Because some injuries are combat-related but not caused by wounding, statisticians often combine the rate of battle injury and wounding (BI & W), usually given per 1,000 troops per year. Based on BI & W rates, World War II and most of the Korean conflict may be considered mid-intensity combat, and much of the Vietnam conflict may be considered low-intensity combat,[18] as seen in Table 2-2.

Obviously, during some periods of engagement with the enemy, BI & W rates for the engagement may be quite high but may or may not reflect significant changes in the overall rate. For example, during the first 6 months of the Korean conflict, casualties were higher than in any other American war by a factor of two due to the surprise North Korean invasion, the retreat to Pusan, the amphibious U.S. counterattack at Inchon, and the surprise Chinese attack from Manchuria. Because of the large numbers of U.S. casualties and relatively small numbers of U.S. troops in Korea, the annual rate approaches that of a high-intensity conflict.[19]

Similarly, during much of the Vietnam conflict, battle intensity as measured by BI & W rates was low; however, during the several months of the Tet offensive of 1968, casualties were relatively high,

TABLE 2-2

BATTLE INJURY AND WOUNDING RATES/ 1,000 TROOPS/YEAR DURING VARIOUS U.S. WARS

War	Year	Nonbattle Injuries	Battle Injuries and Wounds
U.S. Civil War	1861–1865	—	97
World War I	1917–1918	—	238
World War II			
Pacific	1942–1945	122	39
Europe	1942–1945	101	108
Mediterranean	1942–1945	131	80
Korea	1950	242	460
	1951	151	170
	1952	102	57
Vietnam	1965	67	62
	1966	76	75
	1967	69	84
	1968	70	120
	1969	63	87

Data sources: [US Civil War, World War I, and World War II] Beebe GW, De Bakey ME. *Battle Casualties: Incidence, Mortality, and Logistic Considerations.* Springfield, Ill: Charles C Thomas; 1952: 21. [Korea] Office of the Surgeon General. Korea: A summary of medical experience July 1950–December 1952. In: *Health of the Army, January, February, and March 1953.* Washington, DC: US Department of the Army; 1953. [Vietnam] Neel S. *Vietnam Studies: Medical Support of the U.S. Army in Vietnam, 1965–1970*. Washington, DC: US Department of the Army; 1973: 33, 36.

resulting in an annual BI & W rate for 1968 of 120, above the World War II (1942–1945) European rate of 108. Despite some intense battles, U.S. Civil War (1861–1865) casualties among Union troops were only 97/1,000/y,[15(p6)] making it a low- to mid-intensity conflict, while the American Expeditionary Forces' World War I (1917–1918) rate of 238 would place it in the mid- to high-intensity range.[17(p6)]

Another factor in intensity is total number of casualties per unit of time. The suddenness and intensity of the 1973 Yom Kippur War resulted in the compression of the amount of casualties normally occurring in the first 20 days of combat in World War II battles into the first 24 to 72 hours of combat.[1]

To take into account this factor of large numbers of casualties in a brief period of time, combat intensity has also been measured by the numbers of "pulses" of fighting in a given time period. During most of the battles of World War II and the Korean conflict, the number of battle pulses per day of combat did not exceed 4 or 5, whereas during the 1973 Yom Kippur War there were 10 to 12 battle pulses per day for the first week.[1]

Battle pulses of high-intensity combat are accompanied not only by high rates of killing and wounding but also by high rates of stress casualties. In the 1973 Yom Kippur War, some units, for example, had as many stress casualties as surgical casualties among both the Israeli and Egyptian forces.[20,21] There is much overlap not only in combat environments but also in symptom complexes.

In general, however, when one compares the symptoms predominating in various wars during the past century, a clustering can be seen based to a degree on the intensity of combat. For example, in addition to venereal diseases and "voluntary casualties"—those caused by failure to take antimalarial pills, engaging in substance abuse, presenting discipline problems (including refusal to fight and assassination of superiors)—are the primary characteristics of low-intensity, unpopular wars: explosive aggressive behavior, social estrangement, and constricted affect. Depressive affect reported by Bar-On and colleagues[22] as occurring in World War I, the 1973 Yom Kippur War, and the 1982 Lebanon War psychiatric casualties may also fit into this low-intensity war symptom complex depending on how it is defined.

During World War I, stress casualties presented with hysterical syndromes, psychomotor disturbances, and fear, as well as depressed affect. The high-intensity combat of the 1973 Yom Kippur War produced similar casualties, and the roughly 2-week period of intense warfare during the 1982 Lebanon War also produced these casualties. Except for that 2-week period, which produced most of the "traditional" (anxiety and fear) stress casualties, engagements in Lebanon were more of a low-intensity, insurgency nature with snipers and booby traps accounting for many casualties.[9] In this situation the development of symptom overlap between Vietnam, overall a classic low-intensity conflict, and the 1982 Lebanon War (ie, social estrangement) is seen. In a review of follow-up studies, Belenky[23] has detected another similarity between Israeli casualties from the 1982 Lebanon War and U.S. casualties from the Vietnam conflict, namely, the development of delayed stress casualties, which are reported as high in both groups of veterans.

These low-intensity warfare casualties, who present with problems that suggest a depressive core and depressive symptoms, were the primary presentation of nostalgia in preceding centuries.[24] Unchecked, these casualties can significantly degrade the combat efficiency of a unit as was seen in the latter phases of the Vietnam conflict.[4]

The "short-timer's syndrome," the development of superstitious dread that one's chances of being killed are increased followed by phobic anxiety and attempts to avoid all risks even when called for by the military mission, was described as a frequent occurrence in most combat and many combat-support soldiers in Vietnam in the final weeks before rotation home.[25] This syndrome had been described in other situations in which exposure to combat is limited by length of time (9 mo of combat in the Korean conflict) or number of missions (a fixed number of bombing runs by aircrews during World War II). Its appearance in Vietnam was, therefore, not surprising; however, its widespread occurrence, affecting even those in minimal danger, may have reflected disaffection and a sense of hopelessness in fighting the war.

Stress casualties of low-intensity combat differ substantially from those of mid- to high-intensity combat, which present primarily with anxiety and conversion and dissociative symptoms. In contrast, low-intensity combat casualties tend to present with "nostalgic" symptoms such as alcohol and drug abuse, venereal diseases, and character and behavior problems of indiscipline. Nostalgic casualties, for the purposes of this chapter, will be defined as the psychiatric symptom clusters that predominated in the behavior leading to ineffectiveness in Vietnam (see Table 2-1). Venereal diseases may be

included because, like failure to take malarial prophylaxis or to protect oneself from frostbite, psychological ineffectiveness is often manifested by their appearance.

Prediction of Psychiatric Casualties

From this discussion one may conclude that there is a certain degree of predictability of numbers and types of stress casualties when one knows the intensity of warfare (WIA rate) and composition of the soldier population (combat vs combat-support troops). In a general way this is true. In a mid- to high-intensity battle, soldiers will present with combat stress disorders, but in low-intensity or nonbattle conditions, "garrison neuropsychiatric" casualties will predominate. As combat intensity increases the number of combat stress casualties also increases. There are not yet enough data to predict with confidence the incidence of garrison stress casualties, but the subject is treated extensively in Chapter 3, Disorders of Frustration and Loneliness.

This generalization is, however, an oversimplification that does not take into account the numerous factors that protect a soldier from or predispose him to breakdown. The protective factors include unit cohesion, good leadership, experience with and confidence in one's weapons, absence of fatigue, and prior exposure to combat. Predisposing factors would be the negatives of these. The progress and type of battle also influence the rate of stress casualties. Advancing victorious and retreating defeated armies usually have few stress casualties. In static warfare, with much indirect fire from heavy artillery barrages or aerial attack, stress casualties are increased.[15]

A recently identified factor found to be significant in producing Israeli stress casualties in the 1973 Yom Kippur War is the presence of concurrent nonspecific stress.[26] The stress usually is a product of situations in the soldier's nonmilitary life; for example, pregnancy of spouse, birth of offspring, an ill relative, or financial adversity.

Many of these factors would be unknown to the clinician under usual battle conditions, and, even if they were known, it would be difficult to assign them a particular weight for prediction purposes. Their importance lies in preventive programs. Judging from historical review and recent experience of Israeli medical personnel in the 1982 Lebanon War (23% stress casualties despite attempts to prevent the influence of predisposing factors), the factor of combat intensity seems to outweigh most of the other factors in generating combat stress casualties. In future wars, therefore, the battle ecology can be expected to produce high or low stress casualty rates. A "Yom Kippur" (sustained, high-intensity) war may result in large numbers of combat stress cases, while a "Vietnam" (low-intensity, garrison) war may produce "nostalgic" disorders. Military psychiatry must have the flexibility to respond to either circumstance and to the possibility of nuclear, biological, and chemical (NBC) warfare. The latest U.S. Army neuropsychiatry doctrine[2,27–29] addresses the distribution of mental health resources to respond to all scenarios.

Both traditional combat stress casualties ("combat fatigue," "battle shock," or "combat reaction") and low-intensity combat casualties ("nostalgic") will occur in most protracted conflicts. The traditional casualties will occur proximate to the battles and the nostalgic will occur among rear-area troops or when combat troops rotate back to rear areas. The principles of combat psychiatry were developed during World War I and refined during World War II and the Korean conflict, but not until the Vietnam conflict were nostalgic casualties recognized as a serious cause of ineffectiveness in U.S. forces. It seems appropriate to address first the traditional combat stress casualties that predominate in mid- to high-intensity conflicts. Low-intensity combat stress casualties will be addressed in Chapter 3, Disorders of Frustration and Loneliness; NBC combat stress casualties in Chapter 4, Neuropsychiatric Casualties of Nuclear, Biological, and Chemical Warfare; and high-intensity combat stress casualties in Chapter 5, Psychiatric Principles of Future Warfare, of this textbook.

TREATMENT

The principles of forward treatment were developed and refined during the mid-intensity battles of World War I, World War II, and the Korean conflict. For the casualties of such conflicts they worked reasonably well. Treatment failures, when they occurred, were generally because the principles were not applied. This usually occurred when the conflict took on the characteristics of high-intensity battles, overwhelming forward medical resources and forcing evacuation of casualties, or the characteristics of low-intensity battles, making evacuation more feasible. With future battle

circumstances uncertain, all medical personnel and unit leaders should become familiar with the traditional principles of combat psychiatry and be prepared to adapt them to a variety of evolving situations, ranging from low-intensity insurgency actions to high-intensity NBC actions.

The treatment of combat stress casualties depends on a variety of circumstances impossible to foresee until actual engagement with the enemy. These circumstances include the type of battle, the length and location of the war, the type of soldier, the manifestations of ineffectiveness, the type of treating person, and other unforeseen conditions.

The treatment setting depends on the type of war, the type of evacuation (if any), and the availability of resources. Possible treatment settings range from the active battle scene to a medical center in the United States, as shown in Table 2-3.

Treatment of battle fatigue cases begins with their identification. Battle fatigue casualties should never be referred to as psychiatric casualties. The term battle fatigue is more appropriate because it suggests a normal response to the extreme mental and emotional demands of combat.

Treatment of identified combat stress casualties begins with casualty sorting, as shown in Figure 2-1. Battle fatigue cases may be labeled to indicate where they are being treated, with labels such as light, heavy, duty, rest, hold, and refer. These labels do not indicate the presumed cause of the symptoms or the likely response to treatment; they merely designate where the soldier is being treated. While these labels can be useful, there are two compelling reasons to avoid making judgments early in treatment about the presumed etiology and prognosis of individual cases of battle fatigue. First, the initial appearance and symptoms of soldiers may reveal little about the cause or the course of their condition. Second, in time of battle and during the initial interviews, it may not be possible to obtain complete and accurate information about the casualty's personal history. Therefore, all battle fatigue casualties should receive immediate treatment guided by the expectation of rapid and full recovery, as far forward as possible without jeopardizing the mission. As the soldier improves or arrives at a new echelon of care, the label should be modified accordingly.

Casualties are labeled as light or heavy battle fatigue casualties to designate their initial treatment. Battle fatigue cases designated as "light" continue on duty or rest in the unit. Treatment can be provided through buddy aid, unit medics, or leader actions, or can be self-administered. Most soldiers exposed to combat will experience light battle fatigue at some time. Light battle fatigue includes the normal, common signs of battle fatigue, as shown in Exhibit 2-2. It also includes the warning or more serious symptoms, as shown in Exhibit 2-3, if the symptoms respond quickly to treatment. Even soldiers with relatively serious symptoms can often continue on duty and do not necessarily need immediate medical attention. If the symptoms continue despite rest, the soldiers should be sent to their unit surgeon or physician

TABLE 2-3

PSYCHIATRIC ECHELON CARE

Site	Level	Holding Time
Battle	1. Self/buddy	4 h
	2. Small unit leader	4 h
	3. Medical aidman	4 h
Forward area	4. Battalion aid station	8 h
	5. Brigade clearing station	3 d
Rear area	6. Division clearing station	4 d
	7. Special treatment hospital	1–2 wk
	8. Evacuation hospital	1–2 wk
Communication zone	9. Hospital outside combat zone	wk–mo
Continental United States	10. Medical center in United States	Indefinite

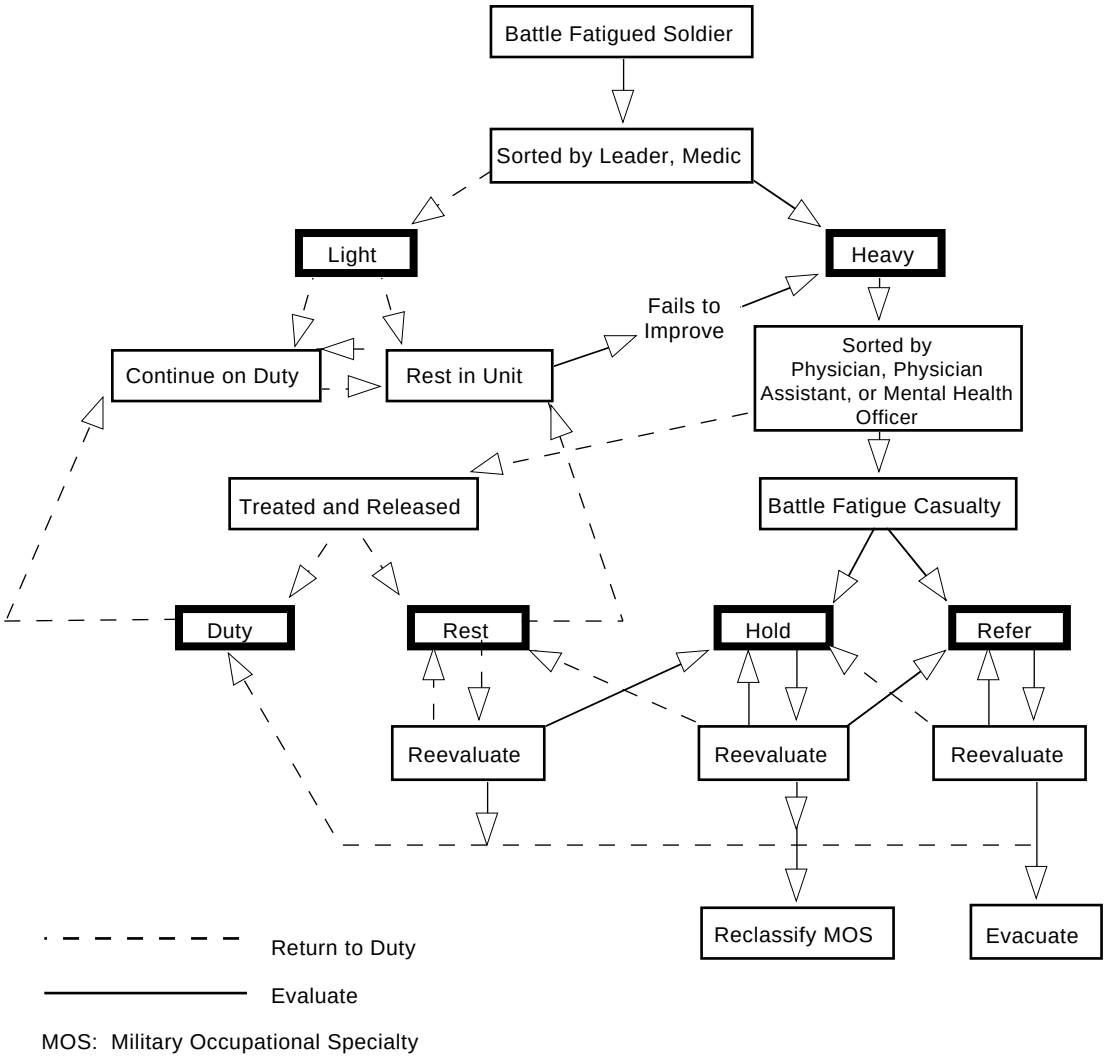

Fig. 2-1. Diagram of sorting choices and labels for battle fatigue cases according to severity of symptoms and unit situation. Reprinted from US Department of the Army. *Leaders' Manual for Combat Stress Control.* Washington, DC: DA; September 1994. Field Manual 22-51: 5-7.

assistant at routine sick call and treated as a heavy battle fatigue casualty.

In contrast to light battle fatigue, heavy battle fatigue requires immediate medical attention. In addition to failure to respond to initial treatment, the "heavy" label can indicate that the soldier's symptoms disrupt the mission of the unit, or that the casualty has a medical condition such as heat stroke that may require emergency treatment.

The triage medic sorts soldiers experiencing heavy battle fatigue based on where they can be treated, as indicated by the labels duty, rest, hold, and refer. Duty cases are heavy battle fatigue casualties who are treated immediately by a physician, physician assistant, or mental health officer and returned to duty. Rest cases do not require continual medical attention and are sent to their unit's nonmedical combat service support elements for brief rest and light duties. Hold cases are heavy battle fatigue casualties who are held for treatment at the triage medic's own medical facility if the tactical situation and the symptoms permit. Refer cases are those who must be treated at a medical facility that is more secure or better-equipped than the triage medic's own facility due to the tactical situation or the casualties' symptoms. Refer cases are relabeled as hold cases when they reach a medical facility where they can be treated.

The decision to label an individual soldier as a case of duty, rest, hold, or refer battle fatigue is not a simple one. Rather, it must be guided by a combination of factors, including the soldier's character-

EXHIBIT 2-2

NORMAL, COMMON SIGNS OF BATTLE FATIGUE

Physical Signs*

- Tension: aches, pains; tremble, fidget, fumble things.
- Jumpiness: startle at sudden sounds or movement.
- Cold sweat; dry mouth; pale skin; eyes hard to focus.
- Pounding heart; may feel dizzy or light-headed.
- Feel out of breath; may breathe too much until fingers and toes start to tingle, cramp, and go numb.
- Upset stomach; may throw up.
- Diarrhea or constipation; frequent urination.
- Emptying bowels and bladder at instant of danger.
- Fatigue: feel tired, drained; takes an effort to move.
- Distant, haunted ("1000 yard") stare.

Mental and Emotional Signs*

- Anxiety: keyed up, worrying, expecting the worst.
- Irritability: swearing, complaining, easily bothered.
- Difficulty paying attention, remembering details.
- Difficulty thinking, speaking, communicating.
- Trouble sleeping; awakened by bad dreams.
- Grief: tearful, crying for dead or wounded buddies.
- Feeling badly about mistakes or what had to be done.
- Anger: feeling let down by leaders and others in unit.
- Beginning to lose confidence in self and unit.

*Many soldiers have these signs, yet still fight well and do all their essential duties.
Source: US Department of the Army. Battle fatigue: Normal, common signs; What to do for self & buddy. US Army Training and Audiovisual Support Center, GTA 21-3-4, June 1986. GPO Stock No. 1991–303-121/49293.

istics, the stressors involved, the soldier's response to treatment, the tactical situation, and the resources available. Furthermore, once the decision is made, it may need to be modified to reflect changing conditions. Successful treatment of combat stress casualties prevents unnecessary evacuation and shifts battle fatigue casualties from refer to hold, from hold to rest, and from rest to duty. The lowest level of treatment likely to be effective should be administered, since holding or evacuating casualties may delay or prevent recovery.

Since World War I, the appropriate use of the principles of forward treatment has resulted in the return of 40% to 90% (optimal conditions) of combat stress casualties to combat duty within days.[7] Forward treatment consists of immediate, brief, simple interventions (immediacy, brevity, simplicity) such as rest and nutrition in a safe place as near the battle lines as possible (proximity), with an explicit statement to the soldier that he will soon be rejoining his comrades (expectancy). These measures create in the soldier a sense that he is only temporarily disabled by fatigue and further create the expectancy that he will quickly return to duty. This expectancy is strengthened when the casualty's small unit comrades can visit him and indicate that they need him and will welcome him back. Treatment is kept simple to foster this expectancy by giving the message that nothing is seriously amiss. Glass[30] has characterized Salmon's approach as a three-tiered (division psychiatrist, front-line specialized hospital, rear-area specialized hospital) related echelon treatment system that takes into account individual and battlefield hindrances to recovery and maximizes the return of the casualty to combat. A further aspect of this echelon approach to treatment calls for soldiers evacuated rearward to be screened at a central collecting point from which they may still be returned to duty if further rearward movement is inappropriate (centrality).

In practice this approach requires four essential elements: (1) a safe place near the battle area (refuge), (2) a treating person (therapist), (3) time for restoration of physiological needs (rest), and (4) a method for returning to one's unit (return). Each element is critical to the process; and each is potentially jeopardized by modern, high-intensity warfare.

EXHIBIT 2-3

MORE SERIOUS SIGNS OF BATTLE FATIGUE

Warning signs that deserve special action, but do NOT necessarily mean a "casualty" who must be evacuated.

Even the normal, common signs become "more serious" if:
- They still disrupt the mission after you take action.
- They don't improve somewhat after good rest.
- The soldier is acting very differently from the way he or she usually does.

More Serious Physical Signs
- Can't keep still; constantly moving around.
- Flinching or ducking at most sudden sounds and movement.
- Shaking (of arms or whole body); cowering in terror.
- Part of body won't work right, with no physical reason:
  - Can't use hand, or arm, or legs.
  - Can't see (or hear, or feel), partially or at all.
- Freezing under fire, or prolonged, total immobility.
- Physical exhaustion; slowed down, just stands or sits.
- Vacant stare, "spaced out"; staggers, sways when stands.

More Serious Mental and Emotional Signs
- Rapid talking; constantly making suggestions.
- Arguing, starting fights; deliberately reckless action.
- Inattention to self-care, hygiene; indifference to danger.
- Memory loss:
  - For orders; for military skills; for a bad event;
  - For time, place, what's going on; or for everything.
- Severe stuttering, mumbling, can't speak at all.
- Afraid to fall asleep for fear of terror dreams, danger; unable to stay asleep even in a safe area.
- Seeing or hearing things that aren't really there.
- Rapid emotional shifts; crying spells; wishing was dead.
- Social withdrawal; silent or sulking; prolonged sadness.
- Apathetic; no interest in food or anything else.
- "Hysterical" outburst, frantic or strange behavior.
- Panic running under fire.

Source: US Department of the Army. Battle fatigue: 'More serious' signs; Leader actions. US Army Training and Audiovisual Support Center, GTA 21-3-5, October 1983.

Both for historical reasons and because psychiatric interventions are most successful in handling the typical stress casualties of mid-intensity, conventional conflicts, they will be addressed first. Such casualties may be grouped roughly in order of increasing exposure to combat as follows: (1) normal battle reactions (not counted as a casualty), (2) acute anxiety syndromes, (3) precombat syndromes (hypochondriasis/following prior combat), (4) chronic anxiety-depressive syndromes (old sergeant syndrome), and (5) atypical syndromes (occurring at all levels of exposure).

Although these symptom constellations may appear at any level of combat intensity, they have been most apparent in World War I and World War II, now considered to be mid-intensity conflicts, based

on frequency of battle pulses in a 24-hour period and levels of casualties sustained.

The bulk of combat stress casualties typically occur in the first week of exposure to combat (80%) and present with severe anxiety or with physical symptoms that reflect fear and anxiety.[31] Such symptoms may consist of one or more of the following: rapid heart rate (DaCosta's "soldier's heart" of the U.S. Civil War), profuse sweating, muscle tension, shaking and cramps, nausea, vomiting, diarrhea, and involuntary defecation and urination. At times the casualty may present with minimal anxiety but with complaints that render him unable to function such as loss of the use of muscles (paralysis or aphonia) or disturbances of sensory organs (blindness, deafness, anesthesia, or pain). As with the anxiety symptoms, the unstated but implicit meaning is clear: the soldier has a recognizable medical condition that, he believes, prevents him from further engagement in combat and is thus an honorable escape from battle.

Although malingering might be suspected in some cases, most soldiers present with unconsciously derived symptoms similar to those found in the neurotic conditions of civilian life. During World War I and thereafter, able clinicians have found that interpreting this temporary defection as malingering only forces the soldier to strengthen, usually unconsciously, the symptoms to disprove such an allegation, making restoration to duty less likely.

Fig. 2-2. William C. Menninger, from a family of famous psychiatrists, was Neuropsychiatry Consultant to the Army Surgeon General during most of World War II. Among many accomplishments, he arranged for appropriate treatment of psychiatric casualties and established a psychiatric nomenclature that formed the basis for the first Diagnostic and Statistical Manual of the American Psychiatric Association.

Normal Reactions to Combat

Transient fear reactions are universal and should not be considered pathological. In fact, such responses came to be called the normal battle reaction. During World War II a number of surveys were made of physical symptoms experienced by infantry soldiers in combat. According to several studies reviewed by Menninger,[32] (Figure 2-2) and summarized by the author, of infantry soldiers in combat for any length of time, approximately 50% would experience a pounding heart, 45% a sinking stomach, 30% cold sweat, 25% nausea, 25% shakiness and tremulousness, 25% stiff muscles, 20% vomiting, 20% general weakness, 10% involuntary bowel movement, and 6% involuntary urination. Menninger refers to this group of symptoms as the normal battle reaction. The author will detail a number of cases from his experience as a division psychiatrist in Vietnam to illustrate various kinds of stress reactions to combat. The following case illustrates physiological (involuntary urination) and psychological (mutism) responses to combat that led to psychiatric intervention.

Case Study 1: The Tunnel Rat

Corporal A, a 20-year-old single man who had come to Vietnam by troopship in late February 1966 was brought to the 25th Infantry Division Base Hospital in late March 1966 by his platoon sergeant and lieutenant in a mute and unresponsive, but tense and alert condition. On a "search and destroy" mission he had volunteered as a "tunnel rat" to enter part of the extensive Viet Cong underground tunnels near Cu Chi, where the 25th had its base camp. Jumping into an 8-foot hole, he found himself facing a Viet Cong (VC) soldier , who was lying in a side tunnel. The VC aimed a pistol at CPL A's head and pulled the trigger. The pistol misfired, and CPL A's platoon sergeant shot the VC in the head with several blasts from his M16 rifle, splattering CPL A with blood and brain tissue. Examination at the base hospital revealed no wound, other than a small facial scratch from a bone fragment, despite CPL A's gory appearance. The 25th Division psychiatrist (the author) was called to see a "catatonic" patient.

The psychiatrist saw CPL A alone in a shielded area of the hospital tent (the "Mental Hygiene tent" had not yet been erected), and a repeat physical exam was performed. During the examination the physician soothingly pointed out that CPL A was safe and that he had normally functioning body parts and the ability to cooperate in the examination. He was then told that his "vocal cords," which had been temporarily "stunned," were back to normal and that he could say anything he wished. After a brief hesitation CPL A broke into a long, pressured explosion of profanity, ending with, "Damn, I peed my pants." He was told that his reactions were completely normal and that after resting that night in his own bed, he would wake up fully able to return to his usual duties tomorrow.

Comment: The psychiatrist did not see CPL A again; however, informal follow-up with the corporal's platoon leader a few months later revealed that he became cheerful the following day when told that he would get a Purple Heart medal for the wound to his face. CPL A did not volunteer for "tunnel rat" duty again.

The labeling of such normal reactions to battle as abnormal can create psychiatric casualties who may become "evacuation syndrome" patients. Such soldiers are best handled by enlightened commanders and senior noncommissioned officers (NCOs) who can reassure them that their responses are normal for the situation. Should such soldiers come to medical attention, a brief but thorough physical exam (to rule out brain injury, internal hemorrhage, or spinal cord injury) followed by reassurance usually suffices. The following case illustrates the need for a physical exam.

Case Study 2: The Mortar Attack Victim

During the course of an all-night mortar attack on the 25th Infantry Division base camp by Viet Cong guerrillas, the author, as division psychiatrist, was assisting the headquarters surgeon in treating casualties presenting with minor injuries (most caused by small pieces of fragmentation devices or bruises and abrasions sustained when soldiers were hastily seeking shelter). A military policeman (MP) brought his youthful fellow MP for treatment of complaints of apprehensiveness. The two of them were driving across the compound when a mortar landed just behind their jeep, momentarily "stunning" the patient, who had been sitting in the back seat. The patient had been "jarred" by the concussion but was unaware of any injury.

Examination revealed a pale (even in the subdued light used to avoid targeting the dispensary tent), apprehensive young man who was sweating profusely. His muscles were tense, and his skin was cool and clammy ("cold sweat"). He had no complaints of pain and no apparent injury; however, his pulse was rapid and weak (low pulse pressure). He was allowed to rest, but his condition deteriorated with development of marked apprehensiveness. Reexamination in better light revealed a small tear in his field jacket, which had been covered by his MP belt. Removing the jacket and undershirt revealed a small puncture wound of the left lower back. A diagnosis of hemorrhagic shock was made, and the Division Psychiatrist accompanied the patient to the division surgical unit where the patient received blood transfusions. Subsequently he was evacuated to a field hospital where abdominal surgery revealed massive hemorrhage from a ruptured spleen.

Comment: This patient had typical symptoms found in acute anxiety or fear reactions in combat: apprehensiveness, sweating and peripheral vasoconstriction (producing the "cold sweat"), tachycardia, and increased muscle tension. The weak pulse, presumably due to impending hypovolemic shock with decreased pulse pressure, should have been a clue to the internal hemorrhaging. Had this patient been uninjured, reassurance and return to his unit would be the treatment procedure.

Ranson has described a spectrum of symptomatology in combat ranging from "the normal battle reaction" to "the pathologic battle reaction." He observes that:

> [T]he normal battle reaction is made up of a variable set of symptoms that arise from (1) moderate to extreme physical fatigue; and (2) extreme, repeated, and continued battle fear, with (a) marked psychosomatic symptoms resulting from this fear and (b) certain psychologic symptoms resulting therefrom.[33(p3)]

Ranson describes normal psychosomatic response patterns to combat stress to include muscular tension, "freezing" or temporary immobility, shaking and tremors, excessive perspiration, anorexia or nausea, occasionally vomiting, abdominal distress, mild diarrhea and urinary frequency including incontinence of feces or urine, tachycardia and palpitation, hyperventilation to the point of giddiness and syncope, weakness and lassitude, and aches and pains. He also described special psychologic considerations in the normal battle reaction including combat sensitization with anticipatory anxiety, sensitization to combat noises, insomnia, diminished drive and initiative, irritability and increasing fear, including fear of showing fear.[33]

This normal reaction may be mislabeled as abnormal. This may have occurred in Israeli forces in the 1982 Lebanon War. Despite relatively low-intensity combat, 23% of Israel's total casualties were labeled as psychiatric. Israel, following the 1973 Yom Kippur War, had devised a system of early identification of psychiatric casualties with an increased expectancy that such casualties would occur.[10] Furthermore, by labeling such casualties

"combat reaction," Israeli mental health personnel created an expectancy that combat alone would create such casualties. Early in World War II American medical personnel, by eliminating soldiers who exhibited symptoms of anxiety, had created a similar expectancy that was further compounded by the evacuation of such soldiers out of combat. Management, therefore, requires informing the soldier that his symptoms, while calling for rest, are not a reason for evacuation.

Inappropriate evacuation of the lightly wounded not only creates an evacuation syndrome but often results in a psychiatric casualty. Lightly-wounded Israeli soldiers in the 1973 Yom Kippur War were found to respond similarly to psychiatric casualties when evacuated from battle,[21] that is, they developed complaints that prevented them from returning to combat. These complaints were both physical (eg, pain, weakness) and psychological (eg, anxiety, fear, depression). As seen in Bowman's[11] listing of psychiatric casualties in Vietnam (see Exhibit 2-1), a significant number were wounded soldiers. Wounding always elicits psychological responses, though not always negative. During World War II, soldiers spoke with elation of receiving "the golden wound," one that would honorably excuse the soldier from battle but not produce permanent disability. Bowman's patients, for instance, developed symptoms as the time drew near for them to return to combat. Such symptoms were usually physical complaints—pain in healed wounds, weakness, and even frank conversion reactions.

In treating the lightly wounded, it is important to treat forward and attempt to avoid rearward evacuation. If evacuation has occurred, "forward evacuation" nearer the battle area with application of the principles of combat psychiatry was found effective by the Israelis in the 1982 Lebanon War.[9] The more seriously wounded who have recovered to the point of return to combat must be managed with the same expectancy approach utilized with recognized psychiatric casualties.

By contrast, severely disabled soldiers—those with amputations, severe thoracic or abdominal wounds, widespread burns, blindness, and brain or spinal cord injuries—generally cannot be returned to combat; thus early psychiatric treatment is often needed in long-term treatment centers to help the veteran adjust to the disability. A variety of psychological responses similar to those described by Kubler-Ross[34] in the dying patient will be encountered: denial, anger, bargaining, depression, and acceptance. Weinstein and Kahn,[35] in their study of brain-injured and amputee patients, found that denial remains the predominant, underlying mechanism in such patients with manifestations such as phantom limb, amnesia, confabulation, reduplication, and other often bizarre responses. These are discussed in Chapter 14, Disabling and Disfiguring Injuries.

In summary, it has been shown that the normal psychological reactions to combat when inappropriately labeled and evacuated lead to actual disability. Such inappropriate evacuation of the lightly wounded likewise often results in psychiatric decompensation.

Pathological Reactions to Combat

Ranson[33] argues that these normal responses to battle shade into pathological responses usually as prolonged or exaggerated normal responses. Examples include the immobilized soldier who remains so for several hours or when the immobility poses a danger to himself or his comrades; autonomic overactivity symptoms that persist long after the danger; noise sensitization that generalizes to innocuous noises; lassitude that becomes persistent apathy and depression; and fear that develops into panic. Such symptoms in response to the threat of death are normal and virtually universal. A variety of personal and interpersonal interactions can result in the transformation of the normal battle reaction into a pathological battle reaction. Also, if the soldier lacks the adaptive capacity to handle the anxiety, it may be expressed through mental defense mechanisms as conversion or dissociative reactions.

Acute Anxiety Syndromes

As suggested earlier, the symptoms in such cases are the same as those occurring in the normal battle reaction—basically exaggerated physiological responses of autonomic overactivity combined with mental states of fear or apprehension.

Conversion reactions generally involve interference with voluntary muscle (paralysis, convulsions, muteness, ataxia, movement disorders) or sensory (anesthesia, blindness, deafness, pain) function. Psychogenic loss of smell or taste is rare; however, complaints of smelling burning flesh, napalm, or other battle smells often occur in chronic post-traumatic stress disorders. The paralyses frequently involve organs important for combat functions, for example, paralysis of the trigger finger. Similarly, pain complaints may prevent combat function. Helmet headaches were briefly a problem in some

units in Vietnam, because this equipment was required for soldiers on ambush or perimeter patrols. It was the author's experience that the symptom disappeared when soldiers were told that they would have to do such duty without head protection.

Conversion symptoms appear to occur more frequently in medically naive and medically sophisticated populations. In the latter cases symptoms often consist of pain and weakness that may be difficult to distinguish from neurological or musculoskeletal dysfunction. In the former cases, naive populations may present with classical hysteroepilepsy, hemipareses, and stocking and glove anesthesias. Such symptoms were observed, for example, in the Iraq-Iran War among Iranian soldiers.[36]

Because conversion reactions indicate a relative breakthrough of primary process thinking, though disguised, limited, and controlled, treatment may be more prolonged than with anxious and fatigued casualties unless corrected early. World War I U.S. Army psychiatrists reported substantial success with strong positive suggestion and simple explanation when given early and far forward (today called "immediacy, proximity and expectancy").[37] In some cases hypnotherapy and abreactive treatments may be indicated. The following case, known to the author, illustrates severe anxiety and stuttering in response to combat.

Case Study 3: The Stutterer

Following an all night mortar attack on the 25th Infantry Division base camp in which several soldiers died and nearly 100 were wounded, a 20-year-old radio operator for hospital communications complained of the sudden onset of severe stuttering as well as anxiety. On examination the soldier appeared as a lanky, blond youth wearing glasses, stuttering, and displaying startle reaction to outgoing artillery rounds. The soldier had a history of briefly suffering from stuttering at about age 5 years when he first left home to start school (kindergarten). Physical exam was normal.

The author, as division psychiatrist, arranged for the soldier to be temporarily relieved from radio operator duty but hinted that if symptoms persisted the soldier would have to revert to his primary specialty of general infantryman. After one day the soldier's symptoms began to abate: however, the division surgeon, a kindly and sympathetic man, evacuated the soldier from the division while the psychiatrist was away on a MILPHAP (Military Public Health Action Program) mission to a local Vietnamese hamlet. The soldier never reurned to the division.

Comment: This case reveals the failure of treatment because of a physician's humanitarian instincts' leading him to believe that he was alleviating suffering. No follow-up was available, but similar inappropriate evacuations during World War II led to chronic disability. The appropriate treatment was rest, reassurance, and return to duty.

Dissociative reactions classically consisted of somnambulism, amnesia, fugue, and multiple personality. The following example from Vietnam illustrates the manner by which somnambulism became an evacuation syndrome in the unit to which the author was assigned.[38]

Case Study 4: The Sleepwalkers

A brief "epidemic" of somnambulism occurred in 1966 during the early deployment of the 25th Infantry Division in Vietnam. The engineer battalion surgeon had sought the help of the division psychiatrist to treat soldiers who were developing sleepwalking (somnambulism). The battalion surgeon was surprised to find a rash of such cases in his relatively small unit. The initial case had presented with a history of sleepwalking during childhood with occasional episodes of falling and injuring himself. His family had been completely dominated by his symptoms, being forced to move to a one-story house, placing a high fence with locked gates around the house, and making other arrangements for his safety. His sleepwalking, however, had disappeared until arrival in Vietnam. Following the example of the soldier's parents, the battalion surgeon moved the patient's sleeping area to the center of the base camp to prevent him from wandering into the minefields that surrounded the base camp.

This environmental manipulation appeared to succeed; however, in the subsequent two weeks three more soldiers reported with complaints of sleepwalking. The battalion surgeon was running out of space in which to house these men. The division psychiatrist observed that the engineering battalion was located along one perimeter of the base camp on the side where a pro-Viet Cong village had been located and from which sniper fire was a regular occurrence at night. There had also been rumors of incidents in other camps during which "sappers" (infiltrators) had in nighttime forays cut the throats of sleeping soldiers. The perimeter area had been cleared of trees, had been heavily mined, and had nighttime perimeter guards (only subsequently was it learned that a very extensive tunnel system was the source of much of the sniper fire).

The division psychiatrist recommended that the sleepwalkers be told that the new policy was to place sleepwalkers on permanent nighttime perimeter guard duty (considered unsafe) or generator maintenance duty (considered undesirable) to protect them from wandering into the minefield at night.

Comment: This intervention consisted of preventing the sleepwalking from allowing the soldiers to escape hazardous duty. When this was accomplished, the "epidemic" abruptly ceased.

Multiple personality has rarely occurred in a combat setting, and current evidence suggests childhood sexual trauma as the etiologic agent in most cases. Soldiers presenting themselves as suffering from multiple personality in combat settings are most often malingering to escape punishment for being absent without leave (AWOL). Such presentations tend to wax and wane with mass media publicity of cases.

Amnesia is often attributed to concussion by the patient with more or less justification. Amnesia is sometimes used as an excuse to account for AWOL or other temporary dereliction from duty. Confronting the soldier with disbelief is generally not useful. The proper therapeutic stance in most cases is to reassure the soldier that his memory will return but, if not, that the amnesia will not prevent him from fulfilling some role in combat. A day might be spent teaching the soldier to load, aim, and fire a rifle, for example, with the clear implication that no matter what his original specialty was, he can be an infantryman. The following case illustrates the efficacy of such suggestion in soldiers with psychological amnesia.

Case Study 5: The Amnesiac

In 1968, a 19-year-old single male was evacuated to Walter Reed Army Medical Center in Washington, D.C. from a nearby post at which he was in training as a paratrooper. He was scheduled to graduate from "jump school" and had received orders for Vietnam. Following his final parachute jump, he was found unconscious, was hospitalized locally, and was found to have no neurological deficit other than amnesia for his entire life. He did not know his name and did not recognize friends and family members. At Walter Reed, where the author was supervising the case, the soldier underwent Amytal interview without remission. Collateral history including early development was not impressive of psychogenic trauma. The soldier was told that there would be another attempt at Amytal; but, that if it failed, he would have to return to basic training and then be sent to Vietnam. It was suggested during Amytal interview that his memory would begin returning and should be completely normal within a week.

Comment: Within a week his memory had returned, and he was sent on amended orders to Vietnam but not to an airborne unit. Although this is not a true combat breakdown, it does have characteristics of a precombat syndrome.

Fugue states in military settings are often accompanied by alcohol or drug abuse and licentious behavior, frequently in contrast with the soldier's usual personality.

Case Study 6: The Wild Week

In 1966, a 32-year-old staff sergeant with 12 years of active duty was brought to the attention of the Shore Patrol by prostitutes on Tu Do Street in Saigon because of his unresponsive behavior. In a confused state he was taken to the Third Field Hospital where it was established that physical examination was normal except for mental status. Mental status examination by the author revealed a thin, balding Caucasian man who was dressed in soiled civilian clothing. He smelled of urine but not alcohol. He appeared perplexed and asked where he was. He gave the date as November 5, 1965 (it was later established that he had left the United States on this date and that he was in the last month of his tour in Vietnam). He was oriented to person and, except for amnesia since coming to Vietnam, mental functions were essentially normal. He was sedated (Librium) and put to bed.

The following day his memory had returned up to about 1 week before. He stated that his last memories were of coming to Saigon with a convoy from a nearby village, Dian, where he was a mess sergeant with an infantry company. Although he was technically AWOL, the unit was tolerant of his absence because he was close to the end of his tour and his replacement had already arrived. The company commander merely thought that "he was having a good time in Saigon." The commander also stated that the staff sergeant was a devout, nondrinking, married man who attended chaplain's services regularly and that "sowing a few wild oats" might be helpful to him.

Although all of the details of the missing week were never discovered, it appeared that the staff sergeant, who had reportedly never been unfaithful in his 10 years of marriage, succumbed to the charms of a prostitute. Ensconced in a hotel room, he spent a month's pay with a succession of prostitutes accompanied by liberal intake of the local beer, "33" ("Bah moui bah" in Vietnamese). After an additional day of rest during which he was reassured that such an incident was unlikely to occur again if he avoided alcohol and prostitutes, he was discharged and returned to his unit where he remained an uneventful 2 weeks until returning to the United States.

Comment: It is sometimes difficult to determine how much intoxication contributes to the amnesia in such fugue cases. In addition to protecting him from guilt-inducing memories, the amnesia also protects the patient from having to recount embarrassing behavior.

Precombat Syndromes

Psychological adjustment to combat may begin long before an actual battle. It begins as soon as the possibility of going into combat is seriously entertained. It is even possible to conceive of those who burned their draft cards as engaging in a long-term avoidance maneuver. When the author arrived in Hawaii as the new 25th Infantry Division Psychia-

trist, he found the topic of most immediate concern was whether the 25th Division would stay in Hawaii as a "strategic reserve" or go to Vietnam. Although no official confirmation was given until the day prior to departure, it became increasingly evident that the next assignment would be in Vietnam. The majority of soldiers began preparing for combat duty. Some took courses in the Vietnamese language or read books on tropical diseases, insects, and reptiles. Others purchased hunting knives, special water-repellent clothing, and enormous amounts of soap because there were rumors of a shortage. Exercising became fashionable. This somewhat compulsive behavior served its purpose. A soldier who is busy learning a language, practicing with a knife, or running to increase lung and leg power does not have as much time to think about being killed, crippled, or separated from loved ones.

A small minority of soldiers, however, consciously or unconsciously sought to evade combat duty. Some wives appeared at clinics describing medical conditions in themselves or their children for which they felt justified in having their husbands near. Some soldiers appeared in dispensaries or clinics having discovered physical defects in themselves that they thought would make them vulnerable in combat. These defects included decreased hearing, a childhood heart murmur, mild hypertension, a "trick knee," and even simple obesity. A few individuals inflicted wounds on themselves. In one incident, a medical corpsman anesthetized a friend's foot with the local anesthetic, Xylocaine, then shot it with an M-16 rifle. Several soldiers claimed to be homosexual because this condition called for separation from the military. Others committed military crimes (usually AWOL or insubordination) in an attempt to achieve medical or administrative separation from the service. Their usual comment in the stockade was, "I just want out. Any kind of discharge will do." These individuals were few in number, however. A more common response was for a soldier to express relief to finally know for sure that he was going to Vietnam and to begin preparing himself.

The term "precombat syndrome," however, has generally not included these attempts to evade altogether duty in a combat zone. Rather, this term has been reserved for combat veterans, often with lengthy exposure to battle conditions, who on the eve of combat report to medical officers with hypochondriacal or minor complaints.[39] Such persons usually believe that their symptoms are real and significant. Symptoms may include headaches, toothaches, indigestion, and worry over healed or nearly healed wounds. On a more conscious level, some individuals report with broken spectacles and dentures or, more rarely, with self-inflicted wounds.

Failing to understand the nature of these symptoms, some commanders have regarded such soldiers as malingerers and have taken a punitive approach to deterrence of "goldbricking." One support commander in the 25th Infantry Division ordered that sick call be held outside, exposed to the weather, which was often inclement, with daily rains and a hot tropical sun. Unable to gain the reassurance that nothing serious is wrong and the support from the physician, such soldiers may become demoralized and more subject to combat breakdown.

The proper approach to such soldiers is a thorough physical examination (especially because some illnesses, particularly hepatitis, are of insidious onset with vague complaints and exacerbation of characterological tendencies) followed by reassurance that all is well and expressions of gratitude to the soldier for adhering to duty, in spite of pain, for his comrades and country.

Chronic Anxiety-Depressive Syndromes

Continuous or long-term exposure to the lethal combat environment in which the emergency "fight-flight"[40] response is repeatedly invoked eventually results in performance decrements in virtually every combatant. Such repeated physiological arousal gradually has a conditioning effect on voluntary muscles (increased tension, tremors), involuntary or autonomic responses (tachycardia, increased blood pressure, increased perspiration and respiration), and cognitive responses (anxiety, fear). The loss of comrades not only provokes anxiety about one's own mortality but also represents a loss of social reinforcement with subsequent anger and depression. During World War II, Sobel[41] referred to such casualties as "the old sergeant syndrome."

In analyzing the factors leading to breakdown in "the old sergeant syndrome," Sobel traced the "progressive breakdown of the adaptive mechanisms of the normal soldier to the point at which his natural resources are exhausted in the struggle against his environment."[41(p145)] In the loss of his defenses against combat anxiety, the soldier successively lost his ideals about the war (the goals of freedom for Nazi-held peoples and "keeping the enemy out of the United States"), his hatred of the enemy (producing vulnerability to guilt), his short-term goal of being relieved from combat, his pride in himself (feeling of responsibility to be courageous

and to endure), and, finally, loss of loyalty to the group (chiefly through actual physical depletion of the group from death, wounding, and illness).

When such repeatedly traumatized combat veterans emerge as psychiatric casualties, they usually present with some variant or mixture of anxiety or depressive symptoms. The "startle reaction," for instance, may represent conditioned muscle tension and other physiological arousal to loud noises (as from exploding mortar, artillery, or bomb attacks). Soldiers presenting with lethargy, decreased self-esteem, and insomnia may be responding with depression to repeated losses and fatigue from repeated arousal. In one model of depression,[42] the hormonal regulatory system of the hypothalamus has become disturbed from higher cognitive and limbic (emotional) inputs. The repeated physiological and cognitive arousal invoked by combat exposure would seem appropriate to such a model. The following cases illustrate some of the symptomatology in such casualties.

Case Study 7: The Fourth Ship

Laughlin[43] in his "case 184" describes a "severe combat reaction following maximal stress." Toward the end of World War II he came across a naval petty officer whom a physician described in disparaging terms as an inferior and unstable person because he had broken down in combat. On closer examination Laughlin recognized him as a fellow shipmate of several years before. His service on ship as quartermaster had included "all kinds of strenuous operational and combat conditions." Laughlin could barely recognize him: physically he had shrunk and aged unbelievably. When seen about 2 years earlier, he had been a young, strong, self-possessed person with a "rock-like quality" of strong leadership; but, now "he was an aged, palsied, defeated and pathetic figure, shriveled and shrunken to nearly half his former weight." Laughlin's colleague who espoused character deficits as the cause of breakdown could not have made a more unjustified case for his assumptions of the etiology of such breakdowns.

Laughlin had traveled with him from the North Atlantic on convoy duty through the North African landing operations finally to the Pacific for the final phase of the campaign for Guadalcanal and the Solomon Islands. In the Pacific, enemy air and naval engagements had occurred, and finally the ship was sunk during an engagement of great stress to the crew. Among the survivors "a fair number developed combat fatigue and various stress reactions." The patient, who had been "a tower of strength" throughout all these exigencies, continued outwardly unfazed and promptly returned to duty, volunteering for service on another destroyer. Laughlin did not see him again until the recently described meeting.

Intrigued by what could have rendered such a change, Laughlin spent time with him and gradually pieced together his history. After loss of the ship in early July 1943, "the tempo of stress" did not abate but actually increased. He continued an unusually extensive combat experience on two subsequent destroyers, each of which had sunk in turn. Not until after the second sinking did he have his first nervous symptoms (depression and anxiety), which gradually increased during service on the third destroyer and after its loss. The culminating traumatic experience occurred on ship number 4 about a month prior to his hospitalization. Scouting enemy shore battery positions that had previously been thought silenced on Southern Okinawa, the ship ran aground on a poorly charted ledge. At this point the "silenced" shore batteries had suddenly opened up at point-blank range. Hundreds of rounds were poured into the helpless ship, until the ship, riddled, dead in the water and sinking, was ordered abandoned. The patient got off the ship and into the water but was seized by the tide, drawing him, despite his strongest efforts, toward a large, burning oil slick from the stricken ship. For what seemed an eternity, he managed to stay clear of the fire until the batteries were in fact silenced and he could be rescued. The anorexic, apathetic, depressed patient resulted from what Laughlin calls "the Final Straw."[43(p11)]

Comment: Laughlin does not discuss treatment in this particular case; however, at that time hospitalization with rest, sedation, insight-oriented psychotherapy or group therapy, and sometimes abreaction, often assisted with hypnosis or intravenous barbiturates, would have been the usual treatment for chronic, fixed neurotic states.

Currently, group or individual psychotherapy with perhaps an abreactive technique might still be called for, but the emphasis in treatment would be "here and now" issues (ie, work, relations with others). Relaxation exercises involving deconditioning to noises or battle memories might be used as well; and, if nightmares and depression were prominent, an antidepressant such as phenelzine (a monoamine oxidase [MAO] inhibitor) or imipramine (a tricyclic) would probably be used, since they suppress dream sleep and hence prevent nightmares.

During World War II, return to a combat role was usually impossible; however, duty in noncombat roles was generally successful. Perhaps a primary factor in the inability to return "the old sergeant syndrome" patient to duty was the consensus that the soldier had done his part and deserved release from combat service. This is illustrated in Sobel's "Case 27":

Case Study 8: The "Old Sergeant Syndrome"

A 20-year-old technical sergeant with 30 months' service who had been overseas 21 months and had an

aggregate of 310 days of combat was admitted during a rest period after the battle of the Gothic Line. He had been thrice wounded in action. He stated that he began to have abnormal battle reactions 60 combat days previously. He said: "Now if I get in a hole I just want to stay. It bothers me more now than it ever did before. This last battle my company was ordered to take a house, and within a few hundred yards of the place a couple of my boys got their feet blown off. We withdrew and I went to the commanding officer and told him I had a feeling that I was going to get it this time, and that I couldn't take it any more. He gave me a direct order to, and it was either do that or have a bad record, so I went."

This soldier had tried on three occasions to have his rank reduced to that of private. "You see," he said, "as a platoon sergeant, you are more often than not a platoon leader, and I couldn't lead the men like I did before. Under shelling I got jittery. A platoon sergeant is a leader. If he isn't out in front it affects the men."

This soldier was born on a ranch in Texas. He stated that his father was epileptic, but that he rarely worried about it and that it had not affected him in any way. His parents were harmoniously married. There were seven children, of which he was next to the oldest. He had a happy family life and had many friends on nearby ranches. No significant neurotic traits or conflicts were elicited in the history. Enuresis, nail biting, temper tantrums, running away from home, nightmares, and somnambulism were all denied. He left home to work on another ranch at the age of 14, after completing the eighth grade, and had been steadily employed as a rancher until induction. He had always been self-reliant and industrious. Single, he had no significant sexual conflicts.

His Army career was characterized by steady promotion after his arrival overseas. He stated that he had been held down in the States by a lack of T/O [Table of Organization] vacancies. A letter from his battalion commander stated: "It is my opinion, through observation, that he has reached the end of endurance as a combat soldier. Therefore, in recognition of a job well done I recommend that this soldier be released from combat duty and be reclassified in another capacity." This battalion commander, incidentally, was noted for his unyielding attitude toward psychiatric casualties.

Therapy was found to be surprisingly simple, but administratively difficult. The most effective single therapeutic tool was assigning these men within the army area, out of shellfire but close enough for them to feel that they were actually helping the men "up front." The usual psychotherapeutic procedures were necessary and valuable, but because the "old sergeant syndrome" is primarily a situational reaction, altering the environment by means of reassignment is the most important aid to readjustment and cure. At one time we had several of these men on the cadre of the divisional training and rehabilitation center. Their work over a four-month period was beyond reproach.[41(p145)]

[The divisional training and rehabilitation center was the facility in the rear of each division, in the late World War II European and Mediterranean theaters, responsible for returning soldiers with combat exhaustion to duty. It was located close to the division medical clearing station, was supervised by the division psychiatrist, but was staffed entirely by line officers and NCOs and maintained a strictly military atmosphere, including realistic combat drills.[44]—JWS, Ed.]

Comment: Given the efficacy of modern drugs in controlling anxiety and depression, it is possible that in extreme need such skilled soldiers might be returned to combat roles. The Israelis, always short of manpower, treated a few such casualties with tricyclic antidepressants during the 1982 Lebanon War. Belenky, Tyner, and Sodetz reported that five Israeli soldiers, representing 8% of the casualties treated in a third-echelon, longer-term treatment facility (total of 60 patients), received tricyclic antidepressants.[9] Although between one third and one half of the total patients returned to their original units, it is not known whether these men were among such returnees, or whether the units were still in combat. The risks of returning soldiers on medication to forward deployed duty include: side effects profiles which may interfere with psychomotor performance; impaired judgment in dangerous situations; medical risks from side effects in the field environment; problem with resupply; and adjusting dosage at far-forward medical aid stations.

Atypical Reactions to Combat

Atypical Anxiety/Depressive Cases

Men with "pseudopsychotic reactions," according to Weinstein,[45] appeared to be out of contact with their current physical environment, being "agitated, hallucinatory, and delusional, performing such stereotypes as digging foxholes with their fingers, taking shelter under their cots at any sudden sound and 'warning' others of the approach of shells."[45(p138)] In Italy most such cases occurred in troops new to battle and to the group who had been freshly called up before an offensive action. Group ties had not only been weakly established at the outset but also they rapidly dissolved when the group faced hostile enemy fire. Glass[7] reported that such casualties occurred early in World War II when the designation "psychoneurosis" (abbreviated "psycho" by the soldiers) was given to most psychiatric (stress) casualties. This illustrates the continuing importance of not calling these soldiers "psychiatric casualties" today.

The ambiguities of low-intensity, civil-war-type conflicts can produce atypical reactions. The following two cases illustrate the buildup of personal problems in a noncombatant in the first case and the issue of ethical conflicts in a new combatant in the second case.

Case Study 9: Shots in the Night

After several months in Vietnam, the author had begun taking sick call with the Headquarters (HQ) Company surgeon (who had been an "on-the-job-training" psychiatrist in Hawaii) due to the lack of significant numbers of psychiatric casualties. He and the surgeon bunked in the back of the dispensary, which was adjacent to the HQ supply tent where the supply sergeant slept. One night the two physicians were awakened by shots fired at close range. Dressed only in their underclothing and Colt .45 gunbelts, the two rushed next door to find the supply sergeant firing his M-16 rifle in the direction of the division commander's tent.

The HQ surgeon, who had been treating the sergeant for bursitis, was able to talk him into surrendering the rifle. Subsequently the sergeant's story came out. In his mid-40s, he had bitterly resented being sent to a combat zone in his last tour of duty after having already been in combat during the Korean conflict. Furthermore, he suffered from bursitis of the shoulder, which he felt should have kept him from a combat assignment. Except for some general complaining, however, he had hidden his feelings. The HQ surgeon had been treating his bursitis with periodic injections of hydrocortisone with only minimal relief of pain. Increasingly despondent, the sergeant began drinking to fall asleep at night. Finally on the night in question, mildly inebriated, he began firing at the general's tent in expectation that he would be shot: suicide by someone else's hands.

The following morning, the sergeant was remorseful about the event, expressed that he had no suicide intention, and asked to continue his assignment. He was closely followed by the HQ surgeon, steroid injections were replaced by large dosages of aspirin, he was given Librium for sleep (the only nonneuroleptic, nonbarbiturate sedative available) and he discontinued all alcohol intake. His mood gradually improved, and he was able to complete the remainder of his tour.

Comment: A number of confounding factors were present in this case. In the biological area is a chronic pain problem compounded by treatment with steroids, which are known to alter mood in many cases. In terms of intrapersonal variables, the sergeant had a basically obsessive-compulsive personality with passive-aggressive features. The situational variables included some isolation from his fellow soldiers by reason of age and temperament. In interpersonal contacts he frequently had to respond with negatives to demands for clothing and equipment. Also, the news from home was sometimes alarming with his wife's complaints about the rebellious behavior of their teenage children. Finally, a few weeks prior to this incident, the base camp had sustained an all night mortar attack with numerous wounded and a few killed.

One outcome of this incident was the development of a Standing Operating Procedure (SOP) for berserk soldiers.[38] There had been several prior incidents in which soldiers would "go berserk" and start firing indiscriminately or barricade themselves and threaten any approaching personnel. Following this incident, the commanding general asked the provost marshal and division psychiatrist to develop an SOP for dealing with such soldiers. The provost marshal suggested that the area be evacuated and sealed off from all but selected personnel, mostly military police, then the division psychiatrist be summoned to speak with him. If he continued to be a threat and waiting was not feasible, sharpshooters would shoot to wound or, if all else failed, to kill. The division psychiatrist agreed with most of the SOP but recommended that the person called to negotiate be either a known friend of the soldier or his commander if he were not hostile to the commander. The division psychiatrist would either accompany the negotiator or be in radiotelephone contact with him. After the SOP became known, very few such incidents occurred.

Case Study 10: The Atrocity

Several months after the 25th Infantry Division had been in Vietnam, the division chief of staff requested the division psychiatrist to evaluate an infantry second lieutenant, a West Point graduate, who had requested that his military occupational specialty (MOS) be changed to that of a chaplain's assistant. When questioned, the lieutenant, a single male in his early twenties, was found to have no evidence of schizophrenia, mood disorder, or any other significant mental affliction.

He had been in several "search and destroy" missions, including some exposure to combat; however, he attributed his change from a warrior to a "man of God" to a recent incident. His platoon had engaged in a firefight at a small Vietnamese village known to be sympathetic to the Viet Cong. After the shooting stopped, an elderly Vietnamese man was found killed with his rifle nearby. The soldiers tied his feet to the rear bumper of a jeep and repeatedly dragged his body up and down the main street of the village. This created a sense of revulsion in the lieutenant but he did not stop what he subsequently referred to as "the atrocity." The day after the incident he requested a change of MOS.

Background history revealed that although he had followed his father, now a general, into the military, he had always been somewhat ambivalent about doing so. Also, he was deeply religious, the legacy of his mother. He was a member of a Christian sect that did not require one to be a conscientious objector, but he stated that he had always felt that he could not kill another human being. The division psychiatrist recommended that the lieutenant be given his requested assignment change. In subsequent sessions the consequences of his choice were explored (one was that the chief of staff delayed his promotion because he had "failed the test of battle").

Comment: Although the psychiatrist suspected neurotic conflicts concerning his identity involving ambivalence toward his father and the army he represented, the lieutenant was determined to pursue his new career. When the division psychiatrist left the division, the lieutenant was still working as a chaplain's assistant.

With hindsight regarding the failure of the U.S. pacification and Vietnamization programs in the Vietnam conflict, and of the serious problems of indiscipline which continued to haunt the U.S. Army through the period of the "hollow Army" of the 1970s, it is apparent that this case was not dealt with appropriately by the chain of command. It must be noted that the lieutenant was morally and legally correct in his distress, and in labeling the event "the atrocity." Desecrating enemy dead (whether combatants or noncombatants) is a war crime, punishable under the Uniform Code of Military Justice (UCMJ). Officers who allow their subordinates to commit war crimes without intervening or subsequently bringing charges are also subject to disciplinary action. The severity of the disciplinary action may depend on the seriousness of the violation. Dragging the body of an enemy already killed in combat is not as serious an offense as killing a disarmed enemy after surrender or an unarmed civilian, but it cannot be allowed to pass without firm action by command which makes clear to all that such misconduct must never happen again or worse will happen.

It is unclear why the lieutenant did not (or was unable to) intervene at the time to stop the misconduct. It is likely that he had reason to doubt that his higher command would back him up in enforcing the Law of Land Warfare,[46] as they do not appear to have validated his sense of wrongness or assisted him in reestablishing discipline after the fact. The failure of the chain of command in Vietnam to clearly state and enforce the standards of conduct contributed to a serious breakdown of civilized behavior in U.S. soldiers. That, in turn, alienated the local populations and provided ammunition to the antiwar movement at home.

Shay[47] has pointed out the parallels between the behavior of the Greek hero Achilles in the Trojan War (as reported in Homer's Iliad) and Shay's Vietnam veterans now suffering from post-traumatic stress disorder. A common theme is that the loss of comrades in battle can lead to rage against the enemy and a "berserk state" in which the soldier performs feats of both heroism and moral depravity. Like the soldiers in this example, Achilles also dragged the body of his defeated foe, Hector, by the heels behind his chariot. Achilles did not survive his war, but the Vietnam veterans seen by Shay came home. Shay writes, "On the basis of my work with Vietnam veterans, I conclude that the berserk state is ruinous, leading to the soldier's maiming or death in battle—which is the most frequent outcome—and to life-long psychological and physiological injury if he survives. I believe that once a person has entered the berserk state, he or she is changed forever … If a soldier survives the berserk state, it imparts emotional deadness and vulnerability to explosive rage to his psychology and a permanent hyperarousal to his physiology—hallmarks of post-traumatic stress disorder in combat veterans."[47(p98)]

Self-Inflicted Wounds

Glass and Drayer[44] reported that at the end of hostilities in Italy numerous incidents of self-inflicted wounds (SIW) occurred, presumably due to carelessness in handling small arms captured from the Germans and Italians, although there were some who felt that underlying guilt about war behaviors might have also played a role in these incidents. The solution adopted by the command structure involved ordering all captured arms turned over to ordnance, where they were tagged and not returned until time of departure for home.

AWOL from Battle

"AWOL from battle," the informal term, subsumes charges of desertion, refusal to obey orders, and misbehavior before the enemy or similar military offenses.[48] Such offenders are seldom found to have serious mental illness. In a survey of 200 such cases in the 85th Infantry Division in Italy from September 13 to November 22, 1944, Glass[48] found the following characteristics of such cases:

1. The AWOL from combat rate increases with the duration of offensive action, a cumulative effect of combat rather than a result of the intensity of battle and unlike the psychiatric casualty rate, which rises and falls with combat intensity.
2. The majority of offenders are veterans and have had relatively long exposure to combat (only 17 of the 200 were in their first combat period).
3. In two thirds of cases the offense was initiated at a safe rear area—returning from hospitalization, during a rear area detail, or when the unit was preparing to move forward into combat. In this respect the casualties are similar to self-inflicted wounds cases.
4. Age and intelligence seemed to play no role.

5. Three fourths admitted that fear of combat motivated their action.
6. Only one fourth sought medical or psychiatric care prior to the offense and were refused evacuation. Of this group, in retrospect, only one fourth (1/16 of the 200) should have received such medical care. The majority did not feel they were ill and saw AWOL as the only way to avoid combat.
7. There was no clear correlation between psychiatric and AWOL rates with regiments, with the highest and lowest psychiatric rates having similar AWOL rates, but the battalion with the highest number of AWOL had a high psychiatric rate and contained three of the five officer offenders, indicating a leadership element in the behavior of the offenders.
8. About one third of the offenders had been recently hospitalized, before AWOL, many for wounds, indicating an adverse effect of rearward evacuation even when surgically necessary, but only three of the 200 had received prior psychiatric treatment. [In 1973, the Israelis experienced similar losses due to psychiatric breakdown in lightly wounded, evacuated casualties.—Au.]

One may conclude from these findings that while both the psychiatric casualty and AWOL offender have a common etiology, the dangers of battle, quite different mental mechanisms are operating. The AWOL soldier consciously elects to avoid combat as a result of chronic anticipatory anxiety deriving from accumulated battle experiences and goes AWOL while away from the supportive or sustaining influence of the combat group or when support is no longer operative. Conversely, the psychiatric casualty arises during the intensity of battle and occurs when the individual is bereft of his own individual sustaining powers or group support by the traumatic and disruptive forces of combat.

Kirkland, a combat veteran and student of soldier stress, has commented on the different symptomatology between combat and rear-echelon troops: "In a unit in combat a soldier is torn between loyalty to his comrades and his identity as a soldier on the one hand and terror on the other. Fleeing and staying are both unacceptable … unconscious … symptoms occur [that remove him honorably from combat]. In the rear, however, the loyalty and identity factors are not present [but] terror is … [the soldier] … is less conflicted and can make a conscious choice—go AWOL."[49]

The salvage of some AWOL soldiers was considered feasible and, with the cooperation of the judge advocate general of the 85th Infantry Division, recommendations as to whether or not the offenders were reclaimable for combat duty were made.[48] Those without a chronic anxiety state who presented a favorable attitude to return to combat were so recommended. Such individuals were held in the division stockade and released to their units after several months of good conduct and work. No follow-up was available because the 85th Infantry Division did not have any further prolonged combat.

Enjoyment of Combat

Absenting oneself from the dangerous combat situation may be dishonorable but understandable to all; however, what is to be made of the occasional soldier who actually seems to enjoy immersion in combat? Are such men unconsciously suicidal? Does their pleasure stem from unleashing Freud's postulated Thanatos, the death instinct? Can such behavior be explained on the basis of powerful social reinforcement from peers and command? Like most human behavior, enjoyment of combat may be of multifactorial origin, resulting from several or all of these inputs. The following case is typical in that such men are often not well-regarded by their peers though command often regards them highly.

Case Study 11: Enjoyment of Combat

Major Glass, while resting in the Alpines after hostilities ended in Italy, was confronted by a jeepload of sergeants from the 85th Infantry Division. They described Sergeant X, a wonderfully resourceful, reliable, cool-in-combat soldier with several decorations including the Silver Star. But now, when there were no longer any hostilities, Sergeant X was restless. He was going on patrol every night, had shot out the light at their parties, and had been prowling around. They considered him a menace.

During the interview he appeared embarrassed and apologetic, stating he liked the fellows but was bored and restless and needed something exciting to do. He requested transfer to the Pacific Theater. He told Major Glass that he must avoid disciplinary problems because he had been paroled to the Army from State prison, where he had been serving a sentence for manslaughter; therefore, he must receive an honorable discharge. He admitted he enjoyed the thrill of combat and danger. He was easily angered and had no close friends, either civilian or military. No psychosis was present. He was evacuated to the 601 Hospital; there was no follow-up.[48(pp59-60)]

Comment: The author saw a few cases similar to this when directing a research ward for severe character disorders. Most of these men had severe personality distortions with prominent antisocial aggressive tendencies. Far from having been created by combat, these men had usually been delinquent and involved in aggressive behavior prior to military service. Their adjustment to civilian life was frequently poor. Persons who enjoyed combat rarely came for treatment; they seldom responded to psychotherapeutic attempts. It is possible that serotonergic antidepressants might be helpful because antisocial persons such as arsonists have been found to have decreased spinal fluid levels of breakdown products of serotonin.[50]

CONCLUSION

The diagnosis of psychiatric casualties is made difficult not only by the protean symptomatology and potential mimicry of "organic" conditions but also by the intentional vagueness of the nomenclature itself. At a time when psychiatrists are striving for increasing precision in diagnosis it may appear anomalous that the military is clinging to the nonspecific term "combat fatigue" to categorize the psychiatric casualties of combat. The glossary to DSM-III (published separately) even lists "combat fatigue" as "an obsolete term for post-traumatic stress disorder." That interpretation is plainly misinformed. Post-traumatic stress disorder, by DSM-IV's own criteria, cannot be diagnosed until 1 month after the traumatic event is in the past. Combat fatigue, by definition, applies to soldiers who are still in the traumatic (combat) situation. In prolonged combat, however, some traumatic events may have occurred more than 1 month ago. In general, "combat fatigue" corresponds more closely to the new DSM-IV classification of "acute stress disorder," which is used in the interval from 3 days after the traumatic event to 1 month (when post-traumatic stress disorder [PTSD] becomes appropriate). But even organized civilian psychiatry has not placed a diagnostic label on the distress and disturbed behavior which may occur within the first 3 days after an extremely traumatic (life-threatening) event. This is the period of time in which most battle fatigue symptomatology is detected and (ideally, with "immediacy") treated and resolved. This temporary disturbance can be described as the normal human response to very abnormal, threatening conditions. Using a "normalizing" label such as combat fatigue is an important therapeutic maneuver intended to impress the soldier with the idea that he is not mentally ill but just tired and can expect to recover with rest. As seen with the diagnostic label, expectancy is the critical psychological variable in the recovery of the combat stress casualty. Thus, diagnosis and treatment are inextricably intertwined.

REFERENCES

1. Gregory GA, Lawson TR, Brooks FR. *Behavioral Science Support in the Theater of Operations: Casualty Generation Study*. Fort Sam Houston, Tex: Academy of Health Sciences, US Army, 1979.

2. US Department of the Army. *Leaders' Manual for Combat Stress Control*. Washington, DC: DA; March 1994. Field Manual 22-51.

3. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. (DSM-IV). Washington, DC: APA; 1994.

4. Jones FD, Johnson AW. Medical and psychiatric treatment policy and practice in Vietnam. *J Soc Issues*. 1975;31(4):49–56.

5. Weinstein EA, Drayer CS. A dynamic approach to the problem of combat-induced anxiety. Combat psychiatry. *Bull US Army Med Dept.* 1949;9:12–25.

6. Bailey P, Williams FE, Komora PO, eds. Introduction [Section I]. In: *Neuropsychiatry*. Vol 10. In: *The Medical Department of the United States Army in the World War*. Washington, DC: Office of The Surgeon General, US Army; 1929: 1–22.

7. Glass AJ. Lessons learned. In: Glass AJ, ed. *Overseas Theaters*. Vol 2. In: *Neuropsychiatry in World War II*. Washington, DC: Office of The Surgeon General, US Army; 1973: 989–1027.

8. Drayer CS, Glass AJ. Introduction. In: Glass AJ, ed. *Overseas Theaters*. Vol 2. In: *Neuropsychiatry in World War II*. Washington, DC: Office of The Surgeon General, US Army; 1973: 1–23.

9. Belenky GL. Military psychiatry in the Israeli Defence Force. In: Gabriel RA, ed. *Military Psychiatry: A Comparative Perspective*. Westport, Conn: Greenwood Press; 1986: 147–179.

10. Jones FD. Future directions of military psychiatry. In: Gabriel RA, ed. *Military Psychiatry: A Comparative Perspective*. Westport, Conn: Greenwood Press; 1986: 186.

11. Bowman J. Recent experiences in combat psychiatry in Vietnam. Presented at the Social and Preventive Psychiatry Conference. Walter Reed Army Medical Center, Washington, DC. 1967.

12. Jones FD. Psychiatric lessons of low-intensity wars. *Ann Med Milit Fenn* [Finland]. 1985;60:128–134.

13. Strecker EA. Military psychiatry: World War I 1917–1918. In: Hall JK, Zilboorg G, Bunker HA, eds. *One Hundred Years of American Psychiatry: 1844–1944*. New York: Columbia University Press; 1944: 385–416.

14. Appel JW, Beebe GW. Preventive psychiatry. *JAMA.* 1946;131(18):182–189.

15. Glass AJ. Leadership problems of future battle. Presented to The US Army War College, Carlisle Barracks, Pennsylvania. January 23, 1959.

16. Marlowe DH. Personal Communication, 1985.

17. Beebe GW, De Bakey ME. Incidence of hits and wounds. *Battle Casualties: Incidence, Mortality, and Logistic Considerations*. Springfield, Ill: Charles C Thomas; 1952: 16–73.

18. Neel S. *Vietnam Studies: Medical Support of the U.S. Army in Vietnam, 1965–1970*. Washington, DC: Department of the Army, 1973: 33,36.

19. Korea: A Summary of Medical Experience July 1950–December 1952. Reprinted from: *Health of the Army, January, February, and March 1953*. Washington, DC: Office of The Surgeon General, US Army; 1953.

20. El Sudany El Rayes M. 1982. Combat psychiatry in Arab-Israeli wars. Presented at Grand Rounds, Psychiatry Department, Walter Reed Army Medical Center; October 1982; Washington, DC.

21. Noy S. Arab-Israeli casualties. Presented at Combat Psychiatry Seminar, Walter Reed Army Medical Center; June 1981; Washington, DC.

22. Bar-On R, Solomon Z, Noy S, Nardi D. War related stress: An overview of the clinical picture in the 1982 conflict in Lebanon. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace; January 1983; Tel Aviv, Israel.

23. Belenky GL. Varieties of reaction and adaptation to combat experience. *Bull Menninger Clin*. 1987;51(1):64–79.

24. Rosen G. Nostalgia: A "forgotten" psychological disorder. *Psychol Med*. 1975;5:340–354.

25. Tischler GL. Patterns of psychiatry attrition and of behavior in a combat zone. In: Bourne PG, ed. *The Psychology and Physiology of Stress*. New York: Academic Press; 1969: 19–44.

26. Solomon Z, Flum H. Life events and combat stress reaction in the 1982 war in Lebanon. *Isr J Psychiatry Relat Sci*. 1986;23(1):9–16.

27. US Department of the Army. *Neuropsychiatry and Mental Health.* Washington, DC: DA; 10 August 1984. Army Regulation 40-216.

28. US Department of the Army. *Planning for Health Service Support*. Washington, DC: DA; 9 September 1994. Field Manual 8-55.

29. US Department of the Army. *Combat Stress Control in a Theater of Operations,.* Washington DC: DA; 29 September 1994. Field Manual 8-51.

30. Glass AJ. History of division psychiatry or the origin and development of related echelons of military psychiatric services. Presented at Army Medical Department Division and Combat Psychiatry Conference; April 28–May 2, 1980; Monterey, Calif.

31. Swank RL, Marchand F. Combat neuroses: Development of combat exhaustion. *Arch Neurol Psychiatry* [superseded in part by *Arch Neurol* and *Arch Gen Psychiatry].* 1946;55:236–247.

32. Menninger WC. Reactions to combat. *Psychiatry in a Troubled World*. New York: Macmillan; 1948: 134–152.

33. Ranson SW. The normal battle reaction: Its relation to pathologic battle reaction. Combat Psychiatry. *Bull US Army Med Dept.* 1949;9:3–11.

34. Kubler-Ross E. *On Death and Dying*. London: Macmillan; 1969.

35. Weinstein EA, Kahn RL. *Denial of Illness*. Springfield, Ill: Charles C Thomas; 1955.

36. Mohajer M, Mottaghi Y. Psychiatric war casualties in Iran: Presentations. Presented at American Psychiatric Association Annual Meeting; May 1985; Dallas, Tex.

37. Salmon TW, Fenton N, eds. In the American Expeditionary Forces [Section 2]. *Neuropsychiatry*. Vol. 10. In: *The Medical Department of the United States Army in the World War*. Washington, DC; Office of The Surgeon General, US Army; 1929.

38. Jones FD. Experiences of a division psychiatrist in Vietnam. *Milit Med.* 1967;132(12):1003–1008.

39. Johnson AW. Combat psychiatry I: Historical view. *Med Bull US Army Europe*. 1969;26(10):305–308.

40. Cannon WB. *Bodily Changes in Fear, Hunger, Pain and Rage*. 2nd ed. New York: Appleton-Century; 1929.

41. Sobel R. Anxiety-depressive reactions after prolonged combat experience: The "old sergeant syndrome." Supplement on combat psychiatry. *Bull US Army Med Dept.* 1949;9:137–146.

42. Akiskal HS, McKinney WT. Overview of recent research in depression: Integration of ten conceptual models into a comprehensive clinical frame. *Arch Gen Psychiatry.* 1975;32:285–305.

43. Laughlin HP. *The Neuroses.* Washington, DC: Butterworths; 1967: 909–911.

44. Glass AJ, Drayer CS. Italian campaign (1 March 1944–2 May 1945), Psychiatry established at division level. In: Glass AJ, ed. *Overseas Theaters.* Vol 2. In: *Neuropsychiatry in World War II.* Washington, DC: Office of The Surgeon General, US Army; 1973; 47–109.

45. Weinstein EA. The Fifth US Army Neuropsychiatric Center—"601st." In: Glass AJ, ed. *Overseas Theaters.* Vol 2. In: *Neuropsychiatry in World War II.* Washington, DC: Office of The Surgeon General, US Army; 1973: 127–141.

46. US Department of the Army. *Treaties Governing Land Warfare.* Washington, DC: DA; 7 December 1956. Pamphlet 27-1.

47. Shay J. *Achilles in Vietnam: Combat Trauma and the Undoing of Character.* New York: Atheneum; 1994.

48. Glass AJ. Psychiatry at the division level. Supplement on combat psychiatry. *Bull US Army Med Dept.* 1949;9:45–73.

49. Kirkland F. Written Communication, 1991.

50. Virkkunen M, DeJong J, Bartko J, Goodwin FK, Linnoila M. Relationship of psychobiological variables to recidivism in violent offenders and impulsive fire setters: A followup study. *Arch Gen Psychiatry.* 1989;46:600–603.